Evidence-Based Policy Reform: Exploring the Role of Evidence in States' Model Selection for the Maternal, Infant, and Early Childhood Home Visiting Program

Prepared for:

David Anderson
Vice President
Coalition for Evidence-Based Policy

Allison Whiteman Taylor
Project Leader
Coalition for Evidence-Based Policy

Prepared by:

Anna Kawar
Candidate for MPP/MBA
Sanford School of Public Policy
Fuqua School of Business
Duke University

Faculty Advisor:

Joel Rosch, PhD
Senior Research Scholar
Center for Child & Family Policy
Duke University

April 19, 2013
ACKNOWLEDGEMENTS

I am very grateful to all those who supported and aided me in finishing this project. While I have learned a lot about the topic itself, I have learned more about how open people are to learning and sharing information in order to continue to improve in serving America’s neediest.

Thank you to all of the people at the various state agencies who were willing to take time out of their busy, hectic days to speak with me about their experiences with MIECHV. I was wonderfully surprised at how little effort it took to get in touch with perfect strangers and schedule our conversations. I couldn’t have done this paper without your input and openness.

Thank you to Dave and Allison at the Coalition for being the perfect clients (for agreeing to be a client in the first place!) Thank you for providing invaluable insights and feedback and for taking so much time to guide me through this process. I do hope this paper turns into a helpful document for your work moving forward in improving the effectiveness of federal programs and policies.

Finally, thank you Joel. You have been such a mentor to me throughout my whole graduate school experience and I can honestly say that I wouldn’t be where I am at the end of it all without your help, guidance, and support. It has been an immense pleasure working with you and getting to know you and I look forward to working together again in the future.
EXECUTIVE SUMMARY

Policy Question

Did the U.S. Department of Health and Human Services (DHHS) successfully signal to states that the driving factor for model selection for the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) should be strong evidence of effectiveness?

- On which factors did states base their selection of models?
- Were states rewarded through competitive funding for selecting stronger models?

Program Overview

Title V of the Social Security Act of 1935 included Federal aid for maternal and child health services (part 1), services for children with disabilities (part 2), and child welfare services (part 3), all to be administered through the Children’s Bureau. Today, Title V remains the only Federal program solely devoted to the health of all mothers and children.

In the current political climate, with a strong emphasis on deficit reduction and continued debates over the size and role of government, federal entitlement programs have come under increased scrutiny. It is important to ensure that each dollar is optimally spent and that the programs that are funded are known to be effective. Randomized evaluations have been hailed as the best way to precisely measure impact and gather evidence regarding the true effectiveness of a social program. Policymakers can then use this evidence to make better decisions regarding which programs to fund and also to garner support for social programs that have been proven to be effective.

In 2010, Obama signed into law the Patient Protection and Affordable Care Act (ACA), which included authorization for MIECHV, a program designed to strengthen and improve the Title V programs and services. The majority of funding is reserved for evidence-based programs—models developed, evaluated, and proven to show significant improvement in outcomes.

DHHS launched the Home Visiting Evidence of Effectiveness (HomVEE) project and created a team to conduct an evaluation of existing home visiting programs and literature. HomVEE’s review of 32 models resulted in a list of 13 models that met DHHS’s criteria for an evidence-based home visiting model. The 13 models that HomVEE selected as approved evidence-based home visiting models for MIECHV are:

1) Child FIRST

---

1 This student paper was prepared in 2013 as a requirement for the Masters of Public Policy Program at the Sanford School of Public Policy at Duke University. The research, analysis, and recommendations contained in this paper are the work of the student who authored the document, and do not represent the official or unofficial views of the Sanford School of Public Policy, Duke University, or the Coalition for Evidence-Based Policy. Without the specific permission of its author, this paper may not be used or cited for any purpose other than to inform the client organization about the subject matter. The author relied in many instances on qualitative data provided through interviews and makes no independent representations as to the accuracy of the data.

http://mchb.hrsa.gov/programs/homevisiting/models.html
The Coalition for Evidence-Based Policy is interested in evaluating the success of the Home Visiting Program to determine how clearly the need for evidence-based programs was signaled to states and also to learn more about the barriers states may have faced in selecting evidence-based models and programs. The Coalition found a wide variety of evidence of effectiveness among the 13 models selected by HomVEE. Only one program, NFP, is ranked as “strong” by the Coalition. This is primarily because effects were significant, strong, and sustained, but most importantly they were replicated. Replication lowers the likelihood that effects are observed by chance and, therefore, increases confidence that the program is delivering real effects.

Methodology

In order to determine the driving factors in states’ model selection, my research and analysis consisted of both research and conducting telephone interviews with a select number of states. I selected 13 states to conduct telephone interviews with about the process for and driving factors in model selection.

Key Findings

Findings indicate that, based on interviews, the driving forces behind model selection were:

- Models are already existing or established with a strong statewide network
  - Out of the 13 states interviewed, 11 (85%) of states selected models that already existed in their state; only two states chose to “start over” with brand new models.
- Models would have the most impact on federal benchmarks for MIECHV
- Models are the best fit for the needs of our target population given our capacity
- Cost of implementation
- Models target a specific need and/or risk factor identified in our state

Only six models out of the 13 listed by HomVEE were chosen across all 38 states. The top three most commonly selected models were: 1) HFA, selected by 28 states; 2) NFP, selected by 25 states; and 3) PAT, selected by 22 states. HFA represents 29% of all models selected, NFP represents 26%, PAT represents 23%, and the remaining three models represent 21%.
NFP is the only model selected that ranks as “strong” by the Coalition, and, therefore, only 26% of all models selected under MIECHV are ranked as having strong evidence of effectiveness. A key hypothesis regarding these findings is that NFP restricts enrollment to only the first child, and many states chose other models in parallel to ensure that all at-risk populations could be served.

**Recommendations**

**Considering Evidence:** Add to the definition of evidence-based models and to the selection criteria that effects be “substantial and important” as well as statistically significant. This language will eliminate a loophole allowing weaker models to be selected by not solely focusing on statistical significance. Statistically significant effects can exist for trivial outcomes, can actually be very small in size to where it’s of little practical importance, or can be chance findings if a program studied a large number of outcomes.

**Model Selection:** As MIECHV evolves and as the list of models continues to develop, it may be important to consider selecting models that have strong evidence of effectiveness in varying contexts and for varying outcomes. This process, ideally, would result in a list of models that are all individually strong and designed to target specific populations in specific contexts. Put together, the models would cover everyone.

**Providing Information and Tools to States:** DHHS should provide the states with more materials, toolkits, and matrices that they can use to thoroughly research and compare models and budget estimates. DHHS should also create a feedback loop that can optimize communication, standardization, sharing of best practices, and can create culture conducive to improvement and innovation. Standardization of model selection as well as implementation can assist in creating not just a centralized state system, but also improve data collection, reporting, oversight, and planning at the federal level. Costs, resources, and staff time can be controllable, optimized, and subsidized as needed.

**Implementation:** Implementation is a commonly overlooked aspect of programs in that the assumption is if you design it well, it will work that way. What has become increasingly evident is that, not only due to the varying contexts within which programs are implemented, but also due to varying processes, management styles, and service delivery on the ground, effectiveness of the same program can vary significantly.

**Innovation and Continuous Improvement:** MIECHV was designed with two-tiers of funding to allow for promising models to be evaluated to determine the strength of evidence of effectiveness. A more thorough understanding of improvement science can help ensure continued innovation through learning from failures and allowing small tests of change in understanding and redesigning the system of maternal and child health.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>i</td>
</tr>
<tr>
<td>Policy Question</td>
<td>1</td>
</tr>
<tr>
<td><strong>Maternal and Child Health Policy in the U.S.</strong></td>
<td>1</td>
</tr>
<tr>
<td>A Brief History</td>
<td>1</td>
</tr>
<tr>
<td>The Title V Maternal and Child Health Program</td>
<td>2</td>
</tr>
<tr>
<td><strong>Evidence-Based Policy Reform</strong></td>
<td>3</td>
</tr>
<tr>
<td>Federal Evidence-Based Initiatives</td>
<td>5</td>
</tr>
<tr>
<td><strong>Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV)</strong></td>
<td>6</td>
</tr>
<tr>
<td>An Assessment from the Starting Line</td>
<td>7</td>
</tr>
<tr>
<td>MIECHV Grant and Funding Structure</td>
<td>9</td>
</tr>
<tr>
<td>Evidence-Based Model Selection</td>
<td>10</td>
</tr>
<tr>
<td><em>Table 1. Favorable Impacts on Primary Measures by Outcome</em></td>
<td>11</td>
</tr>
<tr>
<td><strong>The Coalition for Evidence-Based Policy</strong></td>
<td>12</td>
</tr>
<tr>
<td><em>Table 2. Models and Rankings as Determined by the Coalition</em></td>
<td>14</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Preliminary Findings and Hypotheses</strong></td>
<td>16</td>
</tr>
<tr>
<td><em>Figure 1. How Many Models Did States Select for MIECHV</em></td>
<td>16</td>
</tr>
<tr>
<td><em>Figure 2. Evidence-Based Models Selected by States</em></td>
<td>17</td>
</tr>
<tr>
<td><em>Figure 3. NFP Model Selection and Combinations</em></td>
<td>18</td>
</tr>
<tr>
<td>Discussion and Hypotheses</td>
<td>18</td>
</tr>
<tr>
<td><strong>Qualitative Results from Interviews</strong></td>
<td>19</td>
</tr>
<tr>
<td>Grant Process and Needs Assessment</td>
<td>20</td>
</tr>
<tr>
<td>Federal Guidance and Resources</td>
<td>20</td>
</tr>
<tr>
<td>Thoughts on Evidence Requirement</td>
<td>21</td>
</tr>
<tr>
<td>Driving Factors for Model Selection</td>
<td>21</td>
</tr>
<tr>
<td>Nurse-Family Partnership</td>
<td>23</td>
</tr>
<tr>
<td>Challenges Faced</td>
<td>23</td>
</tr>
<tr>
<td><strong>Recommendations</strong></td>
<td>25</td>
</tr>
<tr>
<td>Considering Evidence</td>
<td>25</td>
</tr>
<tr>
<td>Model Selection</td>
<td>25</td>
</tr>
<tr>
<td>Providing Information and Tools to States</td>
<td>26</td>
</tr>
<tr>
<td>Implementation</td>
<td>27</td>
</tr>
<tr>
<td>Innovation and Continuous Improvement</td>
<td>27</td>
</tr>
<tr>
<td><strong>Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>I. HomVEE Team: Assessing Evidence of Effectiveness</td>
<td>29</td>
</tr>
<tr>
<td>II. Regional Division of States</td>
<td>32</td>
</tr>
<tr>
<td>III. Survey Instrument for Grantees</td>
<td>33</td>
</tr>
<tr>
<td>IV. State Data: Models, Funding, and other Markers</td>
<td>34</td>
</tr>
</tbody>
</table>
POLICY QUESTION

Did the U.S. Department of Health and Human Services (DHHS) successfully signal to states that the driving factor for model selection for the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) should be strong evidence of effectiveness?

- On which factors did states base their selection of models?
- Were states rewarded through competitive funding for selecting stronger models?

MATERNAL AND CHILD HEALTH POLICY IN THE U.S.

A Brief History

In August 1960, the Social Security Administrations’ quarterly research journal, the Social Security Bulletin, ran an article celebrating the 25th anniversary of Title V. Signed into law as part of the Social Security Act of 1935 by President Franklin D. Roosevelt, Title V was in response to increasing concern over child welfare in the U.S., particularly in rural areas where little had been established to improve conditions for disadvantaged and neglected children.

Concerns over child welfare were increasing in the decades leading up to the Great Depression. Studies by the Children’s Bureau in the 1920s exposed a correlation between low earnings and infant mortality, as well as between poverty and juvenile delinquency. Childbirth was the second leading cause of death for women and 20% of children died before their fifth birthday. Additionally, the Bureau found many families constantly lived on the verge of destitution and children primarily suffered from this lack of security—many children were deserted by families who could no longer care for them for a variety of reasons. Some volunteer and public agencies sprung up in urban areas before 1935 to address the need for abused, neglected, and abandoned children. Foster care was established to replace institutional homes; however, this assistance was on a small scale and did not exist at all in rural areas.

Congress first tried to address the growing need to protect child welfare with the Maternity and Infancy Act (Sheppard-Towner Act) of 1921. This program was a radical shift, establishing public responsibility for maternal and child health. The Act aimed to reduce maternal and child mortality; grants were given to states to assist in providing health care to primarily low-income mothers and children during pregnancy and infancy. This program was short-lived; between

2 Ibid.
backlash from various interest groups such as the Catholic Church as well as the start of the depression, the Act was repealed in 1929 and the funds were stopped.

When Congress convened in 1935, President Roosevelt asked it to establish a foundation for safeguards to protect family life and individual welfare. A Committee on Economic Security was established and assisted by various advisory committees, including one on child welfare. The Children’s Bureau was asked by this advisory committee to provide recommendations regarding child health and welfare, which were approved. The Social Security Act was signed on August 14, 1935.

The Title V Maternal and Child Health Program

Title V of the Social Security Act of 1935—the Maternal and Child Health (MCH) Services Block Grant—included Federal aid for maternal and child health services (part 1), services for children with disabilities (part 2), and child welfare services (part 3), all to be administered through the Children’s Bureau. Through WWII and into the 1960s, funding provided through Title V was used to expand, improve, and innovate services for mothers and children through better health care, serving disabled children, and community planning for foster care and adoption services. The following timeline outlines the progression of Title V and related maternal and child health efforts in the U.S.:  

- By 1938, every state but one had established a Crippled Children’s Program designed to meet the social, emotional, and physical needs of disabled children. These were the first medical care programs supported on a continual basis with Federal money.
- In 1944, the Association of Directors of Maternal and Child Health Programs (AMCHP) was formed to help state and national efforts centered on mothers, children and families. The Emergency Maternity Infant Care Program (EMIC) established a service delivery system to provide free health care for wives and infants of the four lowest grades of servicemen. At the time, this was the most extensive public health care program in history.
- In the 1950s, new programs are established to keep up with the newest findings regarding infant mortality and health. “MR funds” are established for mentally handicapped children.
- The Maternal and Infant Care Programs (MIC) and Children and Youth Programs (C&Y) are established in the 60s and 70s to provide child and reproductive health care services to millions of low-income women and children. The programs become models for the country. In 1965, Head Start launches, serving over 560,000 children and families.

---

4 Oettinger. (Aug. 1960)
7 Ibid.
• 34 states participate in the Improved Pregnancy Outcomes Program (IPO) in the 1970s, 13 of which have very high infant mortality rates, and these states see a greater decline in mortality than the rest of the country.

• In 1981, the Omnibus Budget Reconciliation Act (OBRA) converts Title V programs to a Block Grant, combining seven categorical child health programs. In 1984, the Emergency Medical Services for Children (EMSC) is established and influences the development for pediatric equipment and standards.

• The Maternal and Child Health Bureau (MCHB) is established in 1990 to administer Title V and other MCH work at the federal level. In 1993, the Government Performance Results Act (GPRA) improves accountability and cooperation between state and federal agencies. Child health initiatives, such as the State Child Health Insurance Program (SCHIP) (1997), continue to address unmet needs and concerns for infant mortality and uninsured children. Title V Information System (TVIS) established in 1998, allowing states to report Block Grant activities and provide quantitative and qualitative data about the health of women and children.

Today, Title V remains the only Federal program solely devoted to the health of all mothers and children. In September 2008, the Title V Block Grant received the highest rating possible on the White House Office of Management & Budget’s Performance Assessment Rating Tool (PART)—only 19% of all Federal programs earned this designation of “effective” in 2008. In 2008, state maternal and child health programs served more than 2.5 million women, 4 million infants, nearly 30 million children, and almost 2 million children with special health care needs. Title V is an ideal starting place in both proving and increasing effectiveness for social programs.

EVIDENCE-BASED POLICY REFORM

Title V is a partnership between federal, state, and local governments, which provided around $650 million in federal funding for MCH programs in 2010. Title V requires that at least three-quarters of federal funds be then matched by state and local funds. This is a minimum funding requirement; inclusive of other grants and program income, money invested in MCH programs easily adds up to billions of dollars a year.

---

9 Ibid.
10 Ibid.
11 For every $4 of federal funds, at least $3 must be matched with state and local funds.
In the current political climate, with a strong emphasis on deficit reduction and continued debates over the size and role of government, federal entitlement programs have come under increased scrutiny. While Democrats and Republicans both agree that the deficit needs to be a priority, Republicans have focused their efforts to reduce budget deficits mainly on cutting funding to social safety net programs based on a belief that they are ineffective and do little but encourage dependency. It is important to be concerned with wasted or unnecessary funding of programs; however, broad sweeping cuts are not a safe way to deal with entitlement programs that serve millions of needy Americans. Instead, it is better, and necessary, to ensure that each dollar is optimally spent and that the programs that are funded are known to be effective. Until recently, there has been little rigorous evidence available on the true impact of federal programs designed to serve the poor and disadvantaged. This evidence is a necessary factor in developing and funding programs not just so that funding can be used as efficiently as possible, but more importantly, to ensure that programs are well designed to effectively meet the needs of the target population.

When looking at programs that address social needs, it can be difficult to both gather data and interpret the results. Many programs exist that are targeted at the same policy outcome, and it is difficult for policymakers to discern which ones are the most effective. It can be difficult to both attribute results to a particular program and clearly determine what a program has actually achieved. This could be attributed to difficulties in constructing proper measures, but it is far more likely that the complexity of an individual’s life, with all of the factors and forces influencing outcomes, makes it very hard to determine the true effect of a particular service or program.

Randomized control trials (RCT) are an example of a scientific design, used in areas such as medicine, to eliminate variability in determining the true effect of an intervention. Such scientific designs can be applied to social programs to evaluate and measure impact on a number of outcomes. There are many different ways to rigorously evaluate social programs; however, randomized evaluations have been hailed as the best way to precisely measure impact and gather evidence regarding the true effectiveness of a social program. Policymakers can then use this evidence to make better decisions regarding which programs to fund and also to garner support for social programs that have been proven to be effective. There are obviously many other factors involved in making such a decision—political constraints, capacity, feasibility, time pressures, budgets—however, evidence-based policy is the responsible way to not only prevent wasted funds, but also to successfully meet the needs of and improve outcomes for the poor and underserved.
Federal Evidence-Based Initiatives

The Obama administration began building on efforts started during and before the Bush administration, and implemented new initiatives, such as tiered funding models, as “new [ways] to invest in critical services for vulnerable populations by...targeting dollars to programs that achieve positive, measurable impact.” Former Director of the Office of Management and Budget (OMB), Peter Orszag, explains how this philosophy would be integrated into the federal funding of social programs:

“It will [also] create the right incentives for the future. Organizations will know that to be considered for funding, they must provide credible evaluation results that show promise, and be ready to subject their models to analysis. As more models move into the top tier, it will create pressure on all the top-tier models to improve their effectiveness, so they continue to receive support. By instilling a culture of learning into federal programs, we can build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence that carefully targeted investments will produce results.”

By 2010 (the administration’s second year), the first four initiatives were underway, with two more starting in 2011 and 2012:

- **Home Visitation Program (MIECHV)** for at-risk families with young children (DHHS, $1.5 billion over 2010-2014)
- **Teen Pregnancy Prevention** program (DHHS, $105 million in FY12)
- **Investing in Innovation Fund** (i3), to fund development and scale-up of evidence-based K-12 educational strategies (Dept. of Education, $150 million in FY12)
- **Social Innovation Fund**, to support public/private investment in evidence-based programs in low-income communities (Corporation for National and Community Service, $50 million in FY12)
- **Started in 2011**: Trade Adjustment Assistance Community College and Career Training Grants Program, to fund development and scale-up of evidence-based education and career training programs for dislocated workers (Dept. of Labor, $2 billion over 2011-2014)

---

14 In the same speech, Peter Orszag clarifies: “First, we’re providing more money to programs that generate results backed up by strong evidence. That’s the top tier. Then, for an additional group of programs, with some supportive evidence but not as much, we’ve said: Let’s try those too, but rigorously evaluate them and see whether they work.”
15 Office of Management and Budget website: [http://www.whitehouse.gov/omb/blog/09/06/08/BuildingRigorousEvidencetoDrivePolicy/](http://www.whitehouse.gov/omb/blog/09/06/08/BuildingRigorousEvidencetoDrivePolicy/)
• **Started in 2012: Workforce Innovation Fund**, to fund development and scale-up of evidence-based strategies to improve education/employment outcomes for U.S. workers (Dept. of Labor, $50 million in FY12)

### MATERNAL, INFANT, AND EARLY CHILDHOOD HOME VISITING PROGRAM

In 2010, Obama signed into law the Patient Protection and Affordable Care Act (ACA), which included authorization for MIECHV, a collaboration between the Administration for Children and Families (ACF) within DHHS and the Health Resources and Services Administration (HRSA). The purpose of MIECHV is to strengthen and improve the Title V programs and services, to improve coordination of services for at-risk communities, and to improve outcomes by providing comprehensive services to families in at-risk communities. The majority of funding is reserved for evidence-based programs—models developed, evaluated, and proven to show significant improvement in outcomes.

MIECHV complements a comprehensive service delivery system designed to support high-quality maternal, infant, and early childhood health, safety, and development. Home visiting is believed to be an integral and essential part of this system. Nurses, social workers, or other trained home visitors meet with families in their homes, evaluate the environment and needs of the family, and, if needed, connect them to assistance designed to impact the child’s health and development, as well as provide support and education to parents. Target populations are determined by the states and territories during their needs assessments, but can include families that reside in at-risk communities and/or have low-income, mothers younger than 21 years old, mothers with a history of substance abuse, or families with a history of abuse and neglect.

MIECHV defines home visiting programs as:

> “Programs or initiatives in which home visiting is a primary service delivery strategy and in which services are offered on a voluntary basis to pregnant women, expectant fathers, and parents and caregivers of children from birth to kindergarten entry, targeting participant outcomes that may include improved maternal and child health; prevention of child injuries, child abuse, or maltreatment, and reduction of emergency department visits; improvement in school readiness and achievement; reduction in crime or domestic violence; improvements in family economic self-sufficiency; improvements in the coordination and referrals for other community resources and supports; or improvements in parenting skills related to child development.”

---

MIECHV requires quantifiable and measurable improvements in outcomes for targeted populations. A number of federal benchmarks were established, which grantees must meet in order to continue receiving funding. These include:

- Improved maternal and newborn health
- Prevention of child injuries, child abuse, neglect, or maltreatment, and reduction of emergency department visits
- Improvement in school readiness and achievement
- Reduction in crime or domestic violence
- Improvements in family economic self-sufficiency
- Improvements in the coordination and referrals for other community resources and supports

An Assessment From the Starting Line

In order to maximize the potential for MIECHV, the PEW Center on the States conducted a survey of home visiting programs across the country for fiscal years 2009-2010. The goal of this report was to help policymakers understand existing home visiting investments and programs as well as make recommendations for maximizing resources moving forward. Here are some key findings:19

- 46 states plus DC have some level of investment in home visiting.
  - 34 states support more than one home visiting program.
  - 21 states administer three or more home visiting programs.
  - Four states—Alaska, Idaho, Nevada, and Mississippi—do not administer home visiting programs.

- $1.4 billion was invested in a total of 119 home visiting programs through categorical and broad-based prevention funding.
  - Categorical funding is exclusively for home visiting ($462 million).
  - Broad-based funding does not require programs that use home visiting as a service delivery method.
    - $912 million was awarded to 29 programs addressing child abuse prevention, parent education, school readiness, etc.
    - Only 19 of the 29 programs could account for $52 million used by communities for home visiting.

---

The report provided key high-level findings that policymakers could take into consideration for MIECHV and efforts to improve the efficacy of home visiting programs:20

• Most home visiting funding was not adequately tracked at the state level.
  o States could not document the use of $575 million out of $1.4 billion (more than 40%). Spending data may have existed at the local level, but states required reporting and tracking of expenditures very infrequently.

• States frequently provided funding with few requirements that programs invest in models with a proven record of success.
  o 58% of funding (48 programs in 32 states) was provided with minimal guidance regarding selection of models, quality standards or expected outcomes. Most program decisions were left to local discretion, and states could not ensure quality or cost effectiveness.

• States did not adequately monitor publicly funded programs to ensure effectiveness.
  o Most states did not provide data on activities, cost, and outcomes that states could then use to inform funding and policy.

• States did not consistently target at-risk families (highest return on investment).
  o More than half of available home visiting funding ($727 million) was allocated to programs without eligibility requirements.

• In every state, too few at-risk families got home visiting services.
  o No state had the sufficient funding or infrastructure to reach all of its highest-risk families.

These findings demonstrate that MIECHV could be a successful program through:
• evidence-based model selection;
• frequent tracking and reporting of activities and use of funds;
• smart targeting of the neediest populations;
• development of state infrastructure; and
• maintaining a culture of continuous learning through which grantees and policymakers can make informed decisions

Once MIECHV is designed to meet all of these improvements, the next question is whether it can be successfully implemented at scale. This paper will not discuss implementation challenges;

---

However, in order to answer this question, it is important to start with an understanding of how states individually approached MIECHV and selected evidence-based models.

**MIECHV Grant and Funding Structure**

MIECHV provides $1.5 billion in funds over five years (2010-2014) through both formula and competitive grant awards. MIECHV stipulates that 75% of both awards should be used to fund evidence-based models and programs that have been rigorously evaluated and proven to have evidence of effectiveness. The remaining 25% can be used to fund promising models. 3% of the funds are also set aside for tribal activities, and another 3% for research and evaluation activities. These funds allow states to implement evidence-based home visiting models, expand services, and also provide assistance with innovation and improving infrastructure of state systems.

In 2010, $91 million was awarded through formula grants to every state and territory. The size of the formula grant was calculated based on the size of the target population of pregnant women and young children in each state. $500,000 of this amount was unrestricted and could be used by states for planning purposes and to complete a thorough needs assessment. A statewide needs assessment was required of all states as a condition for receiving Title V grants in 2011. The next step required by the MIECHV program was for every state to complete an Updated State Plan, which involved making the final designation of the targeted at-risk communities, updating and providing a more detailed needs and resources assessment, and submitting a specific plan for home visiting services tailored to address those identified needs.

An additional $125 million in formula funding was awarded to each state and territory in both 2011 and 2012. Competitive funding started the following year: $100 million was awarded to 22 states in 2011 and around $90 million went to 16 states in 2012 for a total of 37 states plus DC (grants are awarded for two year terms).

Competitive grants are awarded to states that demonstrate the interest and capacity to expand and develop evidence-based home visiting efforts. Competitive grants consist of both expansion grants and development grants. Expansion grants are awarded to states that have already made significant progress towards implementing evidence-based programs and have the capacity to take it to scale. Funds are used to expand evidence-based programs and improve existing programs; funding in subsequent years is dependent on performance. Development grants are for states that have modest programs and want to continue building on existing efforts. These grants are stepping-stones towards being awarded expansion grants.

---


Evidence-Based Model Selection

In order to assess which home visiting programs should be considered evidence-based for MIECHV, DHHS launched the Home Visiting Evidence of Effectiveness (HomVEE) project and created a team to conduct an evaluation of existing home visiting programs and literature. HomVEE partnered with Mathematica Policy Research and the National Institute of Health library, under the guidance of DHHS, to conduct a review of available literature on home visiting programs and also issued a call for new studies. Mathematica assessed the quality of research studies in order to determine the strength of evidence available for specific home visiting models. The review produced assessments of evidence of effectiveness for each model and outcome domain, as well as guidelines for implementation.

HomVEE’s review of 32 models resulted in a list of 13 models that met DHHS’s criteria for an evidence-based home visiting model. The main criteria for selecting models were (a detailed description of the criteria and results of review can be found in Appendix I): 23

- At least one high- or moderate-quality impact study of the model finds favorable, statistically significant impacts in two or more of the eight outcome domains; or
- At least two high- or moderate-quality impact studies of the model using non-overlapping analytic study samples find one or more favorable, statistically significant impacts in the same domain

Models that did not meet these criteria were rejected. Additionally, 11 models were not considered because they lacked any high or moderate quality studies to assess their effectiveness. HomVEE also provided information on a number of evidence domains, including replication and sustainability of impacts; however, these were not determining factors for selection (see Table 2 in Appendix I for evidence domains). The 13 models that HomVEE selected as approved evidence-based home visiting models for MIECHV are: 24

1) Child FIRST
2) Early Head Start-Home Visiting
3) Early Intervention Program for Adolescent Mothers (EIP)
4) Early Start (New Zealand)
5) Family Check-Up
6) Healthy Families America (HFA)
7) Healthy Steps

---


http://mchb.hrsa.gov/programs/homevisiting/models.html
8) Home Instruction for Parents of Preschool Youngsters (HIPPY)
9) Nurse Family Partnership (NFP)
10) Oklahoma’s Community-Based Family Resource and Support (CBFRS) Program
11) Parents as Teachers (PAT)
12) Play and Learning Strategies (PALS) Infant
13) SafeCare Augmented

The three most widely used national models are HFA, PAT, and NFP—in the report by PEW Center for the States, it was noted that they accounted for 39 of the 119 home visiting models in 2009. These three models have national organizations and require accreditation by the implementing agency to use the model. Many other programs used adapted or locally developed models and curricula.

Because MIECHV requires that the states implement an evidence-based model that best meets the needs of the target populations as outlined in the completed needs assessments, it is important for states to understand how each model would impact both the federal benchmarks outlined and those identified in the needs assessments. As shown in Table 1, in seven of the eight outcome domains, at least one model had a favorable impact on a primary measure. None of the models, however, show impacts on reductions in delinquency, violence, and crime. Most models had favorable impacts on primary measures of child development and school readiness and positive parenting practices. NFP had the most favorable primary findings, with impacts on primary measures in six outcome domains. HFA has the most total findings, with impacts on primary and/or secondary measures in all eight domains.

Table 1. Number of Favorable Impacts on Primary Measures, by Outcome Domain

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Child FIRST</td>
<td>-</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Early Head Start</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>3</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>EIP</td>
<td>8</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Early Start (NZ)</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Family Check-Up</td>
<td>-</td>
<td>0</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

THE COALITION FOR EVIDENCE-BASED POLICY

The Coalition for Evidence-Based Policy (CEBP) is a nonpartisan nonprofit based in Washington, DC. The mission of the Coalition is to “increase government effectiveness through the use of rigorous evidence about ‘what works.”’ The Coalition believes that the same rigor with which evidence is used in medicine should be applied to social policy in order to avoid spending billions of public dollars on implementing programs that are not effective. Areas such as education, poverty reduction, and crime reduction can benefit from interventions that are backed by strong evidence of effectiveness, as proven through randomized-control trials carried out in community settings. The Coalition has worked with key federal Executive Branch and Congressional officials to advise and shape major policy initiatives that are based in strong evidence of effectiveness.

The Coalition is interested in evaluating the success of the Home Visiting Program to determine how clearly the need for evidence-based programs was signaled to states and also to learn more about the barriers states may have faced in selecting evidence-based models and programs. Although MIECHV provides a list of evidence-based models for states to choose among, some are very clearly stronger than others in impacting outcomes, and it is important to understand the driving forces behind why a state might choose a less effective model.

In re-evaluating the 13 models selected by HomVEE, the Coalition found a wide variety of evidence of effectiveness. Building on Mathematica’s findings regarding quality of studies and

26 The Coalition for Evidence-Based Policy website: http://coalition4evidence.org/wordpress/?page_id=6
statistical significance of outcomes, they also assessed models based on the importance of effects (sizeable and sustained\textsuperscript{27}) and confidence in evidence that a model may show improvements if replicated in a similar community.

The Coalition independently reviewed the models proposed by HomVEE because MIECHV’s overall success and effectiveness depends on the models implemented by individual states. The Coalition felt that Mathematica’s review “[focused] on whether rigorous evaluations have found that the model produces statistically-significant effects, but not on whether these effects have policy or practical importance.”\textsuperscript{28} This distinction between focusing on effects that are statistically significant vs. effects that are “substantial and important” is key to the Coalition’s approach in evidence-based policy reform. Statistically significant effects can exist for trivial outcomes, can actually be very small in size to where it’s of little practical importance, or can be chance findings if a program studied a large number of outcomes.

For example, in Healthy Steps, the statistically significant effects were observed on outcomes such as an increase in the frequency of mothers bringing their children to the doctor once a month from 95% to 97%. While this is a statistically significant effect, it isn’t of real practical importance, nor is it a sizeable effect. No effects were found on more policy-relevant outcomes such as child behavior, development, or health and safety of the child at age 5.\textsuperscript{29}

Another example is Parents as Teachers, which was determined to be evidence-based after a review of four randomized control trials that measured a total of 208 outcomes. Five statistically significant positive effects on outcomes were observed and six statistically significant adverse effects on outcomes were also noted. Both positive and adverse effects could have been observed by chance—at 95% confidence, 10.4 outcomes out of 208 measured will show statistically significant effects purely by chance.

The Coalition’s review of the 13 models produced a ranking based on the level of confidence that the model will produce important life improvements and are listed in Table 2. Only one program, NFP, is ranked as “strong” by the Coalition. This is primarily because effects were significant, strong, and sustained, but most importantly they were replicated. Replication lowers the likelihood that effects are observed by chance and, therefore, increases confidence that the program is delivering real effects.

\textsuperscript{27} HomVEE did consider sustained effects, but classified impacts as sustained only if they were measured at least one year after program enrollment.


Table 2. Models and Rankings as Determined by the Coalition

<table>
<thead>
<tr>
<th>MODEL</th>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Family Partnership (NFP)</td>
<td>STRONG</td>
</tr>
<tr>
<td>Child FIRST*</td>
<td>MEDIUM/STRONG</td>
</tr>
<tr>
<td>Early Start (New Zealand)*</td>
<td>MEDIUM/STRONG</td>
</tr>
<tr>
<td>Early Intervention Program for Adolescent Mothers (EIP)</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Family Check-Up</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Early Head Start-Home Visiting (Early HSHV)</td>
<td>LOW</td>
</tr>
<tr>
<td>Healthy Families America (HFA)</td>
<td>LOW</td>
</tr>
<tr>
<td>Healthy Steps (HS)</td>
<td>LOW</td>
</tr>
<tr>
<td>Oklahoma’s Community-Based Family Resource and Support (CBFRS) Program*</td>
<td>LOW</td>
</tr>
<tr>
<td>Parents as Teachers (PAT)</td>
<td>LOW</td>
</tr>
<tr>
<td>Play and Learning Strategies (PALS) Infant*</td>
<td>LOW</td>
</tr>
<tr>
<td>Home Instruction for Parents of Preschool Youngsters (HIPPY)</td>
<td>Insufficient Evidence</td>
</tr>
<tr>
<td>SafeCare Augmented</td>
<td>Not Yet Rated</td>
</tr>
</tbody>
</table>

Source: Coalition for Evidence-Based Policy

* Programs that were added to the list of approved programs after the Coalition’s August 2011 formal review were subsequently assessed and ranked by the Coalition, but have not yet been written up in a formal review. The one exception is Child FIRST, which was found to meet the Coalition-managed Top-Tier Evidence Initiative’s Near Top-Tier standard and is summarized at the following link: [http://toptierevidence.org/programs-reviewed/child-first](http://toptierevidence.org/programs-reviewed/child-first)

** A 14th program was added as this paper was published and had not been assessed by the Coalition: Maternal Early Childhood Sustained Home Visiting Program.

The two major concerns regarding states’ understanding of the importance of evidence of effectiveness in choosing home visiting models are:

1) Did DHHS convey sufficient information—and conveyed it clearly enough—so that states were more likely to select a model with strong evidence of sizable, sustained effects on important outcomes as opposed to one with only short-term effects on a few preliminary outcomes? The states may be receiving signals that programs with fairly weak evidence are
on par with programs that are actually supported by much stronger evidence. The Coalition wants to know how much variation states perceive in the strength of evidence supporting the approved programs.

2) What factors will drive states’ selection of evidence-based models? Will states be concerned primarily about evidence of effectiveness (beyond the requirement of choosing from the approved models), or will cost matter more? Will states be willing to start over with a new stronger model if a less effective one is already well established in the state? How will they handle the trade-off between stronger evidence-based programs (which are more targeted and have stricter eligibility requirements) and serving as large a population as possible?

METHODOLOGY

In order to answer the questions posed above regarding the communication to states regarding the important of evidence and to determine the driving factors in states’ model selection, my analysis consisted of both research and conducting telephone interviews with a select number of states. First, I gathered quantitative data for each state chosen to receive competitive awards in 2012 for MIECHV (38 states in total30). I chose competitive grantees because HRSA recognizes these states as having the capacity and desire to implement successful home visiting programs and bring them to scale. This data included grant award amount, models selected under MIECHV, and some demographic characteristics such as population and poverty rate. Secondly, I selected 13 states to conduct telephone interviews with about the process for and driving factors in model selection. I chose to implement my own process for selecting states instead of using randomization to allow for mitigating unresponsiveness. This process is outlined below:

1) I divided the country into nine regions using Census definitions (see Appendix II) and selected the two states with the highest poverty levels in each region. My intention was to provide some control over state characteristics, as states in the same region tend to be similar on a number of unobservables. I chose states with high poverty levels, as these states should have the most to gain from successful home visiting programs. The resulting list of 18 states provided a broad range of states with varying population sizes, poverty rates, funding awards, and # of models chosen.

2) I reviewed the selection of states from each region and eliminated one state if both states were very similar to one another on at least two dimensions (population size, funding amount, poverty rate, # models). I first looked to keep the state with the higher number of models as I assumed this would provide more information on the selection process. If both states had the same number of models, then I chose the state with the higher poverty

---

30 This number includes the District of Columbia
rate because I assumed that state would be more invested in a successful program. However, if one state chose a “strong” model (based on the Coalition’s ranking) and the other didn’t, I kept both states.\textsuperscript{31} This process eliminated five states.

3) I contacted the Program Directors listed for the remaining 13 states to schedule telephone interviews. Two of them were unresponsive, and so I reached out to three states of the five that were eliminated in step 2 (top three poverty rates). Two responded and scheduled interviews.

A sample of the survey instrument implemented via telephone interview for the selected 13 states is in Appendix III.

\section*{PRELIMINARY FINDINGS AND HYPOTHESES}

Based on the Coalition’s review and subsequent ranking of models selected by HomVEE, it can be hypothesized that a sizeable number of states may have implemented models considered to have low evidence of effectiveness. Preliminary findings suggested that this was true. Quantitative data for each grantee, gathered from HRSA’s Home Visiting website, can be found in Appendix IV.

The 38 states, including DC, listed by DHHS as receiving competitive funds under MIECHV selected, in total, 95 models. See Figures 1 and 2 for breakdowns.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{How Many Models did States Select for MIECHV? (n=38)}
\end{figure}

\footnote{Because the Coalition is interested in why states might choose models that they ranked as “low” evidence, it is important to survey states that chose both “strong” models (e.g. NFP) and models ranked as “low” (e.g. PAT).}
Compared to findings in the PEW study, where 12 out of 46 states supported only one model and 21 states supported more than three models, these results show eight states with only one model and 17 states with more than three. As seen in Figure 2, only six models out of the 13 listed by HomVEE were chosen across all states.

**Figure 2. Evidence-Based Models Selected by 38 States (n=95 models)**

Figure 2 can be read as, for example, 25 out of 38 states selected NFP as one of their models, or 25 of the total 95 models selected are NFP. As shown, the top three most commonly selected models are: 1) HFA, selected by 28 states (74%); 2) NFP, selected by 25 states (66%); and 3) PAT, selected by 22 states (58%). Of the 8 states that chose just one model: 3 chose NFP, 4 chose HFA, and 1 chose PAT.

These three models represent 79% of all models selected. The PEW study in 2010 found that these three models represented only 33% of all models; HFA was the most commonly funded, with PAT in second, and NFP third.

Looking at the 95 models across 38 states as percentages, HFA represents 29% of all models selected, NFP represents 26%, PAT represents 23%, and the remaining three models represent 21%. NFP is the only model selected that ranks as “strong” by the Coalition, and, therefore, **only 26% of all models selected under MIECHV are ranked as having strong evidence of effectiveness.** This is an improvement since before MIECHV, however, as the PEW study found

---

only 13% of funding for home visiting went to NFP programs.\textsuperscript{34} In addition, most states that selected NFP, selected it alongside other models. Only 5 of the 25 states that selected NFP chose \textit{only} NFP. Finally, there is no evidence that states were rewarded for selecting stronger models. Considering the fact that the HomVEE did not differentiate between the 13 models in strength of evidence, it makes sense that there was no correlation between the amount of funds awarded to the states and whether it selected stronger models.\textsuperscript{35}

\textbf{Figure 3. NFP Model Selection and Combinations with Other Models (n=25)}

![Diagram showing model selection combinations]

\textbf{Discussion and Hypotheses}

There are a number of hypotheses that can be posed to explain these findings, such as the fact that perhaps states considered models to be pretty equivalent in evidence of effectiveness considering they were not ranked by HRSA. However, as seen in Table 1, there is large variation in findings between the three most popular models—NFP, HFA, and PAT. NFP was found to have more than three times as many positive effects as would appear by chance (5\% at 95\% confidence), where HFA had less than twice as many effects as would appear by chance. Additionally, PAT had exactly the number of positive effects one would expect to see by chance along with four negative effects.\textsuperscript{36}

A stronger hypothesis may be uncovered by examining the key elements of each model. In doing so, we discover that NFP, the only model selected that is ranked as “strong,” also has the most eligibility restrictions. NFP only covers first-time mothers through the child’s second birthday, and those mothers have to enroll at least three months before birth, ideally by the 16\textsuperscript{th} week of

\textsuperscript{34} Ibid.
\textsuperscript{35} Based on basic regression of state funding amounts and model selection, controlling for state population, poverty rate, and number of models selected.
\textsuperscript{36} Detailed findings for each model can be found at [http://homvee.acf.hhs.gov/programs.aspx](http://homvee.acf.hhs.gov/programs.aspx)
pregnancy. NFP, therefore, does not cover all at-risk mothers and children, and requires implementing agencies to potentially turn away mothers who may not enroll in time or who have other children. This is a very difficult position to be in for agencies whose missions dictate serving needy populations.

Both HFA and PAT, in contrast, allow mothers to enroll at any point, cover any children already in the home, and services can begin either before or after the birth of the child. Could states be looking for complementary programs to make up for NFP’s eligibility restrictions?

This analysis can be taken a step further by looking at other models the Coalition ranked as “strong” or “medium” that were not chosen by any states. Most of these models are less restrictive than NFP. Below is a brief outline of restrictions for models ranked as “medium” or “strong” by the Coalition:

- **Child FIRST** does not restrict based on age or birth status; however, it does target children with learning or developmental disabilities, which could restrict enrollment.
- **Early Start (New Zealand)** targets mothers over 24 years old, but does accept mothers younger than 24 years. The program does not restrict participation based on pre- or post-natal, but does require enrollment before the child is 9 months old.
- **Early Intervention Program for Adolescent Mothers (EIP)** targets adolescent mothers. Required age for enrollment is 14 to 19 years old, no more than 26 weeks gestation, and pregnant with their first child.
- **Family Check-Up** targets children from 2 to 17 years old with evidence of conduct problems.

The other factor that probably influenced model selection is ease of implementation. This issue will not be addressed in this paper, but it is an important consideration for states when they are selecting models. NFP, for example, puts a heavy emphasis on assessing organizational readiness and providing heavily standardized materials and guidelines for implementers. In addition, it requires the development of infrastructure for service delivery and data collection, as well as employing Registered Nurses (RN) as home visitors, all of which can be very expensive for states.

**QUALITATIVE RESULTS FROM INTERVIEWS**

Appendix III provides an outline of the questions asked during the qualitative interviews with the Program Directors (or other contacts) from the 13 states selected to interview. The interview consisted of a few questions about basic information such as funding, and then more in depth questions regarding the process each state went through to select models for MIECHV. In
discussing these results, I will not link findings to individual states to retain anonymity, but will discuss key findings at a high-level. In order to discuss these findings, this section will be divided into subsections that will touch on different areas of the model selection process. Please note that findings discussed below were collected as interviewees discussed particular issues and experiences. Findings may also hold true for other interviewees, but those interviewees may not have specifically mentioned a particular issue as part of their experience.

Grant Process and Needs Assessment

Because MIECHV is tied to Title V, most states had no problem learning about the opportunity for funding. In fact, many states had designated people to track developments coming out of the ACA in order to determine when opportunities would open up. Many states were interested in this opportunity precisely because they were looking to redesign and/or improve their state home visiting programs. Three states mentioned that prior to MIECHV, their states had many home visiting programs operating without any centralization. Six states mentioned that they had been working on improving home visiting long before MIECHV, three of which had already created working committees specifically to re-design their statewide system and establish consistency and efficiency.

To start the process of conducting the needs assessment and applying for the grant, ten states created steering committees and advisory groups consisting of community stakeholders, service providers, and other agencies to discuss the needs assessments and model selection. Additionally, two states specifically went out into the community to educate leaders and service providers about MIECHV, the models, the evidence requirement, and discuss local needs.

The goals for the needs assessments and Updated State Plans, as required by MIECHV, included identifying communities with the highest needs and selecting models tailored to meeting those needs. In order to do this, six states mentioned creating matrices outlining indicators from needs assessments and matching them to each model to see which model would impact the most domains.

Federal Guidance and Resources

HRSA and HomVEE provide extensive information on their websites about MIECHV, the requirement for evidence-based models, and information on the models specifically, including links to the Mathematica review and other sources of research. In addition, HRSA conducted

webinars and assigned ten regional program officers to act as a reference for states, such as by providing monthly check-ins and answering questions.

Six states clearly stated that they received very little or no guidance from the federal level, and only really paid attention to the list of evidence-based models and information available through the grant application materials. Seven states specifically mentioned receiving extensive assistance from their regional program officer and/or used the HRSA Technical Assistance. Only two states specifically mentioned a lack of clarity regarding how to start the process and the varying requirements between the formula and competitive grant processes.

**Thoughts on Evidence Requirement**

All states understood the requirement for evidence-based model selection for MIECHV and that funding would be dependent on fulfilling this requirement and showing improvement on the federal benchmarks outlined in the legislation.

States varied in how they considered the evidence requirement in model selection. Some states mentioned only considering evidence that demonstrated how well the models aligned with and would impact federal benchmarks and/or the identified needs of their target populations. Taking this a step further, some states mentioned that they defined strength of evidence as whether the models had been evaluated and proved effective on populations comparable to their target populations. Additionally, a common theme was that while states did thoroughly review the research and evaluations for each of the models, only one or two specifically mentioned evaluating the strength of the research and evaluations available to them.

Two states specifically mentioned that although they realized NFP was a very strong model, they had to consider the needs of the populations they were targeting. Additionally, some states mentioned PAT as a model that they knew wasn’t particularly strong, but offered good alignment with the states’ goals for their home visiting programs and population needs. This may be because PAT does not have a defined curriculum and can be altered as needed. Additionally, a few states considered their experience with certain models as a primary source for whether a model is effective, with the additional research and list of models provided by HRSA serving as confirmation of that model selection.

**Driving Factors for Model Selection**

States were asked to provide the top three factors taken into consideration when selecting models. A list of the responses provided for first, second, and third driving factors is below. All states provided a top factor, but not all states provided second and third factors.
**Top Factor for Selection**
Models are already existing or established with a strong statewide network (3 states)
Models would have the most impact on federal benchmarks\(^3\) (3 states)
Models are the best fit for the needs of our target population given our capacity (2 states)
Models target a specific need and/or risk factor identified in our state (2 states)
Cost of implementation (1 state)
Evaluations of models show the strongest evidence of effectiveness on outcomes (1 state)
Models allow centralization and collaboration with flexibility to reduce confusion (1 state)

**Second Factor for Selection**
Models are the best fit for the needs of our target population given our capacity (2 states)
Models are already existing or established with a strong statewide network (2 states)
Models would have the most impact on benchmarks (1 state)
Models are interested in participating (1 state)
Cost of implementation (1 state)
Models allow for flexibility by implementers and reduce disruption (1 state)

**Third Factor for Selection**
Models are already existing or established with a strong statewide network (1 state)
Models provide the biggest bang for the buck (1 state)
Models target a specific need and/or risk factor identified in our state (1 state)
Cost of implementation (1 state)

These responses obviously demonstrate a large variety of driving factors in model selection; however, factors mentioned by a large number of states or many times include:
- Models are already existing or established with a strong statewide network
- Models would have the most impact on benchmarks
- Models are the best fit for the needs of our target population given our capacity
- Cost of implementation
- Models target a specific need and/or risk factor identified in our state

Additionally, I collected some information on models that already existed in the state prior to MIECHV in order to test a hypothesis that states tended to select models that were already established. Out of the 13 states interviewed, 11 (85%) of states selected models that already existed in their state; only two states chose to “start over” with brand new models. While only three of the 11 states explicitly stated “pre-existing” as a driving factor, the benefits of choosing models that require no start-up cost or effort cannot be ignored.

\(^3\) In order to receive continued funding, states must demonstrate that they “moved the dot” on federal benchmarks outlined in grant (discussed earlier in paper).
Nurse-Family Partnership

Because NFP was the only model selected by states that was ranked as “strong” by the Coalition, one of the survey questions specifically addressed why a state chose or did not choose NFP as one of the models for MIECHV.

Of the states that selected NFP, the most common reason given was that the model was known to have very strong evidence of effectiveness. Many states selected NFP because it specifically addressed a need in their state. For example, a state with a high birth rate selected NFP because the model would specifically address a huge need. Additionally, another state selected NFP because it has strong outcomes for child maltreatment, which is a bigger problem in that state than prenatal care and premature births. Other states mentioned that the prescriptive nature of NFP made it easy to implement and helped ensure fidelity and cost-effectiveness.

For states that did not choose NFP, the most commonly stated reason was the cost to implement. Many states noted that for the cost of implementing NFP in one county, they could implement HFA or PAT in multiple counties. Additionally, some states with a percentage of populations living in rural areas commented that NFP hasn’t been proven as effective in those communities and, therefore, isn’t worth the cost.

My hypothesis was confirmed by a number of states that said they selected a complimentary model in order to mitigate the restrictive nature of NFP and ensure that at-risk populations were being cared for. One interviewee mentioned that although intervention with NFP for the first child is known to improve outcomes for subsequent children, there are many at-risk families with multiple children now, and they had to provide services to those families even if it is through another less-effective model.

Finally, an interesting point that was raised by many states that did not select NFP was that they did not want to create any competition or discomfort among service providers and community members. States mentioned that they didn’t want to “play favorites” or pit models against each other. If there is tension on the ground between service providers, and state agencies are in tune with this sentiment, they may be reluctant to select a model that will create unrest.

Challenges Faced

States mentioned a number of challenges faced both in the grant process and in model selection. Commonly discussed challenges include (from most commonly discussed to least):

1) **Short turn around time for planning, reporting, and meeting deadlines.** States only had 30 days between the time that the needs assessment was due to the time that the grant
application was due. In this time, states had to do research, form committees, meet with community members, and decide on model selection, as well as complete the grant application process. This was a commonly discussed challenge, especially for states that prioritized meeting with community members as they needed more time to fully educate members on models prior to selection. This could also explain why many states chose pre-existing models.

2) **Competition among models.** Many states discussed this challenge from two perspectives. Some states mentioned that there was a lot of backlash by community service providers who had been delivering home visiting programs for many years, but had models that were not deemed to be evidence-based. Additionally, some states struggled with lobbying by evidence-based model developers who pushed to be selected in their states.

3) **Culture change.** Some states faced challenges in discussing the new evidence requirement with service providers and creating a shared vision for MIECHV. It was important and difficult to get buy-in and get all stakeholders on the same page regarding the process for the new evidence requirement. A few states specifically mentioned community partners disagreeing with the selection of evidence-based models that would require a large sum of funds going to overhead in order to create state infrastructure.

4) **Aligning measures and data requirements both across multiple models and between model and federal reporting requirements.** Established and well-designed models provide implementers with a set of measures, tools, reporting requirements. These can differ across the multiple models potentially being implemented in a state, and states need to be able to find some consistency in order to conduct reporting. Measures and reporting required by models can also differ from federal requirements, which means that states have to potentially translate results twice: once to consolidate results from multiple models and again for federal reporting. Multiple models may target the same outcomes, yet those outcomes may be measured with different constructs. For example, a targeted outcome for HFA is to “increase utilization of prenatal care,” while NFP seeks to “improve prenatal health and outcomes.” Then, the first MIECHV benchmark that states are required to show improvement for is: “improved maternal and newborn health.” All three of these outcomes call for varying constructs and methods of data collection; somehow the results have to be rolled into one package that’s both easy to understand and, more importantly, communicate in order to demonstrate effectiveness of the program and inform both the community and policymakers.

5) **Subcontracting with implementing nonprofits and agencies.** A number of states used subcontracting for their programs. Through conducting an RFP, service providers would apply for funding and then implement the program on the ground. Sometimes, part of this process was for the service provider to select among a number of pre-selected (by the state) models. For example, some states would select three models and then allow local agencies to select one of those models that they believed would be the best fit for their target population. Subcontracting poses a number of challenges, such as inconsistency across independent nonprofits or service providers (though implementers have to go through a separate authorization process with the model developers), a slow and cumbersome process of awarding funding and starting implementation (as opposed to leading centralized service delivery by the state government), and defining the scope of work and writing contracts for implementers.

**RECOMMENDATIONS**

**Considering Evidence**

Designing MIECHV to be a program based in evidence was an important move in ensuring that federal, state, and local dollars are being optimally used in providing much needed services to at-risk populations. However, the question remains, why is home visiting the main focus? Has home visiting been proven to solve the problem of maternal and child health more effectively than other types of programs? This focus on home visiting may actually allow for weaker programs than those not based in home visiting but may be targeted at solving the same problem.

Even with the focus on home visiting, it is important to add to the definition of evidence-based and selection criteria that effects be “substantial and important” as well as statistically significant. This language should be considered in determining which models are selected in the future for this program or others. This will eliminate the loophole for weaker models allowed by solely focusing on statistical significance as discussed earlier in this paper.

**Model Selection**

In the selection of models, it is also important to consider the question of quality vs. quantity. Currently, the models selected for MIECHV target a broad range of outcomes, and only a few of them have been ranked as medium or strong. These highly ranked models are more restricted in both the environments they have been studied in and the outcomes they target. For example, NFP is ranked as strong; however, it has not been evaluated in rural populations, and so is not necessarily the best option for every state. As MIECHV evolves and as the list of models continues to develop, it may be important to consider selecting models that have strong evidence.
of effectiveness in varying contexts and for varying outcomes. This process, ideally, would result in a list of models that are all individually strong and designed to target specific populations in specific contexts. Put together, the models would cover everyone. This would help mitigate the challenge that states face in having to select other less effective models to parallel stronger models such as NFP in order to ensure all at-risk populations are covered.

**Providing Information and Tools to States**

One comment made by a number of interviewees concerned the consideration of evidence in selection of the models—some said that they didn’t necessarily see any one model as stronger than the other, they were focusing on finding a model that was best matched with both the states’ needs assessments and federal benchmarks. This comment, while understandable, seems to point towards a lack of awareness regarding the varying level of evidence across the list of models provided to them. In addition, this could reflect a lack of understanding regarding strong and weak evaluations and studies—some poorly designed evaluations may show a model to be effective even if it’s not. Should states take the federal government’s word for how strong a model is, or should they be inclined to do their own research?

DHHS should provide the states with more materials, toolkits, and matrices that they can use to more thoroughly research and compare models and budget estimates. Aside from the resources provided by HomVEE, many states involved model developers in the process of researching and exploring the models. The developers were sometimes even brought in to speak with community members and service providers. This can be a very biased source, as the developers are interested in only demonstrating how their model will be best suited. There are lobbying activities occurring and one state interviewee even commented that they were being encouraged to choose a particular model even though the state’s rural environment could not ensure fidelity in implementation. States should be provided with research that is objective, complete, and based in strong evaluations from reliable sources.

Many states also want to include community members and local service providers in grant and program-related decision making. This requires a significant amount of time to meet with and educate these parties on models and processes. Additionally, this means that the decisions are not solely the states’ to make. This exposes an element of bottom-up decision making. DHHS should create a feedback loop that takes into account both top-down policymaking and bottom-up communication of preferences and needs. A feedback loop can optimize communication, standardization, sharing of best practices, and can create culture conducive to improvement and innovation, as discussed in more detail below.

There is also evidence from interviews of a strong desire to centralize and re-design state home visiting programs. Standardization of model selection as well as implementation can assist in
creating not just a centralized state system, but also improve data collection, reporting, oversight, and planning at the federal level. Costs, resources, and staff time can be controllable, optimized, and subsidized as needed.

Implementation

MIECHV is a strong program in the way it is designed to ensure that only evidence-based models are selected and funded by participating states. However, that is where the design ends. Implementation is a commonly overlooked aspect of programs in that the assumption is if you design it well, it will work that way. What has become increasingly evident is that, not only due to the varying contexts within which programs are implemented, but also due to varying processes, management styles, and service delivery on the ground, effectiveness of the same program can vary significantly. Even in the preliminary stages of just model selection, interviews expose significant variation in the way states handle the process, and also the way states choose to then begin the implementation process. Some states contract out to service providers, some decide to implement through state agencies—all of these will vary in process and, ultimately, in outcomes. NFP is one of the most rigid, standardized models in implementation (and most models do provide implementation guidance); however, even with NFP, there will be variation at the local level when alterations are made for certain contexts or populations.

Innovation and Continuous Improvement

How can it be ensured that MIECHV can and will evolve and continue to improve as models are implemented and results trickle in? One argument against the use of evidence-based models is that it stifles innovation. MIECHV was designed with two-tiers of funding precisely for this reason: to allow for promising models to have funding for evaluation to determine the strength of evidence of effectiveness. However, while MIECHV includes language outlining the use of continuous improvement to ensure effective implementation, the structure of the program is not conducive to truly using improvement science to ensure that MIECHV is successful.

Improvement science is a new field, having been proved immensely effective in healthcare and currently taking hold in other fields such as education. The premise is that, through understanding how a system functions, and using small tests of change to alter processes within that system, learnings and data can be collected at a local level in varying contexts and simultaneously be rolled up to improve at scale and ultimately change the system. For a full overview of improvement science and how it is being considered in education, see “Getting Ideas into Action,” published by the Carnegie Foundation for the Advancement of Teaching.40

Without giving a full overview, there are a couple of important elements that can be applied to MIECHV. The first is establishing a culture of learning, one that is safe for sharing best practices and transparent to learn from failures. In order to understand a system and develop improvements in process and implementation, it is essential to learn from failures. MIECHV has a level of competition both among models and among states (for future funding) that this culture cannot fully be established. This is probably a contributing factor to some of the local resentment I found towards NFP in some states. Instead of NFP being regarded as a model to learn from, one with established success that can be learned from, it is regarded as a threat to other models and service providers.

The second important element is using small tests of change. Once change ideas, or new innovations are discovered, they are implemented on a small scale in a variety of settings. Through collecting both process data and outcome data, it is possible to determine what specific elements of a program work in specific contexts. This information is invaluable when it comes time to scale a program. Programs can then be designed with these pre-tested elements and scaled in a number of different environments and there will be confidence of effectiveness. Through small tests of change, innovation can be maintained; however, MIECHV does not currently maintain the flexibility to accommodate this kind of learning or testing.

While MIECHV is a well-designed and well-intentioned program, its long-term success may benefit from recommendations listed above. Additionally, MIECHV is an important federal experiment in proving that it is possible to ensure the effectiveness of social programs—this will guarantee future funding and prioritization of programs that serve America’s neediest.
APPENDIX I. HomVEE Team: Assessing Evidence of Effectiveness

After completing all impact study reviews for a model, the HomVEE team evaluates the evidence across all studies of the program models that received a high or moderate rating and measured outcomes in at least one of the eligible outcome domains. To meet DHHS’ criteria for an “evidence-based early childhood home visiting service delivery model,” program models must meet at least one of the following criteria:

• At least one high- or moderate-quality impact study of the model finds favorable, statistically significant impacts in two or more of the eight outcome domains; or
• At least two high- or moderate-quality impact studies of the model using non-overlapping analytic study samples find one or more favorable, statistically significant impacts in the same domain.

In both cases, the impacts considered must either (1) be found for the full sample or (2) if found for subgroups but not for the full sample, be replicated in the same domain in two or more studies using non-overlapping analytic study samples. Additionally, following the legislation, if the model meets the above criteria based on findings from randomized controlled trial(s) only, then one or more favorable, statistically significant impacts must be sustained for at least one year after program enrollment, and one or more favorable, statistically significant impacts must be reported in a peer-reviewed journal.

In addition to assessing whether each model met the DHHS criteria for an evidence-based early childhood home visiting service delivery model, the HomVEE team examined and reported other aspects of the evidence for each model based on all high- and moderate-quality studies available, including the following:

• Quality of Outcome Measures. HomVEE classified outcome measures as primary if data were collected through direct observation, direct assessment, or administrative records; or if self-reported data were collected using a standardized (normed) instrument. Other self-reported measures are classified as secondary.
• Duration of Impacts. HomVEE classified impacts as lasting if they were measured at least one year after program services ended.
• Replication of Impacts. HomVEE classified impacts as replicated if favorable, statistically significant impacts were shown in the same outcome domain in at least two non-overlapping analytic study samples.
• Subgroup Findings. HomVEE reported subgroup findings if the findings were replicated in the same outcome domain in at least two studies using different analytic samples.
• Unfavorable or Ambiguous Impacts. In addition to favorable impacts, HomVEE reported unfavorable or ambiguous, statistically significant impacts on full sample and subgroup findings. While some outcomes are clearly unfavorable (such as an increase in children’s behavior problems), others are ambiguous. For example, an increase in the number of days mothers are hospitalized could indicate an increase in health problems or increased

---

access to needed health care due to participation in a home visiting program.

- **Evaluator Independence.** HomVEE reported the funding source for each study and whether any of the study authors were program model developers.

- **Magnitude of Impacts.** HomVEE reported effect sizes when possible, either those calculated by the study authors or HomVEE computed findings.

### Table 1. Summary of Study Rating Criteria for the HomVEE Review

<table>
<thead>
<tr>
<th>HomVEE Study Rating</th>
<th>Randomized Controlled Trials</th>
<th>Matched Comparison Group</th>
<th>Single Case Design(^a)</th>
<th>Regression Discontinuity Design(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>- Random assignment</td>
<td></td>
<td>- Timing of intervention is systematically manipulated</td>
<td>- Integrity of forcing variable is maintained</td>
</tr>
<tr>
<td></td>
<td>- Meets WWC standards for acceptable rates of overall and differential attrition(^a)</td>
<td></td>
<td>- Outcomes meet WWC standards for interrater agreement</td>
<td>- Meets WWC standards for low overall and differential attrition</td>
</tr>
<tr>
<td></td>
<td>- No reassignment; analysis must be based on original assignment to study arms</td>
<td></td>
<td>- At least three attempts to demonstrate an effect</td>
<td>- The relationship between the outcome and the forcing variable is continuous</td>
</tr>
<tr>
<td></td>
<td>- No confounding factors; must have at least two participants in each study arm and no systematic differences in data collection methods</td>
<td></td>
<td>- At least five data points in relevant phases</td>
<td>- Meets WWC standards for functional form and bandwidth</td>
</tr>
<tr>
<td></td>
<td>- Controls for selected measures if groups are different at baseline</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>- Reassignment OR unacceptable rates of overall or differential attrition(^a)</td>
<td>- Baseline equivalence established on selected measures and controls for baseline measures of outcomes, if applicable</td>
<td>- Timing of intervention is systematically manipulated</td>
<td>- Integrity of forcing variable is maintained</td>
</tr>
<tr>
<td></td>
<td>- Baseline equivalence established on selected measures</td>
<td>- No confounding factors; must have at least two participants in each study arm and no systematic differences in data collection methods</td>
<td>- Outcomes meet WWC standards for interrater agreement</td>
<td>- Meets WWC standards for low attrition</td>
</tr>
<tr>
<td></td>
<td>- No confounding factors; must have at least two participants in each study arm and no systematic differences in data collection methods</td>
<td></td>
<td>- At least three attempts to demonstrate an effect</td>
<td>- Meets WWC standards for functional form and bandwidth</td>
</tr>
<tr>
<td>Low</td>
<td>Studies that do not meet the requirements for a high or moderate rating</td>
<td></td>
<td>- At least three data points in relevant phases</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) The What Works Clearinghouse (WWC), established by the Institute for Education Sciences in the U.S. Department of Education, reviews education research (http://ies.ed.gov/ncee/wwc/). The WWC standard for attrition is transparent and statistically based, taking into account both overall attrition (the percentage of study participants lost in the total study sample) and differential attrition (the differences in attrition rates between treatment and control groups).

\(^b\) For ease of presentation, some of the criteria are described very broadly. Additional details about standards are available for single case designs (http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf) and regression discontinuity designs (http://ies.ed.gov/ncee/wwc/pdf/wwc_rd.pdf).
Table 2. Home Visiting Evidence Dimensions

<table>
<thead>
<tr>
<th>Program Model</th>
<th>High or Moderate Quality Impact Study?</th>
<th>Number of Favorable Impacts on Primary Outcome Measures</th>
<th>Number of Favorable Impacts on Secondary Outcome Measures</th>
<th>Sustained?</th>
<th>Lasting?</th>
<th>Replicated?</th>
<th>Favorable Impacts Limited to Subgroups?</th>
<th>Number of Unfavorable or Ambiguous Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child FIRST</td>
<td>Yes*</td>
<td>16*</td>
<td>12*</td>
<td>Yes*</td>
<td>No</td>
<td>No</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>Early Head Start–Home Visiting</td>
<td>Yes*</td>
<td>4*</td>
<td>24*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No</td>
<td>No*</td>
<td>2**</td>
</tr>
<tr>
<td>EIP</td>
<td>Yes*</td>
<td>8*</td>
<td>2*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No</td>
<td>No*</td>
<td>1**</td>
</tr>
<tr>
<td>Early Start (New Zealand)</td>
<td>Yes*</td>
<td>9*</td>
<td>2*</td>
<td>Yes*</td>
<td>No</td>
<td>No</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>Family Check-Up</td>
<td>Yes*</td>
<td>5*</td>
<td>1*</td>
<td>Yes*</td>
<td>No</td>
<td>Yes*</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>Healthy Families America</td>
<td>Yes*</td>
<td>14*</td>
<td>29*</td>
<td>Yes*</td>
<td>No</td>
<td>Yes*</td>
<td>No*</td>
<td>4**</td>
</tr>
<tr>
<td>Healthy Steps</td>
<td>Yes*</td>
<td>2*</td>
<td>3*</td>
<td>Yes*</td>
<td>No</td>
<td>No</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>HIPPY</td>
<td>Yes*</td>
<td>4*</td>
<td>4*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>Nurse Family Partnership</td>
<td>Yes*</td>
<td>28*</td>
<td>57*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No*</td>
<td>9**</td>
</tr>
<tr>
<td>Oklahoma CBFRS</td>
<td>Yes*</td>
<td>1*</td>
<td>4*</td>
<td>Yes*</td>
<td>No</td>
<td>No</td>
<td>No*</td>
<td>0</td>
</tr>
<tr>
<td>Parents as Teachers</td>
<td>Yes*</td>
<td>5*</td>
<td>0</td>
<td>Yes*</td>
<td>No</td>
<td>Yes*</td>
<td>No*</td>
<td>7**</td>
</tr>
<tr>
<td>PALS Infant</td>
<td>Yes*</td>
<td>12*</td>
<td>0</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No</td>
<td>No*</td>
<td>1**</td>
</tr>
<tr>
<td>SafeCare Augmented</td>
<td>Yes*</td>
<td>2*</td>
<td>1*</td>
<td>Yes*</td>
<td>Yes*</td>
<td>No</td>
<td>No*</td>
<td>1**</td>
</tr>
</tbody>
</table>

*In the full sample only. Primary measures were defined as outcomes measured through direct observation, direct assessment, administrative data, or self-reported data collected using a standardized (normed) instrument. Secondary measures included other self-reported measures.

Yes, if favorable impacts were sustained for at least one year post program inception.

Yes, if favorable impacts lasted for at least one year after the program ended.

Yes, if favorable impacts (whether sustained or not) were replicated on at least one measure in the same outcome domain in either a high- or moderate-quality study.

This number includes unfavorable or ambiguous impacts on both primary and secondary measures in the full sample. Unfavorable findings should be interpreted with caution because there is subjectivity involved in interpreting some outcomes; for some outcomes, it is not always clear in which direction it is desirable to move the outcome. Readers are encouraged to use the HomVEE website, specifically the reports by program model and by outcome domain, to obtain more detail about unfavorable findings.

*Green-shaded table cell = favorable dimension of the study.

**Red-shaded table cell = unfavorable or ambiguous impact.
APPENDIX II. Regional Divisions of States

Source: https://www.census.gov/geo/www/us_regdiv.pdf
APPENDIX III. Survey Instrument for Grantees

Responses to these questions will only be specific to your state and department for basic information on award amount and models selected. Responses to process questions will remain anonymous. These responses will be compiled into a research paper for public viewing in May.

I. Basic Information

1) State
2) Department
3) Confirm award amount
4) Confirm # models and types
5) What existing models were there in the state (prior to MIECHV)?

II. Decision Making Process

6) How did your department learn about the opportunity to apply for funding?
7) Can you describe the steps taken once the opportunity was found?
8) Can you identify the major steps taken to identify models that were chosen?
9) What parties were involved in the decision-making process for selecting models?
10) What were the top three factors taken into consideration when choosing models?
11) What were some challenges you faced in selecting a model?
12) Did you receive guidance in selecting home visiting models? From who? How would you describe that guidance? Was this guidance adequate? What else would have been helpful?
13) Can you describe the communication you received regarding the requirement for evidence-based model selection for MIECHV?
14) What role did evidence play in selecting models?
15) What sources did you use to evaluate the strength of evidence of the models?
16) (NFP) Why did you choose to implement NFP? OR Why didn’t you choose to implement NFP?
<table>
<thead>
<tr>
<th>STATES</th>
<th>POPULATION* (millions)</th>
<th>POVERTY RATE*</th>
<th>AWARD</th>
<th>MODELS (#)</th>
<th>NFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>4.779</td>
<td>19.00%</td>
<td>$1,976,665</td>
<td>3</td>
<td>Y</td>
</tr>
<tr>
<td>Arizona</td>
<td>6.392</td>
<td>17.40%</td>
<td>$9,430,000</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Arkansas</td>
<td>2.915</td>
<td>18.80%</td>
<td>$6,243,547</td>
<td>4</td>
<td>Y</td>
</tr>
<tr>
<td>California</td>
<td>37.253</td>
<td>15.80%</td>
<td>$9,430,000</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Colorado</td>
<td>5.029</td>
<td>13.40%</td>
<td>$3,717,761</td>
<td>5</td>
<td>Y</td>
</tr>
<tr>
<td>Connecticut</td>
<td>3.574</td>
<td>10.10%</td>
<td>$8,677,222</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Delaware</td>
<td>0.897</td>
<td>11.80%</td>
<td>$2,991,355</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>0.601</td>
<td>19.20%</td>
<td>$2,250,000</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>9.687</td>
<td>17.90%</td>
<td>$2,020,173</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hawaii</td>
<td>1.36</td>
<td>10.70%</td>
<td>$3,300,000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Illinois</td>
<td>12.83</td>
<td>13.80%</td>
<td>$3,286,607</td>
<td>4</td>
<td>Y</td>
</tr>
<tr>
<td>Indiana</td>
<td>6.483</td>
<td>15.30%</td>
<td>$9,145,337</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Iowa</td>
<td>3.046</td>
<td>12.60%</td>
<td>$6,600,000</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td>2.853</td>
<td>13.60%</td>
<td>$2,958,587</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>4.339</td>
<td>19.00%</td>
<td>$6,971,342</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Louisiana</td>
<td>4.533</td>
<td>18.70%</td>
<td>$8,021,924</td>
<td>1</td>
<td>Y</td>
</tr>
<tr>
<td>Maine</td>
<td>1.328</td>
<td>12.90%</td>
<td>$6,976,372</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>6.547</td>
<td>11.40%</td>
<td>$9,395,256</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>9.883</td>
<td>16.80%</td>
<td>$2,800,191</td>
<td>1</td>
<td>Y</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5.303</td>
<td>11.60%</td>
<td>$8,000,000</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Montana</td>
<td>0.989</td>
<td>14.60%</td>
<td>$3,263,022</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td>1.826</td>
<td>12.90%</td>
<td>$1,543,572</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>1.316</td>
<td>8.30%</td>
<td>$1,461,379</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>8.791</td>
<td>10.30%</td>
<td>$9,430,000</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>2.059</td>
<td>20.40%</td>
<td>$1,544,563</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>North Carolina</td>
<td>9.535</td>
<td>17.50%</td>
<td>$1,943,112</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Ohio</td>
<td>11.536</td>
<td>15.80%</td>
<td>$3,000,000</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3.751</td>
<td>16.90%</td>
<td>$9,430,000</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>3.831</td>
<td>15.80%</td>
<td>$3,300,000</td>
<td>3</td>
<td>Y</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>12.702</td>
<td>13.40%</td>
<td>$9,027,587</td>
<td>4</td>
<td>Y</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1.052</td>
<td>14.00%</td>
<td>$3,286,493</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Tennessee</td>
<td>6.346</td>
<td>17.70%</td>
<td>$6,571,353</td>
<td>3</td>
<td>Y</td>
</tr>
<tr>
<td>Texas</td>
<td>25.145</td>
<td>17.90%</td>
<td>$3,300,000</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Vermont</td>
<td>0.625</td>
<td>12.70%</td>
<td>$917,729</td>
<td>1</td>
<td>Y</td>
</tr>
<tr>
<td>Virginia</td>
<td>8.001</td>
<td>11.10%</td>
<td>$6,295,506</td>
<td>3</td>
<td>Y</td>
</tr>
<tr>
<td>Washington</td>
<td>6.724</td>
<td>13.40%</td>
<td>$6,609,476</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td>1.852</td>
<td>18.10%</td>
<td>$1,793,101</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Wisconsin</td>
<td>5.686</td>
<td>13.20%</td>
<td>$3,124,700</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Population and poverty rate from 2010 Census and 2010 American Community Survey, respectively.