

# **The Pew Home Visiting Data for Performance Initiative: Phase II Executive Summary**

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The Pew Home Visiting Data for Performance Initiative (DPI) offers an important opportunity for states to galvanize around a small set of desired outcomes to demonstrate the collective impact of early home visiting investments. The project was informed by a theory of change (see Figure 1) that placed primary emphasis on the role home visiting programs play in promoting maternal health and well-being and optimal child development. Although home visiting programs serve diverse populations and offer diverse content, early home visiting is distinct as an intervention strategy in its emphasis on strengthening parental capacity to address a child’s immediate and ongoing developmental needs via individualized parent coaching. Phase I, completed in 2015, specified nine indicators that states might adopt to determine whether their goals are being achieved across their full portfolio of home visiting programs, regardless of funding source. In addition, the recommended system included 16 descriptive factors inclusive of several participant demographic characteristics, geographic location, and service delivery information which states could use to more fully understand the differential impact of services on various subpopulations. The project also identified key strategies for enhancing the quality and usefulness of states’ home visiting data—including collecting it in its most basic, raw format; at the participant level; and at multiple intervals—and comparing participant outcomes with those of similar families not receiving services. By increasing the rigor of their performance measurement and the utility of their data, states could strengthen the evidence base for home visiting, improve practice, and demonstrate its return on investment.<sup>1</sup>

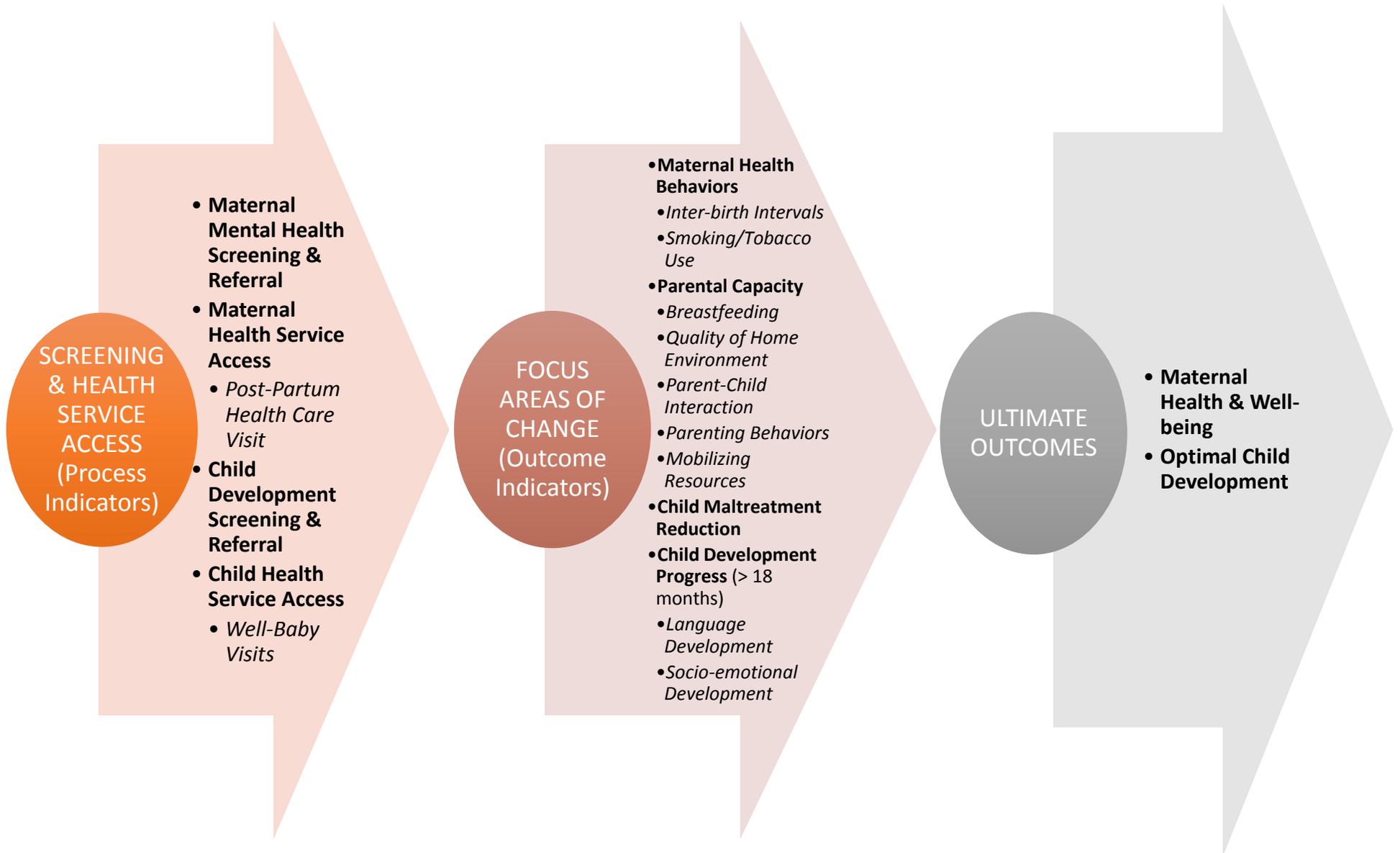
Building on the Phase I activities, the current phases second phase (DPI-2), completed in July 2017, focused on defining two additional performance areas – parental capacity and child development – central to the mission of nearly all early home visiting programs and pilot testing the proposed data collection system in a sample of states. The pilot was used to determine the plan’s feasibility, identify key implementation challenges encountered by local home visiting programs or state agencies in coordinating their data collection efforts; and to test the extent to which administrative data matching techniques can be used to deepen the ability to track home visiting’s proximate and distal impacts while minimizing data collection burden for home visitors.

The purpose of this document is to summarize key findings and final recommendations. Detailed descriptions of the specific activities related to each component can be found in the study’s two major reports available on the Chapin Hall website: [www.chapinhall.org/pewhvdatainitiative](http://www.chapinhall.org/pewhvdatainitiative)

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<sup>1</sup> The Pew Charitable Trusts (2015). *Using data to measure performance: A new framework for assessing the effectiveness of home visiting*. Philadelphia, PA: Author.

Figure 1: Pew Performance Indicators and Early Childhood Home Visiting Theory of Change



## **PARENTAL CAPACITY AND CHILD DEVELOPMENT INDICATORS**

With respect to tracking the ability of early home visiting to influence child development and build parental capacity, the DPI team spent considerable time during Phase I debating how best to measure both constructs but delayed recommending a specific approach pending further discussion. Enhancing parental capacity and optimal child development are central to the mission of nearly all home visiting programs. As such, both are critical outcome domains and how programs measure them will influence how policymakers are likely to view the intervention's overall utility. Because of the importance of both of these areas, home visiting programs have developed multiple ways of defining and measuring these concepts, often in ways that are not fully complementary. No single measure reflects the breadth of either concept and simple, parsimonious measures are currently not available. Capturing progress in both domains will likely require home visitors to do additional data collection—no administrative data options exist with respect to reliable indicators of child development or parental capacity. All of these issues heightened the importance of our work in these domains and the challenges faced as we moved forward.

To address these concerns, we conducted comprehensive literature reviews of the measures currently in use by home visiting programs and program evaluators to assess parental capacity and child development as well as those measures cited by the research community as having strong utility in each domain. Details for each measure, such as psychometric properties, sensitivity to change, cost, and length of administration, were researched and documented. Over 30 child development measures and 35 parenting measures were examined and discussed with a group of external experts, state home visiting program directors, and representatives from several home visiting models, resulting in a narrowed list of 21 parenting measures and 12 child development measures. A detailed report on our assessment of these measures and our rationale for our final set of recommended measures is available on the Chapin Hall website.<sup>2</sup>

### **Key Findings**

- Capturing change in caretakers' parental capacity and young children's development are not well served by administrative data sources and will require additional data collection by home visitors.
- In examining changes in parental capacity, it is more productive to measure parents' use of specific skills or parenting behaviors than shifts in parental attitudes.
- To the extent possible, multiple perspectives (i.e., parent self-report and home visitor observation) are needed to obtain an accurate assessment of how parents interact with their children and create safe and nurturing environments.

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<sup>2</sup> Daro, D., Klein, S., & Burkhardt, T. (2017). *The Pew Home Visiting Data for Performance Initiative: Phase II Final Report on Parental Capacity and Child Development Indicators*. Chicago, IL: Chapin Hall at the University of Chicago. Available at: [www.chapinhall.org/pewhvdatainitiative](http://www.chapinhall.org/pewhvdatainitiative)

- Measuring changes in child development is complex, particularly for infants and toddlers younger than 18 months of age. We found no cost-effective, easy-to-administer direct measure that could reliably accomplish this task for this age group.
- Therefore, capturing the extent to which home visiting impacts development for children younger than 18 months old might best be achieved through an indirect measurement approach that documents the impacts of programs on parent sensitivity and responsiveness, a strong predictor of healthy child development.
- For programs that have the opportunity to observe children beyond 18 months of age, we do recommend direct measurement of child development, specifically in the areas of early language and social-emotional development.
- Regardless of the measures adopted by home visiting programs to monitor outcomes in the areas of parent capacity and child development, additional efforts are needed to improve staff training and the supervision of data collection to maximize data quality and reliability.
- Strategies to improve the quality and utility of assessing these domains, as with other outcome domains, is maximized when indicator data are collected at the participant level, in their most basic, raw format, and at several points in time.

## **Specific Measurement Recommendations**

### **Parental Capacity**

We are recommending a suite of three brief instruments to serve as indicators for this domain.

Collectively, they capture dimensions of parental capacity from the perspective of program participants and home visitors, as well as a structured observation tool of parent-child interaction. These measures include:

- three of the nine subscales from the Healthy Families Parenting Inventory (HFI): participant self-assessment of parental capacity to mobilize resources, parent-child behaviors, and quality of the home environment;
- the HOME-Short Form: completed by the home visitor to assess the caregiver's parent capacity; and
- structured observation of parent-child interactions using either the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) or Dyadic Assessment of Naturalistic Caregiver-Child Experiences ( DANCE).

### **Child Development**

Although promoting optimal child development is a critical component of home visiting, we are not recommending programs collect a direct measure of a child's developmental progress for infants and toddlers under the age of 18 months. The variability and unevenness in how children develop in key areas related to later school achievement, such as language and socio-emotional development, during this period makes it difficult to draw reliable conclusions from repeated measures of these developmental outcomes. During this period, we instead recommend that programs carefully monitor the extent to which they are improving parent sensitivity and responsiveness through the repeated use

of one of the Parental Capacity structured observation measures (i.e., PICCOLO or DANCE) outlined above, as these are predictive of early childhood development.

For programs that have ongoing contact with children between the ages of 18 and 36 months, we do recommend programs collect direct measures of a child's developmental progress, specifically the following assessments:

- MacArthur-Bates Communicative Development Inventories (CDI) Level II Short Form to assess progress in language development and
- The Brief Infant Toddler Social Emotional Assessment (BITSEA) to detect emerging social and emotional competence and problem behaviors.

Assessing change in children older than 36 months was not fully explored in our work in part because the majority of early home visiting programs focus their work on pregnant women and very young children. As such, the measures we examined and the focus of our discussions centered on children 36 months or younger. Specific recommendations on appropriate tools for measuring developmental change for older children will require additional study.

In addition to the CDI and BITSEA, we recommend that home visiting programs enhance their use of the Ages and Stages Questionnaire (ASQ) and the ASQ-SE. While these are screening instruments and not typically used as change measures, preliminary research conducted by two members of the DPI-2 Advisory Board found evidence that programs may be able to adapt their use of these measures to assess the *aggregate* developmental performance of children participating in home visiting programs. By standardizing scores across multiple administrations of the tool, the DPI-2 research teams demonstrated that these tools may offer a promising path forward for monitoring program effects on the development of cohorts of young children served by early home visiting. Although ceiling effects do occur with the tool, in that a large proportion of children score at the highest levels of functioning and therefore lack room for measurable improvement, programs can address this issue by incorporating items in versions designed for older children. This approach would create expanded variance in the population-level results and improve the likelihood of identifying aggregate change over time at the program level. The use of this approach to assess change for *individual* children, however, was not examined and is not recommended at this time. Further testing on larger samples of home visiting participants, as well as data on a control or comparison group of children, would be required to determine if individual-level effects can be assessed using the ASQ-3 or ASQ-SE.

## **FEASIBILITY STUDY AND REVISED INDICATORS**

The feasibility pilot assessed the practicality of states and large counties implementing Pew's Home Visiting Data for Performance Initiative (DPI) recommendations as articulated in Phase I report. To accomplish this goal, we designed an implementation study to address the following research questions:

1. How feasible is it for states/counties to collect and analyze the original nine home visiting system performance indicators recommended by Pew?
2. How feasible is it for states/counties to collect and analyze the original 16 home visiting system descriptive factors recommended by Pew?

3. What are the facilitators and barriers to states/counties collecting and analyzing the original nine home visiting system performance indicators recommended by Pew?
4. What are the facilitators and barriers to states/counties collecting and analyzing the original 16 home visiting system descriptive factors recommended by Pew?
5. How feasible is it for states/counties to access home visiting system performance indicator data through administrative data linkage with other service systems' (e.g., child welfare, vital records, Medicaid) electronic records, and how does this compare to the alternative of relying on home visitor case records for this data?

### **Feasibility Study Design and Sample**

A convenience sample of five states and one large county—Connecticut, Iowa, Kansas, Los Angeles County, Massachusetts, and Oklahoma—participated in the pilot. They each gathered retrospective participant-level data for a cohort of home visiting program participants enrolled in a sample of their local home visiting programs during a 12-month period. The local programs that were selected for analysis by each pilot site were generally representative of the range of home visiting program models available throughout that state/county, except when access to data was limited by funding source. Four of the six pilot sites were able to provide data on families served by both federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) and non-MIECHV (state)-funded programs. The other two sites were prevented from doing so because of differences in data collection requirements, data collection systems, and, sometimes, data access by funding source. The pilot sites were charged with attempting to capture as many of the Pew home visiting performance indicators and descriptive factors for their sample as possible. At least one indicator was to be captured via electronic linkage with client records from another state/county agency (e.g., child welfare, Medicaid, vital records). Each site recorded the barriers that they encountered in trying to do this, as well as any factors that facilitated their efforts. A detailed report on the sample, process and final recommendations is available on the Chapin Hall website.<sup>3</sup>

### **Key Findings**

The key results of the pilot sites' efforts to implement the Pew DPI recommendations are summarized here:

- Each of the pilot sites were able to capture the majority of Pew's original nine home visiting system performance indicators for their retrospective samples; yet, none of the sites found it feasible to collect data for all nine of the indicators. This limitation is not as grave as it first appears, however, because it pertains to a retrospective sample. Most of the pilot sites recently upgraded their home visiting data collection infrastructure or are in the process of doing so in response to Pew releasing its DPI recommendations in October 2015 and the U.S. Health Resources and Services Administration (HRSA) releasing the revised MIECHV Benchmarks in

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<sup>3</sup> Klein, S. & Daro, D. (2017). The Pew Home Visiting Data for Performance Initiative: Phase II Final Report on Feasibility Study. Chicago, IL: Chapin Hall at the University of Chicago. Available at [www.chapinhall.org/pewhvdatainitiative](http://www.chapinhall.org/pewhvdatainitiative).

2016. Consequently, their capacity to report data on the Pew performance indicators and descriptive factors going forward is far greater than our study results seem to suggest.

- Several of the pilot sites did not capture Pew's *Interbirth Interval* performance indicator. They questioned whether doing so was worth the effort given that it only applied to a subgroup of families served by their home visiting system (i.e., those enrolled prenatally or shortly after birth who remained in the program for at least a year and half after childbirth) and given that it was not a MIECHV Benchmark requirement.
- The pilot sites were uncertain how to account for mothers and children already receiving treatment prior to being screened for maternal depression or developmental delays when calculating the *Maternal Depression Screening and Referral* and the *Child Development Screening and Referral* indicators. They recommended that these program participants not be included when calculating these indicators since there is no reason for home visitors to refer these participants for services they are already receiving.
- The pilot sites preferred Pew's *Breastfeeding* indicator, which measures this behavior at three months postpartum, over the MIECHV Benchmark for breastfeeding, which measures this behavior at six months postpartum. They observed that many of the mothers in their home visiting programs must return to low-wage, service sector jobs within six months of childbirth, where it is not easy for these mothers to pump and store breast milk. Nevertheless, the pilot sites were uncomfortable asking their home visiting programs to collect breastfeeding data twice (at three *and* six months postpartum) because of concerns about data collection redundancy and burden.
- Data from several of the pilot sites indicated that some of the mothers in their home visiting programs quit smoking while pregnant but then start again before they complete the program, although sometimes the amount of their tobacco consumption is reduced. They were not sure how to account for the time variant nature of this outcome when calculating Pew's *Maternal Smoking and Tobacco Use* indicator, which simply asks for the rate of mothers who quit smoking.
- Only two of the pilot sites were able to capture Pew's *Child Maltreatment* indicator, which requires linking home visiting participant records with state/county child protective services records. Those that were successful had preexisting data sharing MOUs before volunteering for the pilot. The others found that negotiating a data sharing MOU with their local child welfare agency was a long and difficult process that sometimes broke down over the child welfare agency's concerns about data privacy. However, they thought that it might be easier to negotiate an MOU of this type for prospective data if families signed consents. While several of the pilot sites defaulted to using home visitor report data to measure child maltreatment outcomes for their retrospective study samples, they were dissatisfied with this alternative because it prevented them from measuring child maltreatment outcomes after families completed home visiting, which is when research suggests prevention effects tend to appear.
- The pilot sites were able to collect participant-level data for Pew's 16 descriptive factors more reliably than for the nine Pew indicators. Two sites were able to collect all 16 descriptors with a third site collecting all but one descriptor.

- The most difficult descriptive factors for the sites to capture were the *Number of Home Visits*, *Supervisor-to-Home Visitor Ratio*, and *Average Caseload*, all of which describe home visiting program characteristics rather than participant characteristics.
- Lastly, while most of the pilot sites were able to capture *Maternal Race*, *Maternal Ethnicity*, *Native Language*, *Date & Reason for Termination*, and some indicator of father involvement, the response categories for these items varied, making it difficult to aggregate data across pilot sites or to conduct cross-site comparisons.

Based on these findings and our work in the parent capacity and child development domains, we recommend several revisions to the original Pew home visiting performance indicators and descriptive factors. The final list of recommended indicators and descriptive factors are summarized in Figure 2.

## **SUMMARY RECOMMENDATIONS**

Our revised indicators, while not in perfect alignment with the indicators and measures recommended in the MIECHV Benchmarks, offers home visiting programs and state managers a concise and comprehensive framework for capturing the collective benefits of investing in early home visiting. We have focused on proximate indicators related to the core objectives of early home visiting programs, namely maternal health and well-being and optimal child development. In addition to the measurement and implementation lessons ongoing above, our Phase II work identified a number of issues important to advancing a more coordinated system of support for young families.

- Utilizing a set of standard process and outcome measures, as well as a uniform way of describing program participants, represents a key infrastructure component for documenting the collective impact of public and private investments in early home visiting. Our pilot work suggests this type of uniform system is within our reach and potentially applicable to a range of programs focused on enhancing early child development and parental capacity.
- The role of administrative data in capturing core program outcomes is, at the moment, limited. Addressing the technical issues surrounding the ability of states to implement robust and reliable data linkages (privacy concerns, variability in data systems, and overall data quality, among other concerns) will require specific attention at both the state and Federal levels to overcome barriers to the widespread use of these data.
- The most salient and broadly applicable performance outcomes across all early home visiting programs (enhancement of parental capacity and achieving optimal child development) will require home visitors to play a more active role in the monitoring of participant performance. Because administrative data in these two domains is very limited, documenting performance in these areas requires that home visitors tell the story. As such, specific attention needs to be paid to training home visitors in this important task and providing them adequate supervision to insure ongoing data quality and consistency.
- The Pew Data Initiative identified a minimum data set, one that is applicable to the majority of early home visiting programs currently being implemented across the country. Specific

communities and program models may want to consider adding additional indicators to this set for their own research and quality improvement efforts to capture other outcomes of high priority within their specific theory of change or within their specific target population.

## **CONCLUSIONS**

Early home visiting programming has made great strides over the past 20 years in both defining program quality and structure. The core domains and related indicators highlighted by the DPI project reflect a growing consensus regarding the likely ways in which investments in high-quality early home visiting may alter the trajectory of the young children, parents, and families being served. To further advance this discussion, the DPI team will engage in a number of educational, dissemination, and advocacy activities over the next several months. Specifically, we will present the final recommendations individually to a range of key stakeholders currently involved in implementation home visiting programs at both the state and Federal levels. These stakeholders will include:

- National Home Visiting Model Developers;
- measurement committee of the Association of State and Tribal Home Visiting Initiatives (ASTHVI);
- Home Visiting Research Coalition (HVRC);
- foundations and think tanks working on related early childhood system performance measurement projects (e.g., Pritzker, Heising-Simon, and Child Trends);
- Maternal, Infant and Early Childhood Home Visiting (MIECHV) central office staff and Regional Project Officers;
- federal Administration of Children and Families (ACF) Office of Planning, Research, and Evaluation (OPRE); and
- federal Health Resources and Services Administration (HRSA) Division of Home Visiting and Early Childhood Systems.

Following discussions with these stakeholder groups, we will discuss the recommendations more broadly via webinars and conference presentations.

**Figure 2:  
Pew Home Visiting Data for Performance Initiative:  
Final Recommended Indicators and Descriptive Factors**

<b>Performance Indicators</b>	
<b>Maternal Depression Screening and Referral</b>	Percent of untreated mothers participating in home visiting who are referred for follow-up evaluation and treatment as indicated by depression screening with a validated tool.  (Population excludes mothers already receiving treatment for depression from the numerator and denominator)
<b>Postpartum Health Care Visit</b>	Percent of mothers enrolled in home visiting prenatally or within 30 days of giving birth who receive a postpartum visit with a health provider within 2 months (60 days) following birth.
<b>Maternal Educational Achievement</b>	Percent of mothers who entered home visiting without high school or GED completion who have enrolled in or completed high school or the equivalent.
<b>Child Development Screening and Referral</b>	Percent of untreated children participating in home visiting who are referred for follow-up evaluation and intervention as indicated by developmental screening with the Ages and Stages Questionnaire (ASQ).  (Population excludes children already receiving developmental support services from the numerator and denominator)
<b>Child Development<sup>4</sup></b>	1. Percent of children enrolled in home visiting who demonstrate improved social and emotional competencies on the <i>Infant Toddler Social Emotional Assessment (ITSEA/BITSEA)</i> ; and  2. Percent of children enrolled in home visiting who demonstrate enhanced language development and age-appropriate skills on the <i>MacArthur-Bates Communicative Development Inventories (CDI) – Short Form</i> .
<b>Child Maltreatment</b>	Percent of children participating in a home visiting program with at least 1 investigated case of maltreatment following enrollment.  (Realigned with MIECHV Benchmark which is restricted to <i>investigated</i> reports of child maltreatment)
<b>Well-Child Visit</b>	Percent of children participating in home visiting who received their last recommended visit based on the American Academy of Pediatrics' "Bright Futures" schedule.

<sup>4</sup> For Children 18-36 months

<p><b>Maternal Smoking or Tobacco Use</b></p>	<p>1. Percent of pregnant mothers participating in home visiting who quit smoking or tobacco and remain tobacco-free throughout their pregnancy; and</p> <p>2. Percent of mothers participating in home visiting who reduced their amount of smoking or tobacco use following program enrollment.</p> <p>(Focused indicator on pregnant mothers who quit and abstain from smoking/tobacco use throughout their pregnancy, and added a second indicator measuring smoking/tobacco use reduction during program enrollment, not just abstinence)</p>
<p><b>Parental Capacity</b></p>	<p>1. Percent of families enrolled in home visiting who report improvement in mobilizing resources on the Healthy Families Parenting Inventory (HFPI) Mobilizing Resources subscale (parent self-assessment);</p> <p>2. Percent of families enrolled in home visiting who report improved parent-child behaviors on the HFPI Parent-Child Behavior subscale (parent self-assessment);</p> <p>3. Percent of families enrolled in home visiting who report improvement in the quality of their child rearing environment on the HFPI Home Environment subscale (parent self-assessment);</p> <p>4. Percent of mothers enrolled in home visiting who demonstrate improved capacity to meet their child's needs on the HOME-Short Form (home visitor assessment); and</p> <p>5. Percent of mothers enrolled in home visiting who demonstrate more frequent parent-child interactions on the DANCE or PICCOLO (home visitor observation).</p>
<p><b>Breastfeeding</b></p>	<p>Percent of mothers enrolled in home visiting during pregnancy who initiate and continue breastfeeding for at least 6 months.</p> <p>(Adopted MIECHV Benchmark which currently measures this behavior at six months postpartum rather than 3 months postpartum)</p>
<p><b>Descriptive Indicators</b></p>	
<p><b>Child Characteristics</b></p>	<p>Date Of Birth Full-Term Or Preterm Birth</p>
<p><b>Maternal Characteristics</b></p>	<p>Date Of Birth Number Of Prior Births Residential Address Or Zip Code</p>
<p><b>Maternal Characteristics</b></p>	<p>Race (Using 2010 Census Race Categories) Ethnicity (Using 2010 Census Ethnicity Categories) Native Language (Using MIECHV Benchmark Response Categories) Contact With Father At Time Of Enrollment (Yes/No)</p>

<b>Participant Program Experiences</b>	Date Of First Home Visit Date Of Subsequent Home Visits Date And Reason For Termination (Using MIECHV Response Categories)
<b>Program-Level Data</b>	Model Or Program