Assessing Effectiveness of Early Childhood Home Visiting Models Implemented with Tribal Populations

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Home Visiting Evidence of Effectiveness (HomVEE) Review

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This volume and its companion volume of appendices are available at https://homvee.acf.hhs.gov/tribal.

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Overview

A. Introduction

A portion of the federal funds that support early childhood home visiting for families and young children is designated specifically to support early childhood home visiting in tribal populations. Therefore, policymakers and program administrators should know what research has revealed about early childhood home visiting in these communities.

The Home Visiting Evidence of Effectiveness (HomVEE) project is an evidence clearinghouse that systematically reviews research on the effectiveness of early childhood home visiting programs. (Detailed information and results are available at https://homvee.acf.hhs.gov.) To assess the evidence of effectiveness of models that could be relevant to communities with tribal populations, HomVEE conducted a systematic review focusing on effectiveness research about models that have been tested with tribal populations. This report compiles and summarizes the findings of that research review. Specifically, it provides details on the findings of impact research on the 21 early childhood home visiting models that have impact studies examining their effectiveness in tribal populations.[1]

B. Primary research questions

This report focuses on these core questions:

- What research is available about the effectiveness of early childhood home visiting with tribal populations?
- What does this research say about how early childhood home visiting is implemented with tribal populations and how it affects them?

C. Purpose

The Tribal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program aims to support the development of tribal children and families through implementing high quality, culturally relevant early childhood home visiting models that have demonstrated evidence of effectiveness or are considered promising approaches.

The Office of Planning. Research, and Evaluation at the Administration for Children and Families, U.S. Department of Health and Human Services (HHS) contracts with Mathematica to conduct the HomVEE review. HomVEE conducted its initial systematic review focusing specifically on research relevant to tribal communities in fall 2010. As the research literature on early childhood home visiting models studied with tribal populations grows, HomVEE updates the review.

[1] Some early childhood home visiting models have only implementation or descriptive research conducted with tribal populations. Some basic information about these models is included in the report Appendix B, but that content is not included in the main body of the report.

D. Key findings and highlights

HomVEE's 2022 review of research with tribal populations includes 77 manuscripts that spanned 32 early childhood home visiting models.

- Two-thirds of the models (21 models) had research that reported results from an impact study that was eligible for inclusion in HomVEE's 2022 review. Eligible research on the remaining 11 models examined a tribal population with implementation research only.
- Eligible impact research consisted of 48 manuscripts. Among those, 14 manuscripts (29 percent) reported findings from a well-designed impact study. Eight of those manuscripts specifically examined the effect of a model with a 100 percent tribal population or sample.
- One early childhood home visiting model, Family Spirit, met HHS criteria for an "evidence-based early childhood home visiting service delivery model" for tribal populations.
- The review includes two detailed appendices, presented in a separate volume from these findings in the main report. Appendix A describes the review process HomVEE used to identify, screen, and assess the research literature on early childhood home visiting models implemented with tribal populations. Appendix B provides information on each model (as indicated in Box 1 in this report). Appendix B also includes models that had only implementation research (and no impact studies) available about tribal populations.

The more rigorous the design, the more likely it is that a study's impacts were caused by the program model itself rather than by other factors. HomVEE uses the term "well-designed impact studies to" refer to those studies that meet HomVEE's published standards for moderate- or high-quality research.

E. Methods

HomVEE's review of research with tribal populations involved the following steps:

- Conducting a broad literature search, including database searches and a call for research, to identify research on early childhood home visiting models implemented in tribal communities or studies that included a sizable share (30 percent or more) of tribal participants. This search included literature on early childhood home visiting models implemented among tribal populations in high income or upper middle income countries[2] outside the United States.
- Screening manuscripts for relevance.

Of the 21 eligible models with impact research included in this review, only one model, Family Spirit, met HHS criteria for an "evidence-based early childhood home visiting service delivery model" for tribal populations.

[2] HomVEE uses the country income level as defined by the World Bank classification for the manuscript's year of publication (or for unpublished research, the year it was submitted to HomVEE), available at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519.

- Rating the quality of manuscripts about impact studies with eligible designs based on their ability to produce unbiased estimates of a model's effects. Reviewers that had no conflict of interest assessed, using a standard protocol, the research design and methodology of the impact study described in each manuscript and assigned each manuscript a rating of high, moderate, or low.[3] HomVEE's published standards assign a rating of moderate or high to a well-designed impact study.
- Assessing the evidence of effectiveness for each model to determine whether the model met the HHS criteria for "an evidence-based early childhood home visiting service delivery model" in tribal populations. (More information on the criteria is available here: https://homvee.acf.hhs.gov/about-us/hhs-criteria.)
- Reviewing implementation information for each model with well-designed impact studies (those with manuscripts that earned a rating of moderate or high) and models that have only implementation research. (Implementation information is not discussed in detail in this report.)
- Updating this report with new information.

[3] **Manuscripts** describe study results. Manuscripts may be published or unpublished research, such as journal articles, book chapters, or working papers. A single study may produce one or many manuscripts. Typically, one manuscript reports on only one study, although in rare cases one manuscript may report on several studies, if it describes evaluations of multiple interventions or the same intervention evaluated in multiple distinct (non-overlapping) samples. A **study** evaluates a distinct implementation of an intervention (that is, with a distinct sample, enrolled into the research investigation at a defined time and place, by a specific researcher or research team).

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I. Introduction

The federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program provides grants to states, territories, and tribal entities to develop and implement home visiting programs. A portion of the federal funds that support home visiting for pregnant women and families with young children is designated for supporting home visiting in tribal communities. Specifically, the MIECHV authorizing statute[4] sets aside three percent of the total grants appropriation to federally recognized tribes (or consortia of tribes), tribal organizations, or urban Indian organizations.

The overall goals of the MIECHV Program are to strengthen and improve maternal and child health programs, improve service coordination for at-risk communities, and identify and provide comprehensive early childhood home visiting services to families who reside in at-risk communities. The MIECHV Program awards grants to implement evidence-based models that promote outcomes such as improvements in prenatal, maternal, and newborn health; improvements in child health and development; improvements in parenting skills; improvements in school readiness and child academic achievement; reductions in crime or domestic violence; improvements in family economic self-sufficiency; and improvements in the coordination of referrals for, and the provision of, other community resources and supports for eligible families.

The Tribal MIECHV Program mirrors the state and territory program to the maximum extent practicable, with the goal of supporting the development of American Indian and Alaska Native (AIAN) children and families through a coordinated, high quality, evidence-based early childhood home visiting strategy.[5] The Tribal MIECHV Program is designed to support the implementation of high quality, culturally relevant early childhood home visiting models that have demonstrated evidence of effectiveness.

The Office of Planning, Research, and Evaluation at the Administration for Children and Families (ACF), U.S. Department of Health and Human Services (HHS), contracts with Mathematica to conduct the Home Visiting Evidence of Effectiveness (HomVEE) project, an evidence clearinghouse that systematically reviews early childhood home visiting effectiveness research. HomVEE reviews the literature to assess the evidence of effectiveness of early childhood home visiting models that serve families with pregnant women and children from birth to kindergarten entry. HomVEE provides states and other interested parties with information about which early childhood home visiting models have shown evidence of effectiveness as required by the MIECHV authorizing statute. The evidence base for home visiting with tribal populations, though, is not as extensive as the

[4] The MIECHV authorizing statute (Social Security Act, Title V, § 511 (42 U.S.C. § 711)) sets aside 3 percent of the total appropriation (authorized in Section 511(j)) for grants to federally recognized tribes (or a consortia of tribes), tribal organizations, or urban Indian organizations. The statute (Section 511(h)(2)(A)) requires that the tribal grants, to the greatest extent practicable, be consistent with the requirements of the MIECHV Program grants to states and territories (authorized in Section 511(c)).
[5] HomVEE's review for this report also includes research conducted with Native Hawaiians.

evidence base for the general population. Consequently, HomVEE conducts a specific systematic review to help determine the evidence of effectiveness for home visiting in tribal populations.

This review presents information about the available research and effectiveness of early childhood home visiting with tribal populations. Two appendices, which serve as a companion to this review, are presented in a separate volume. Appendix A describes the review process HomVEE used to identify, screen, and assess the research literature. Appendix B provides details on each model reviewed, including those with only implementation research (see Box 1).

This volume and its companion volume of appendices are available at https://homvee.acf.hhs.gov/tribal.

A. Purpose of HomVEE's review of research with tribal populations

To assess the evidence of effectiveness of models of potential relevance to tribal communities, HomVEE conducted a focused systematic review. The initial 2010 review resulted in a final report; the current update includes manuscripts released through September 2021 or received through the HomVEE call for research that closed in early January 2022. This update presents conclusions in a more streamlined manner than previous reports.[6] Our search for relevant research included consideration of research and evaluation conducted in indigenous communities outside of the United States.[7] Although there is tremendous variation among Native and indigenous communities within the United States and across the globe, they share similarities such as traditional culture, historical trauma from colonization, and health disparities. Knowing which early childhood home visiting models have been tested with indigenous populations outside the United States can provide useful information to tribal communities as they make decisions about early childhood home visiting locally.[8] (To respect tribal sovereignty, HomVEE does not name specific tribal communities when summarizing findings. If researchers identified a specific tribal community as participants, HomVEE sometimes names the community in appendix tables about the model.)

[6] Prior versions of HomVEE's tribal report are available at https://www.acf.hhs.gov/opre/project/assessing-evidence-home-visiting-evidence-effectiveness-2011-2020.
[7] For the purposes of HomVEE's review of research with tribal populations, we included manuscripts in which the original researchers reported that at least 30 percent of sample members were tribal members, were tribally affiliated, or had race or ethnicity demographics that met the definition HomVEE uses for its review with tribal populations. Our definition of tribal included participants who identified as American Indian, Alaska Native, or Native Hawaiians or Other Pacific Islanders or who identified as members of indigenous groups in other countries.
[8] For this review, we identify any named intervention as a separate model. Some models were included in this review before HomVEE published its definition of an early childhood home visiting service delivery model in its handbook of procedures and standards (see https://homvee.acf.hhs.gov/publications/methods-standards). As with HomVEE's annual review, this review did not retroactively confirm that all included interventions meet all aspects of that definition but did confirm that models newly added to the review with this update adhere to that definition.

There is a key difference between HomVEE's annual review of early childhood home visiting models with the general population and HomVEE's review of research with tribal populations:

- The *annual review* considers only manuscripts about a set of early childhood home visiting models selected through a prioritization process, including any versions of those prioritized models (such as adaptations or supplements).[9]
- The *tribal review*, however, considers all eligible impact study manuscripts, regardless of which early childhood home visiting model the manuscripts study.

Box 1. Details on each model in Appendix B include the following:

- List of eligible manuscripts about that model
- Model description (for models with any well-designed impact studies)
- The model's evidence of effectiveness

The more rigorous the design, the more likely it is that a study's impacts were caused by the program model itself rather than by other factors. HomVEE uses the term well-designed impact studies to refer to those studies that meet HomVEE's published standards for moderate- or high-quality research.

As a result, the review of research with tribal populations includes manuscripts about some early childhood home visiting models that have not yet been comprehensively examined by HomVEE's annual review. The review with tribal populations also examines some implementation study manuscripts, which are presented in the report appendices. Tribal MIECHV aims to support the development of tribal children and families through implementing high quality, culturally relevant early childhood home visiting models that have demonstrated evidence of effectiveness or are considered promising approaches.

B. Summary of research reviewed and report findings

We focus this report on all models with well-designed impact studies, and Appendix B presents basic information about all models that were eligible for this review (Box 1). Of the 77 manuscripts spanning 32 models identified in HomVEE's review of research with tribal populations, 48 described results from impact studies of 21 unique early childhood home visiting models. Fourteen of those manuscripts (examining six models) reported findings from a well-designed impact study, with eight manuscripts specifically examining the effect of a model with a 100 percent tribal population or sample. Only one model, Family Spirit, met the HHS criteria for an "evidence-based early childhood service delivery model with tribal populations."

[9] The home visiting literature commonly refers to adaptations and/or enhancements as "versions." More information about HomVEE's prioritization process is available at https://homvee.acf.hhs.gov/publications/methods-standards.

The early childhood home visiting field needs more well-designed research with tribal populations. Most impact studies did not meet HomVEE's published standards for well-designed research, and more research focused on impacts in a 100 percent tribal population or subgroup is needed (see Figure I.1 and Table I.1). However, Indian tribes (or consortia of tribes), tribal organizations, or urban Indian organizations, including the Tribal MIECHV Program grantees, might find this information useful in determining whether these models would fit their communities and whether implementing these models in their communities would be feasible.

HomVEE uses the term "well-designed impact studies" to refer to those whose design suggests that some or all of the findings were due to the early childhood home visiting model and not to other factors, as specified in HomVEE's published standards.

The rest of this report describes the findings from this review. Chapter II describes the impact study manuscript ratings and evidence of effectiveness for models eligible for the review, then summarizes the types of findings reported in the manuscripts and characteristics of the early childhood home visiting models. Presented in a separate volume, Appendix A describes the review process HomVEE used to identify, screen, and assess the research literature on early childhood home visiting models implemented with tribal populations. Appendix B provides information on each model (as indicated in Box 1). Appendix B also includes models that had only implementation research (and no impact studies) available about tribal populations.

Figure I.1. Less than half of the impact studies identified in HomVEE's review of research with tribal populations was well designed according to HomVEE's published standards

77 manuscripts with research that examined a tribal population
Across 32 early childhood home visiting models

29 manuscripts about implementation studies

11 models have only implementation research

The other implementation research discussed models that also had impact studies

48 manuscripts about impact studies
Across 21 models

14 manuscripts have well-designed impact studies
Across 6 models

7 had participant samples composed entirely of tribal participants

1 reported impacts for a subgroup composed entirely of tribal participants

6 manuscripts had a sample that combined tribal and non-tribal participants

1 model, Family Spirit®, meets HHS criteria for an "evidence-based early childhood home visiting service delivery model" for tribal populations

5 models with well-designed research do not meet HHS criteria for an evidence-based early childhood home visiting service delivery model for tribal populations

34 manuscripts (71%) did not meet HomVEE's standards for well-designed research
15 models with impact studies had only studies that did not meet HomVEE's standards

Table I.1. Models with impact studies included in the HomVEE Tribal review: 21 models had impact studies, including 6 with well-designed impact-studies[a]

	Model name
	Six models with at least one well-designed impact study that includes tribal populations (discussed throughout report)
1.	Bureau of Indian Affairs' Baby Family and Child Education Program (Baby FACE) *Favorable findings in child development and school readiness and positive parenting practices*
2.	Early Start (New Zealand) *Favorable findings in child development and school readiness, positive parenting practices, and reductions in child maltreatment*
3.	Family Spirit *Favorable findings in child development and school readiness, maternal health, and positive parenting practices*
4.	Family Spirit Nurture *Favorable findings in child health*
5.	Healthy Families America (HFA) *Favorable findings in child health; maternal health; positive parenting practices; reductions in child maltreatment; and reductions in juvenile delinquency, family violence, and crime*
6.	Healthy Starts trial/Te Piripohotanga (New Zealand) *No favorable findings*
	Fifteen models had research that included tribal populations, but impact studies did not meet HomVEE's published standards for well-designed research (Section II.A and Appendix B)
1.	Baby Basket program
2.	Families First (Canada)
3.	Healthy Children, Strong Families
4.	Home Interaction Program for Parents and Youngsters (HIPPY)
5.	Inter-Tribal Council of Michigan's (ITC of MI) Healthy Start project (Maajtaag Mnobmaadzid)
6.	Kheth'Impilo Community-Based Adherence Support
7.	Nurse-Family Partnership
8.	Obesity Prevention + Parenting Support
9.	Parents as Teachers/PAT
10.	Parents as First Teachers (New Zealand)
11.	Philani Outreach Programme
12.	Promoting First Relationships® - Home visiting promotion model
13.	SHARE-ACTION
14.	South Australia Family Home Visiting Programme
15.	Toddler Overweight and Tooth Decay Prevention Study (TOTS)

Note: For additional details on favorable findings, please see Appendix B. Baby FACE is a version of Parents as Teachers. The Families First program in Canada is based on the HFA model described elsewhere in this report, though at present not formally affiliated. HomVEE's standards for well-designed impact studies are published here: https://homvee.acf.hhs.gov/publications/methods-standards.

[a] Eleven additional models had implementation research conducted with a tribal population but did not have any impact studies. Those models are: Aboriginal Cradle to Kinder, Aboriginal peer-led home visiting programme, Australian Nurse-Family Partnership Program (a version of the Nurse-Family Partnership), Baby One Program, Even Start, Halls Creek Community Families Program, Home Activity Program for Parents and Youngsters Rural Outreach Project, Indian Family Wellness Project, ParentChild+® Core Model, Perinatal Intervention Program, and Universal Health Home Visit offered through Families First.

II. Information About Early Childhood Home Visiting Models Studied with Tribal Populations

HomVEE periodically conducts additional literature searches to identify new early childhood home visiting research conducted with tribal populations since the tribal home visiting review began in 2010.[10] Here we describe the quality and findings of impact studies of models eligible for the review. Additionally, we summarize the types of findings reported in the manuscripts and characteristics of the early childhood home visiting models that had well-designed research. The activities for this review mirror those conducted for the annual HomVEE review of research on the general population. (See Appendix A and information about the review process and HomVEE's standards for well-designed research on the HomVEE website, https://homvee.acf.hhs.gov/publications/methods-standards, for more detail).

In 2022, HomVEE substantially streamlined this report and established new screening criteria for eligible manuscripts that led to the following changes:

The current version of this report has been streamlined to focus primarily on well-designed impact research with study populations that include at least 30 percent tribal participants.

- Previous versions of the report included findings about models with exclusively descriptive or implementation research designs. To align more closely with the HomVEE annual review, this version screens out such models in discussing findings in the body of the report (but lists those models and their manuscripts in Appendix B).
- Previous versions included manuscripts with study populations that are made up of at least 10 percent tribal participants. To enhance the relevance to tribal populations the current version includes study populations that are made up of at least 30 percent tribal participants.

[10] Mathematica, under contract to ACF, issued a call for tribal-specific research in fall 2010 to identify additional research, reviewed the literature, assessed the quality of manuscripts examining impact studies, and evaluated the strength of evidence for specific early childhood home visiting models. The first report was published in February 2011. The report was updated annually through 2014 and then was updated again in 2017 and in 2020. The current update includes manuscripts released through September 2021 or received through the HomVEE call for research that closed in early January 2022.

A. HomVEE's review of research in tribal communities

In this section, we describe the ratings for each of the manuscripts about impact studies that HomVEE reviewed as well as the evidence of effectiveness of the models eligible for the review.[11]

1. Manuscript ratings

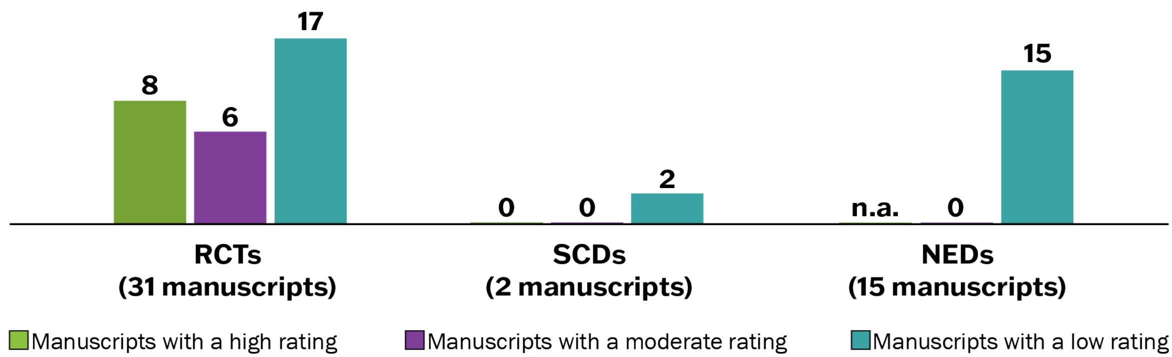
Common reasons that HomVEE assigned a low rating to a manuscript about an impact study included (1) the presence of confounding factors and (2) the intervention and comparison groups differing on key characteristics, or missing information about these characteristics, at baseline.

Fewer than one-third of manuscripts about impact studies reported on well-designed research (14 of 48). Of the 77 manuscripts identified for this review, 48 manuscripts about impact studies are included in this report. Among these, 31 used a randomized controlled trial (RCT) design, 2 used a single-case design study (SCD), and the remaining 15 used a non-experimental comparison group design (NED).[12] Only 14 of the 48 manuscripts (29 percent) reported on *well-designed* impact studies (Figure II.1). According to HomVEE's published standards, well-designed impact studies are defined as those with designs suggesting that some or all of the findings were due to the home visiting model and not to other factors. HomVEE assigns a high or moderate rating to manuscripts about impact studies with these designs and assigns a low rating if the impact study has a potentially concerning design limitation. Of note, HomVEE only reviews impact research with study designs for which we have existing standards.

[11] This update of HomVEE's report on research with tribal populations applies HomVEE's Version 2 Procedures and Evidence Standards, which were released in late 2020, to manuscripts about impact studies that were newly added to the report. Most manuscripts about impact studies that HomVEE reviewed for earlier iterations of this report were examined against Version 1 Procedures and Evidence Standards. Both versions of the standards are available at https://homvee.acf.hhs.gov/publications/methods-standards. There are minor differences between the terminology used in the Version 1 and Version 2 standards. This report uses terminology that is consistent with the Version 2 standards. HomVEE does not rate manuscripts about implementation studies but reports some basic information about those manuscripts in Appendix B.

[12] Non-experimental comparison group designs use a nonrandom process to assign sample members to an intervention group and a comparison group. Sample members can be assigned through statistical techniques that are designed to match sample members in each group so that each group has similar measurable characteristics on average, or they can be assigned based on convenience, by assigning people to groups because they are nearby, available, or otherwise convenient to include.

Figure II.1. Number of manuscripts about impact studies, by study design and rating



Source: HomVEE analysis.

Notes: According to published standards for the HomVEE review, an NED can receive only a moderate or low study quality rating. HomVEE considers well-designed impact studies to be those that earn a high or moderate rating based on HomVEE's review published standards.

n.a. = not applicable.

NED = non-experimental comparison group design study; RCT = randomized controlled trial; SCD = single-case design study.

Eight of the 14 manuscripts about well-designed impact studies conducted with a tribal population *specifically examined* the effect of the model with a 100 percent tribal population or subgroup. As detailed in Table II.1, they included four models with well-designed research focused exclusively on a tribal population and a fifth model whose research reported results with a tribal subgroup. (The remaining six manuscripts, which reported on Healthy Families America, had a sample that was one-third Native Hawaiian or Pacific Islander, but they did not report findings separately by tribal affiliation.)

Table II.1. Populations included in well-designed research eligible for review: Eight manuscripts examined model impacts with a 100 percent tribal population or subgroup

Model	Number of manuscripts about well-designed impact studies	Population	Percent tribal
1. Bureau of Indian Affairs' Baby Family and Child Education Program (Baby FACE)	1	Tribal communities across six states	100
2. Early Start (New Zealand)	1	Indigenous community in New Zealand	36 (comparison group) to 42 (intervention group) in full study. Authors also reported selected findings for the 100 percent tribal subgroup of families in which at least one parent identified as Māori.

Model	Number of manuscripts about well-designed impact studies	Population	Percent tribal
3. Family Spirit	4	Tribal communities on reservations in New Mexico and Arizona	100
4. Family Spirit Nurture	1	Tribal community in New Mexico	100
5. Healthy Families America	6	Native Hawaiian or Pacific Islander	33 (intervention group) to 34 (comparison group)
6. Healthy Starts trial/Te Piripohotanga (New Zealand)	1	Indigenous communities in Australia and New Zealand	100
Total manuscripts	**14**		

Source: HomVEE review of manuscripts that reported on well-designed impact studies. Baby FACE is a version of Parents as Teachers.

2. Evidence of effectiveness of the early childhood home visiting models

Only one model, Family Spirit, met HHS criteria for an "evidence-based early childhood home visiting service delivery model" for tribal populations.

Research from samples composed entirely of tribal participants or at least two distinct subgroups entirely composed of tribal participants can meet HHS criteria for an "evidence-based early childhood home visiting service delivery model" in tribal populations (Box 2).

Four manuscripts about Family Spirit were about well-designed RCT impact studies. These included samples entirely made up of tribal participants (three manuscripts focused on the same study and sample). Across the four manuscripts, there were favorable, statistically significant impacts in three domains. At least one of the findings was sustained at least one year after model enrollment, and results of an RCT were published in a peer-reviewed journal.

Box 2. Definition of an "evidence-based early childhood home visiting service delivery model" in tribal populations

A model that meets the HHS criteria for an "evidence-based early childhood home visiting service delivery model" with tribal populations does so based on research from either (1) a sample composed entirely of tribal participants or (2) at least two distinct subgroups composed entirely of tribal participants.

To meet the HHS criteria, models must have at least one of the following:

- At least one high- or moderate-rated impact study of the model finds favorable impacts in two or more of the eight outcome domains.
- At least two high- or moderate-rated impact studies of the model find one or more favorable impacts in the same domain.

Additional criteria also apply in the case of randomized controlled trials, see https://homvee.acf.hhs.gov/about-us/hhs-criteria.

The other five models with well-designed impact studies did not meet HHS criteria for an evidence-based model with tribal populations for a range of reasons (Table II.2).

Table II.2. Reasons models with well-designed impact studies did not meet HHS criteria for an evidence-based model with tribal populations

Reason	Model
Favorable, statistically significant effects were reported for tribal participants, but they have not yet been replicated in another sample or subgroup composed entirely of tribal participants	• Baby FACE program • Early Start (New Zealand) • Family Spirit Nurture
Findings were not reported separately for tribal populations	• Healthy Families America
No favorable, statistically significant impacts were reported for tribal participants at least one year after model enrollment, which is required for RCTs)	• Healthy Starts trial/Te Piripohotanga (New Zealand)

Source: HomVEE review of 48 manuscripts about impact studies of 21 early childhood home visiting models implemented with tribal populations; 14 manuscripts (about 6 models) reported on well-designed impact studies.

Note: Models in this table had high or moderate quality manuscripts about impact studies eligible for HomVEE's review of research with tribal populations. Some of these models meet the HHS criteria for the annual review in the general population.

Appendix B, which appears in a companion volume to this review, provides detailed information about the effects found in the above models implemented in tribal populations; if the model was also eligible for HomVEE's annual review of effects on the general population, the appendix provides links to more detail. Readers can find a summary of all HomVEE review results related to models implemented with tribal populations on a dedicated page of the HomVEE website (https://homvee.acf.hhs.gov/tribal).[13]

B. Information about early childhood home visiting models evaluated with tribal populations

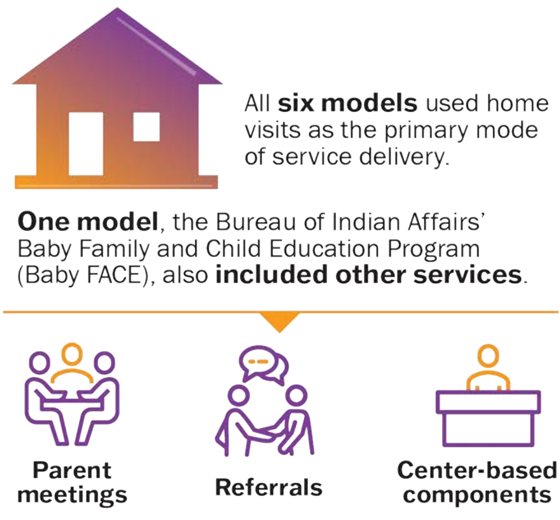
In this section, we summarize descriptive information and implementation details about the six models with well-designed impact studies identified from our overall review of 77 manuscripts spanning 32 models. HomVEE collected descriptive information from the 14 manuscripts about well-designed impact studies (Box 3). In an effort to gather more

> **Box 3. Descriptions of models in this section are based on information from both impact and implementation studies.**
>
> Information comes from 29 manuscripts, including 14 manuscripts about well-designed impact studies and 15 other manuscripts about those models.
>
> This information may not reflect how models are being implemented outside of the context in which the research occurred.

[13] Two models in this review that include well-designed impact studies, Family Spirit Nurture and Healthy Starts Trial, have not been included in the overall HomVEE review to date. Detailed information on these models is available in Appendix B, but neither has a dedicated HomVEE webpage.

complete details about these models, we also examined the way the models were described in the 9 manuscripts about low-rated impact studies and in the four implementation study manuscripts on these six models.[14]

Figure II.2. Services offered by models with well-designed impact studies



Source: HomVEE review of six models with well-designed impact studies.

Below, we describe the features of early childhood home visiting models that manuscripts typically reported on: model goals, service delivery, frequency and duration of home visits, population of focus, geographic location, type of implementing agency, and home visitor qualifications and training. Appendix B provides information about each model, lists the manuscripts from which HomVEE gathered the information, and provides detail about well-designed impact studies. Additional information about the characteristics of well-designed impact studies typically is on the HomVEE website (or otherwise appears in Appendix B).

Model goals. All models had goals related to family and child outcomes, but some integrated culturally relevant processes into their overarching aims. For example, Family Spirit and Family Spirit Nurture explicitly describe the model as providing culturally relevant services for tribal families in support of the ultimate goal of improving parent and child outcomes.

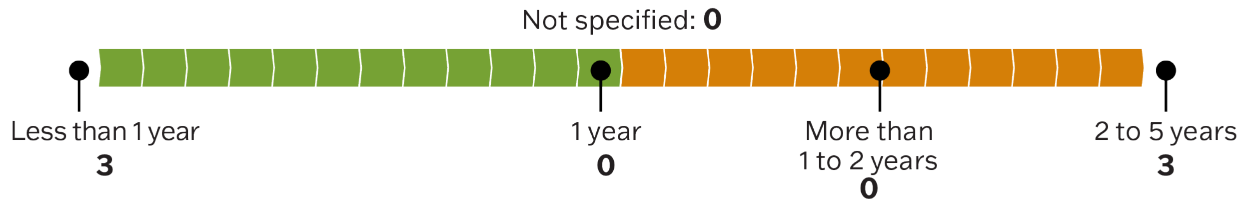
Service delivery. All six models used home visits as the primary mode of service delivery, but one model, the Bureau of Indian Affairs' Baby FACE, also included other services (Figure II.2). These other services comprised group parent meetings, referrals through a resource network, and center-based components.

Number, frequency, and duration of home visits. The number, frequency, and duration of home visits varied by model. Home visitation frequency ranged from weekly over the course of enrollment to only one visit total. Most models offered home visits weekly, biweekly, or monthly. Researchers typically did not report the number or length of home visits. For the two models with manuscripts that reported home visit quantity, the number of home visits over the course of participation was few (5 or fewer) for Healthy Starts trial/Te Piripohotanga (New Zealand) or many (more than 15) for Family Spirit. Of the models that had manuscripts reporting home visit duration, Family Spirit Nurture offered visits lasting less than one hour,

[14] Because the original review in 2010 identified so few manuscripts, HomVEE decided the review of research with tribal populations would include outcomes studies that had ineligible study designs for the impact review (such as pre-post or correlational) but that were otherwise relevant in the implementation review process. As of 2022, HomVEE no longer includes manuscripts about descriptive studies of outcomes (including pre-post studies) in the review of research with tribal populations and instead reviews only research with impact and implementation designs.

and three offered home visits that lasted between one and two hours (Baby FACE, Family Spirit Nurture, and HFA). Models varied in duration, ranging from 10 weeks to three to five years, with most lasting either less than one year or more than two years (Figure II.3).

Figure II.3. Duration of the program and number of models evaluated with tribal populations



Source: HomVEE review of six models with well-designed impact studies.

Note: For one model, Family Spirit, the frequency of home visits declined as children aged, so the model appears in several frequency categories. Additionally, in two manuscripts about the model, services were provided for only nine months, whereas in other manuscripts about the model, services were provided for more than two years.

Population of focus. Models recruited participants based on the age of their children as well as the presence of specific risk factors. Two models, Family Spirit Nurture and Healthy Starts trial/Te Piripohotanga (New Zealand), offered services to families during infancy. Early Start (New Zealand) and HFA began offering services to families at birth or in early infancy and continued to offer services to families with children up to age 2 to 5 years. Baby FACE offered services from birth up to age 8 (Figure II.4).

In addition to age, models focused on a variety of populations. Baby FACE was available to any family meeting the age of focus and living in rural reservations. Other models, however, engaged families with specific risk factors. For example, Family Spirit engaged adolescents and women up to age 19 (another manuscript about the same program included women up to age 22 at conception). The Healthy Starts trial focused on infants living in a household with someone who smokes.

Figure II.4. Age of study participants at program enrollment and the number of models evaluated with tribal populations

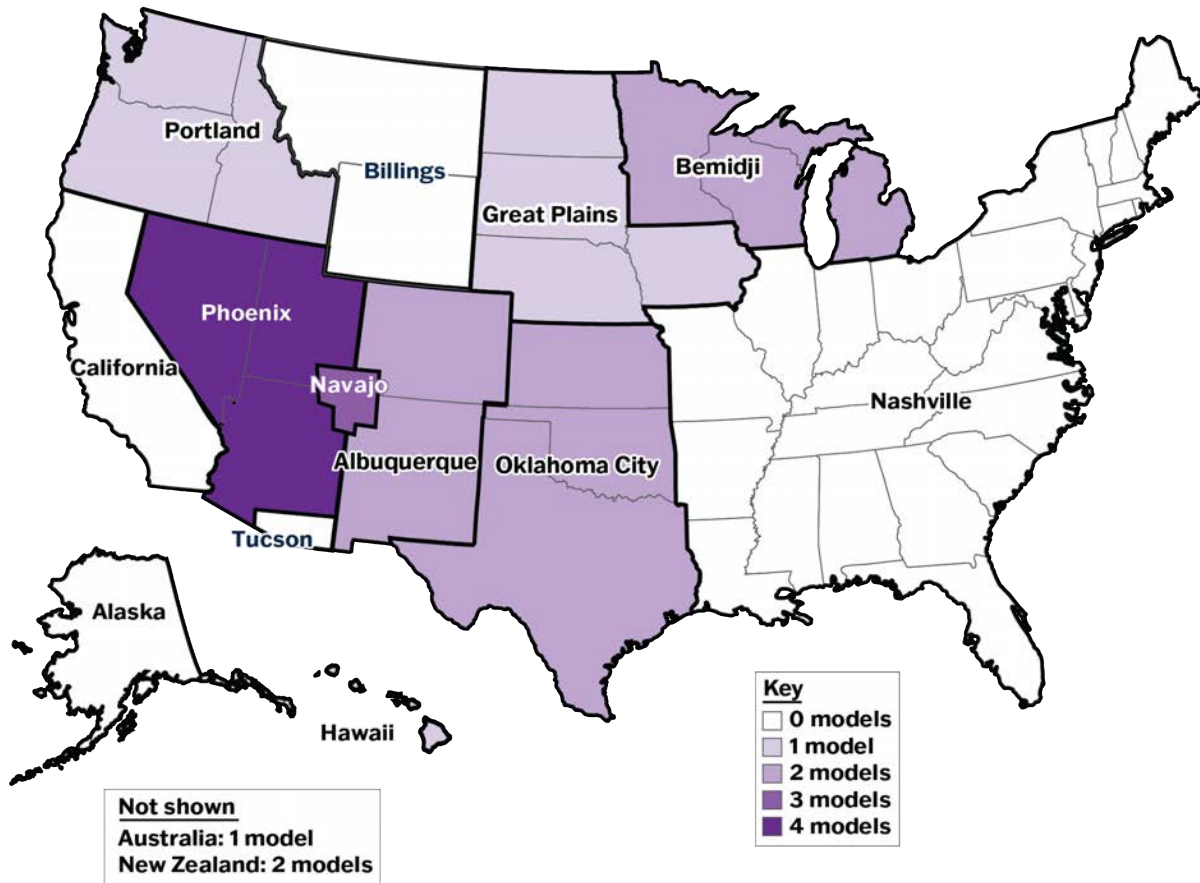
Source: HomVEE review of six models with well-designed impact studies.

Note: We categorized the ages of study participants based on the description of the oldest child served. If a manuscript indicated that participants were offered services up to one year old, that manuscript contributed to a model being counted in the "Infants age 0 to 12 months" category but not the "children up to age 3" category. If a manuscript indicated that participants were between the ages of 0 and 3 years, that manuscript contributed to a model being counted in the "children up to age 3" category but not the "infants age 0 to 12 months" category.

Geographic location of services. Of the six models with well-designed impact studies, four were implemented and evaluated in the United States, and two were implemented internationally. Figure II.5 is a map that shows how many models were implemented and evaluated in each of the Indian Health Service areas in the United States.[15] Inside the United States, the areas most represented in HomVEE's review of research with tribal populations are the Phoenix area (Baby FACE, Family Spirit, Family Spirit Nurture, and HFA) and the Navajo area (Baby FACE, Family Spirit, and Family Spirit Nurture). Of the models evaluated outside of the United States, one was in both Australia and New Zealand, and one was only in New Zealand. Appendix B provides more details about where each model was implemented and evaluated.

[15] For more information about the 12 geographic service areas, see https://www.ihs.gov/locations/.

Figure II.5. Location of models implemented and evaluated in well-designed impact studies: The areas most represented are the Phoenix and Navajo areas in the United States and New Zealand internationally



Source: HomVEE review of six models with well-designed impact studies.

Note: If a manuscript about a given model reported study sites in more than one area, the model is counted in all areas that apply.

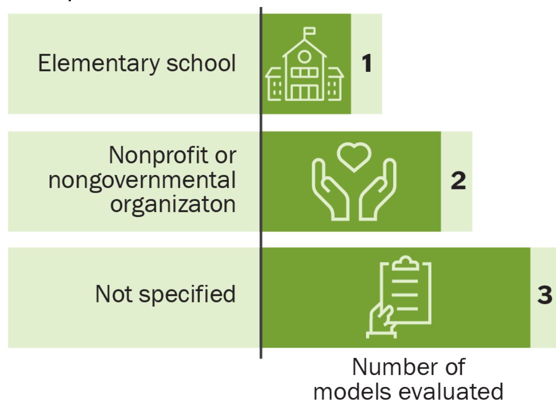
Types of implementing agencies. Across models, services were delivered by a range of implementing agencies, including social services agencies (Family Spirit Nurture), elementary schools (Baby FACE), and Head Start programs (Early Start [New Zealand]) (Figure II.6).

Box 4. Characteristics of home visitors

Three of the six models with well-designed impact studies did not describe education requirements for home visitors. Manuscripts specified other requirements for home visitors, placing greater value on home visitors who were members of the community being served, had strong interpersonal skills, and had relevant personal and professional experience.

Home visitor qualifications and training. Manuscripts that included information about home visitor qualifications and training focused on requirements other than formal education (Box 4 and Figure II.7). Of the three models for which manuscripts reported formal education requirements, Baby FACE required that home visitors have at least a high school degree, and Family Spirit Nurture and HFA required home visitors to have a paraprofessional degree. In contrast, manuscripts about three of the models described other requirements for home visitors, including "relevant experience" or some other requirement such as strong communication skills.[16]

Figure II.6. Implementing agencies involved in well-designed impact studies: Of the models evaluated, none were implemented by a tribal entity



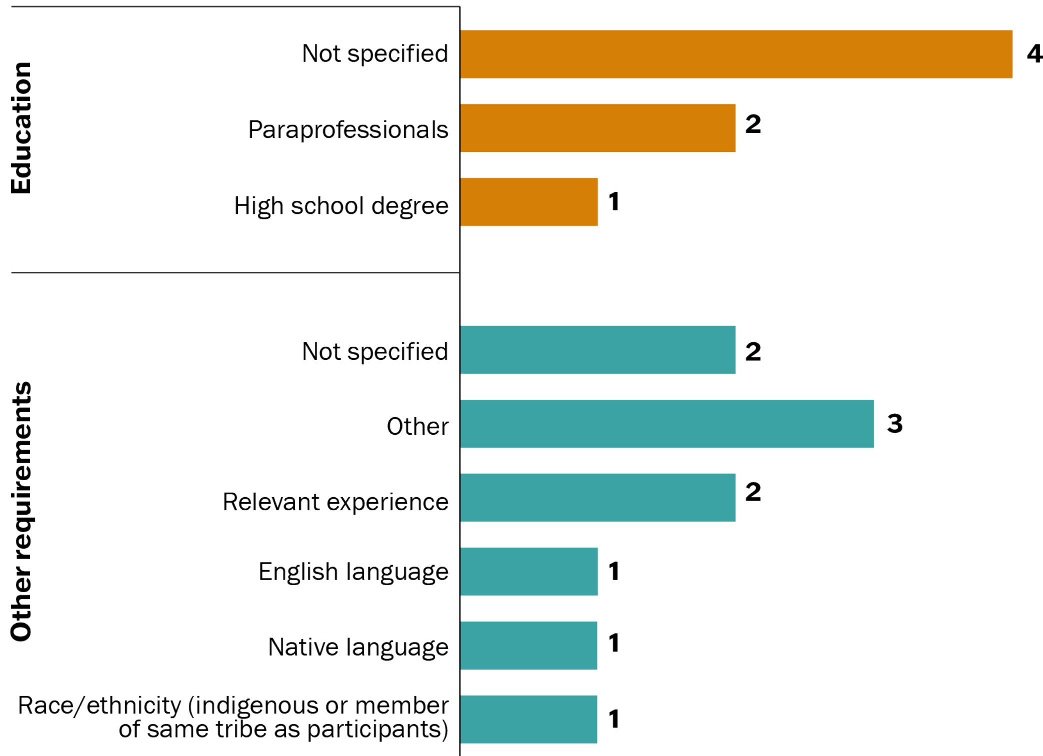
Source: HomVEE review of six models with well-designed impact studies.

Note: Other implementing agencies, including tribal entities, private agencies, and non-tribal public agencies, were not involved with the models tested in impact studies in this review.

Manuscripts described training requirements for most models, and five models mandated that home visitors complete some kind of training, including initial training and other professional development (Figure II.8). Some models required intensive training. For example, home visitors implementing Baby FACE participated in a five-day initial training and three-day follow-up, and those implementing Family Spirit participated in more than 80 hours of training. To support home visitors during service delivery, many model developers offered programs ongoing consultation to ensure that staff implemented the model consistently over time. Manuscripts about three models specified that technical assistance was available to home visitors, but this detail was unspecified for three other models (Figure II.8).

[16] Although models may have various staff requirements, HomVEE only reports qualification and training information described in the reviewed manuscripts about models that had well-designed impact studies. This information about staff qualifications and training may or may not align with the models' current requirements.

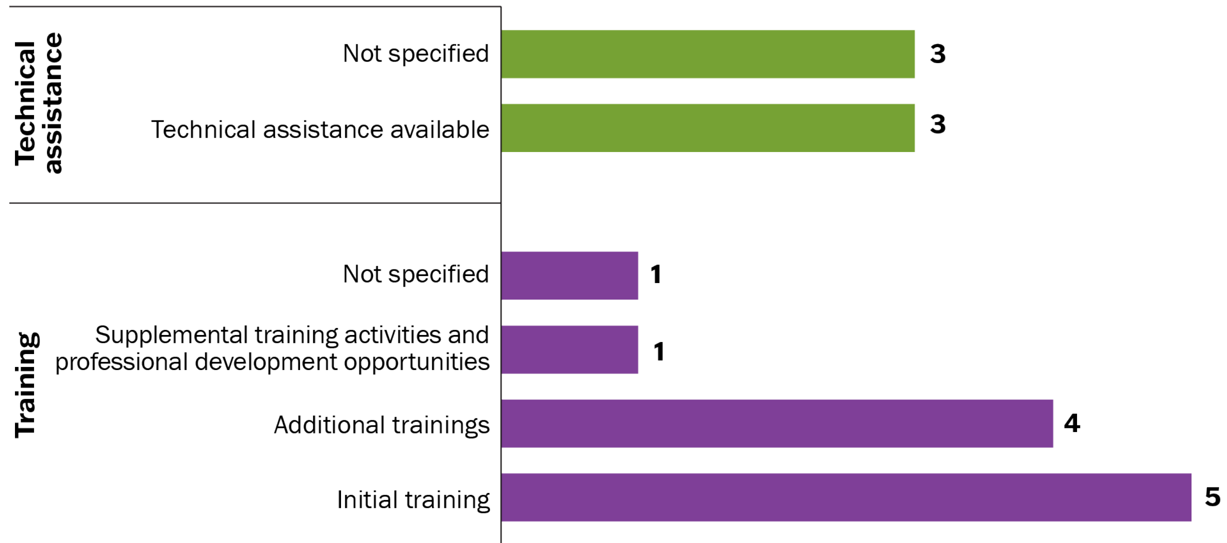
Figure II.7. Education and other requirements for home visitors in well-designed impact studies across six models: Most models did not describe education requirements for home visitors but specified other requirements such as relevant experience



Source: HomVEE review of six models with well-designed impact studies.

Note: "Other" category includes requirements such as strong communication or interpersonal skills, cultural competency, ability to maintain confidentiality, and ability to maintain boundaries between personal and professional life. Categories are based on information described in the manuscripts HomVEE reviewed; actual requirements of early childhood home visiting models may differ from what the manuscripts described. If a manuscript about a given model reported education and training requirements in more than one category, the model is included in all categories that apply.

Figure II.8. Training and technical assistance available to home visitors in well-designed impact studies: Most models required initial training for home visitors, but the availability of ongoing technical assistance was mixed



Source: HomVEE review of 6 models with well-designed impact studies.

Note: If a manuscript about a given model reported training and technical assistance provided in more than one category, the model is included in all categories that apply.

C. Outcome domains examined in well-designed impact studies

In this section, we summarize the outcome domains analyzed in the six models that collectively had 14 manuscripts about well-designed impact studies. The studies reported statistically significant, favorable findings in six of the eight domains that HomVEE examines: positive parenting practices; maternal health; child health; child development and school readiness; reductions in child maltreatment; and reductions in juvenile delinquency, family violence, and crime (Table II.3).

Limited effectiveness of early childhood home visiting in HomVEE's outcome domains with tribal populations indicates an opportunity for future research with tribal families, but it *does not* indicate that these models cannot be effective with tribal families.

In addition, the well-designed impact studies *measured* effects in one other domain, family economic self-sufficiency, and had no favorable effects. Appendix B provides detailed information about findings on these models.

Table II.3. Quantity and direction of findings by outcome domains in well-designed impact studies, by model

Outcome domain	Bureau of Indian Affairs' Baby Family and Child Education Program (Baby FACE)	Early Start (New Zealand)	Family Spirit	Family Spirit Nurture	Healthy Families America	Healthy Starts trial/Te Piripohotanga (New Zealand)	Total models with favorable effects
Positive parenting practices	Favorable: 2 No effect: 4 Unfavorable or ambiguous: 0	Favorable: 2 No effect: 1 Unfavorable or ambiguous: 0	Favorable: 7 No effect: 11 Unfavorable or ambiguous: 0	*Not measured*	Favorable: 1 No effect: 14 Unfavorable or ambiguous: 0	Favorable: 0 No effect: 14 Unfavorable or ambiguous: 0	4
Maternal health	*Not measured*	*Not measured*	Favorable: 5 No effect: 47 Unfavorable or ambiguous: 0	*Not measured*	Favorable: 3 No effect: 26 Unfavorable or ambiguous: 0	Favorable: 0 No effect: 2 Unfavorable or ambiguous: 0	2
Child health	*Not measured*	Favorable: 0 No effect: 3 Unfavorable or ambiguous: 0	*Not measured*	Favorable: 1 No effect: 5 Unfavorable or ambiguous: 2	Favorable: 1 No effect: 14 Unfavorable or ambiguous: 0	Favorable: 0 No effect: 12 Unfavorable or ambiguous: 0	2
Child development and school readiness	Favorable: 1 No effect: 10 Unfavorable or ambiguous: 0	Favorable: 2 No effect: 2 Unfavorable or ambiguous: 0	Favorable: 10 No effect: 30 Unfavorable or ambiguous: 0	*Not measured*	Favorable: 0 No effect: 3 Unfavorable or ambiguous: 0	*Not measured*	3
Reductions in child maltreatment	*Not measured*	Favorable: 1 No effect: 1 Unfavorable or ambiguous: 0	*Not measured*	*Not measured*	Favorable: 2 No effect: 72 Unfavorable or ambiguous: 0	*Not measured*	2
Reductions in juvenile delinquency, family violence, and crime	*Not measured*	Favorable: 1 No effect: 1 Unfavorable or ambiguous: 0	*Not measured*	*Not measured*	Favorable: 2 No effect: 72 Unfavorable or ambiguous: 0	*Not measured*	2
Family economic self-sufficiency	*Not measured*	*Not measured*	*Not measured*	*Not measured*	Favorable: 0 No effect: 4 Unfavorable or ambiguous: 0	*Not measured*	0
Linkages and referrals	*Not measured*	*Not measured*	*Not measured*	*Not measured*	*Not measured*	*Not measured*	0

Source: HomVEE review of 14 manuscripts about well-designed impact studies on six early childhood home visiting models implemented with tribal populations.

Note: Columns about each model count the number and direction of effects measured, by domain, in well-designed research about that model. For most models, studies reported multiple effects for a given domain.

Some of these *studies* may have a narrower focus than the model as a whole. Some models focused broadly on improving outcomes across a range of domains. For example, HFA, in general, reported findings in all of HomVEE's eight domains when looking across research for this review and for HomVEE's annual review (see https://homvee.acf.hhs.gov/effectiveness/Healthy%20Families%20America%20(HFA)%C2%AE/In%20Brief). However, in research conducted with tribal populations, this model did not find any favorable effects (in well-designed research) in the child development and school readiness, family economic self-sufficiency, or linkages and referrals domains. Indeed, the research on this model that was eligible for review did not measure the linkages and referrals domain. This lack of evidence on whether the model is effective in these domains when implemented with tribal families suggests the need for additional research with tribal populations. A similar interpretation applies across models examined with well-designed impact studies in this report because the research base on early childhood home visiting with tribal populations is comparatively much smaller than the research base for a general population.

Notably, some manuscripts narrowly focused on findings in a specific domain, meaning that it is not possible to state whether there were effects in other domains. For example, manuscripts included about the Baby FACE model focused on child development and school readiness and positive parenting practices.

III. Summary

For this 2022 update, HomVEE's review of research with tribal populations includes 77 manuscripts spanning 32 early childhood home visiting models with tribal populations. The review includes 48 manuscripts about impact studies, including 14 manuscripts about well-designed impact studies that are the focus of this review. Of these 14 manuscripts, 8 manuscripts specifically examined the effect of a model with a tribal population (Figure I.1 and Table I.1).

Of the six models with well-designed impact research, one—Family Spirit—meets HHS criteria for being an "evidence-based early childhood home visiting service delivery model" for tribal populations. The reasons that the other five models with well-designed impact studies did not meet the HHS criteria for tribal populations varied. Of the five models that had well-designed impact research but did not meet HHS evidence-based criteria, one model had no favorable findings; in another model authors did not present findings separately for tribal populations; and three models had favorable, statistically significant findings that were not replicated in another sample or domain. Appendix B (found in the companion volume to this report) provides information about the research we reviewed for each model.

There were some key similarities across models. All 6 models with well-designed research (and the other 29 models also identified for the review) focused on improving outcomes for families and young children, and several integrated culturally relevant process aims into their overarching goals. For example, two models (Family Spirit and Family Spirit Nurture) had a specific goal to deliver services that were culturally relevant to tribal families. One additional model (Baby FACE) aimed to increase access to services for American Indian women living in remote and rural areas. Some models focused on participants with specific risk factors (such as mothers impacted by substance use, in the cases of Family Spirit and HFA). Four of the six models with well-designed research were implemented within the geographical borders of the current United States, but two (Early Start and the Healthy Starts Trial) were implemented in Australia and New Zealand.

It is important to note some limitations of this report. We focus on six early childhood home visiting models with well-designed research implemented and evaluated with a study population or sample that includes 30 percent or more tribal participants. Other models may be appropriate for use with tribal populations but either (1) have not yet been evaluated in a way that meets HomVEE's published standards for well-designed research or (2) have not yet been rigorously evaluated in a sample or subsample composed of tribal participants. As new research that meets HomVEE's published standards becomes available, we may include findings about additional models in future updates to this report.

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