

ABOUT HomVEE

Home Visiting Evidence of Effectiveness Model Prioritization Procedures

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HomVEE assesses each study separately and then sums the points for all studies about a model.

This brief describes the procedures used in the Home Visiting Evidence of Effectiveness (HomVEE) project to determine which models to review. It provides hypothetical examples to illustrate the prioritization criteria and answers frequently asked questions about prioritization.

Each year, the HomVEE project identifies models to review. Decisions on the number of models to review depend on (1) the number of studies that are identified for review about each model and (2) available resources. The process by which models are selected for review is called the prioritization process.

Calculating The Prioritization Score

HomVEE selects models for the annual review by calculating a prioritization score and then reviewing models with the highest scores. The prioritization score is based on points assigned at the study and model level. Points are summed and then weighted based on whether the model is already evidence based. Below, we describe each step in the prioritization process.

Study-level criteria

First, HomVEE reviews the titles and abstracts of impact studies for each model and assigns points based on HomVEE’s prioritization criteria. Models can earn up to 5.75 points for each eligible impact study (Table 1).¹ HomVEE assesses each study separately and then sums the points for all studies about a model. Therefore, models with more eligible studies tend to receive more study-level points. Whether a model is already evidence based determines which studies are included in that model’s study-level point total:

- If a model is not yet evidence based, the total includes study-level points for studies that HomVEE reviewed in previous years and assigned a high or moderate rating.²
- If a model is already evidence based, the total includes points only for studies that HomVEE has not reviewed yet.

To illustrate these study-level criteria, Box 1 provides three hypothetical examples.

Table 1. HomVEE study-level prioritization criteria and associated points

Criteria	Points	Notes
Number and design of impact studies	2 to 3 per study	3 points for each randomized controlled trial, single-case design, or regression discontinuity design 2 points for each matched-comparison group design
Sample size	1 per study	Study sample contains 250 or more pregnant women and/or families

Criteria	Points	Notes
Outcomes of interest	1 per study	Study examines outcomes in one or more of the following domains: reductions in child maltreatment; reductions in juvenile delinquency, family violence, or crime; linkages and referrals; and family economic self-sufficiency ³
Study sample	0.5 per study	Study sample lives in the United States or is an indigenous population in or outside of the United States
Priority population	0.25 per study	The entire sample belongs to one or more priority populations named in the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) statute ⁴

Note: HomVEE applies these points at the study level, based on information that study authors provide in the title and abstract. Each study is assessed separately, and then the points for all studies are summed together to create a study-level total for the model.

Box 1. Hypothetical point allocation at the study level

Example: Study 1 involved a group of 100 pregnant women living in Florida. All women were smokers when they enrolled in the program. The home visiting intervention sought to reduce smoking among pregnant women and used a matched-comparison group design. How many prioritization points would this study earn?

- **2.75 points.** This study earns 2 points for a matched-comparison group design, 0.5 points because the participants lived in the United States, and 0.25 because all participants belonged to one of the MIECHV priority populations (families with users of tobacco products in the home).

Example: Study 2 is a randomized controlled trial of 500 pregnant adolescents. The home visiting intervention is designed to help them become economically self-sufficient. The study measured employment outcomes and use of self-sufficiency programs in the community. How many prioritization points would this study earn?

- **5.25 points.** This study earns 3 points because it's a randomized controlled trial, 1 point for a sample larger than 250, 1 point for outcomes of interest (family economic self-sufficiency), and 0.25 points for a MIECHV priority population (pregnant women under age 21).

Example: Study 3 uses a single-case design to test the impact of a home visiting program run by and for members of an indigenous group in Alberta, Canada. The program focuses on improving maternal and child health by enrolling women prenatally and continuing home visits through the child's fifth birthday. How many prioritization points would this study earn?

- **3.50 points.** This study earns 3 points for a single-case design and 0.5 points because participants belong to an indigenous population.

Model-level criteria

Next, HomVEE assigns model-level points based on information from study titles and abstracts, model websites, and previous HomVEE reviews.⁵ Models can earn up to 4 points in this step, 1 for each of the following:

- The model is associated with a national organization or institution of higher education (organizations can be in or outside of the United States).
- The model is currently serving or available to serve families.
- The model has been implemented for at least three years (even if it is not currently active).
- Support is available to implement the model in the United States.

To illustrate these model-level criteria, Box 2 provides three hypothetical examples.

Box 2. Hypothetical point allocation at the model level

Example: Model A was developed and implemented by an early childhood center at a university in South Dakota. It was used between 2004 and 2010 but is not currently active. The model developer's contact information is available online if communities want to implement the model in their area. How many prioritization points would this model earn?

- **3 points.** Model A earns 1 point for being associated with an institution of higher education, 1 point for being implemented for at least three years, and 1 point for having support available for implementation in the United States.

Example: Model B was designed and first implemented by a group in Hawaii in 2016, and it is currently serving families. Additional information cannot be found online. How many prioritization points would this model earn?

- **1 point.** Model B earns 1 point for being currently active.

Example: Model C is implemented and supported by a national child welfare organization. It has been in use for over 10 years and is currently active in three countries. How many prioritization points would this model earn?

- **3 points.** Model C earns 1 point for being associated with a national organization, 1 point for being implemented for at least three years, and 1 point for being currently active.

Calculating prioritization scores

After assigning study- and model-level points, HomVEE sums all points to calculate a model's point total. In the final step, HomVEE assigns a weight to the model score based on whether HomVEE has already deemed it to be evidence based as follows:

- A model that is not yet evidence based (regardless of whether it was previously reviewed) gets a weight of 2.
- A model that is already evidence based gets a weight based on the number of years since it was last reviewed and a report was released, using the following formula:

$$\text{Weight} = [1 + 0.1 * (\text{current year} - \text{release date of prior report})]^2$$

The weights give highest priority to models that are not yet evidence based and permit evidence-based models with new research to be updated periodically. For example, a model considered for review in 2017 that had a report released in 2013 would get a weight of $[1 + 0.1 * (2017 - 2013)]^2 = 1.96$.

After calculating weights, a model's final prioritization score is then calculated as:

$$\text{Prioritization score} = \text{Model point total} * \text{Weight}$$

Table 2 in Box 3 provides examples of weight and prioritization score calculations.

Prioritizing Models

After calculating prioritization scores, HomVEE sorts models from highest to lowest score and reviews the top-scoring models. The number of models reviewed each year depends on available resources and the number of studies identified to review for each model. Regardless of whether they are reviewed in a given year, all models will be included in the prioritization process in subsequent years.

Box 3 illustrates the prioritization process for six hypothetical models.

Box 3. Hypothetical prioritization of six models

Table 2 shows prioritization scores for six hypothetical models. The final row lists the order in which these models would be prioritized for review. These examples demonstrate the importance the prioritization score places on both the number and type of impact studies eligible for review (the model point total) and the number of years since the prior review (weight).

- Model C, the highest-ranking model, is already evidence based but has not been reviewed in five years, resulting in a higher weight than models that are not yet evidence based. The combination of the high weight and the high point total result in the highest prioritization score.
- Model F has the same high point total as Model C but a lower weight.
- Model A, the lowest-ranking model, is already evidence based and was reviewed relatively recently (in 2016), hence its low weight.
- Model D has the same point total as Model A but is not yet evidence based and thus has a higher weight, resulting in a higher prioritization score.
- Models B and E have the lowest point totals but are also prioritized above Model A because they have higher weights.

Table 2. Final prioritization scores and ranks for six hypothetical models

	Model A	Model B	Model C	Model D	Model E	Model F
Study-level total	16.5	15.75	20	16.5	15.75	20
Model-level total	3	1	3	3	1	3
Model point total	19.5	16.75	23	19.5	16.75	23
Evidence based?	Yes	Yes	Yes	No	No	No
Year of most recent report	2016	2014	2013	n.a.	n.a.	n.a.
Current year	2018	2018	2018	2018	2018	2018
Weight	1.44	1.96	2.25	2.00	2.00	2.00
Final prioritization score	28.08	32.83	51.75	39.00	33.50	46.00
Prioritization rank	6	5	1	3	4	2

Note: The study-level total is the sum of points for all eligible studies about the model. n.a. = Not applicable.

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HomVEE designed the prioritization process to treat all models consistently. The process reflects HomVEE's emphasis on identifying new evidence-based home visiting models while continuing to update reports on models that are already evidence based.

The U. S. Department of Health and Human Services may ask HomVEE to review specific models out of order for programmatic or policy reasons.

After a model is prioritized, HomVEE reviews all new impact studies about that model, with two exceptions:

- In years when resources are limited, HomVEE will not review research conducted outside of the United States if it is about a model that is already evidence based (research with indigenous communities outside of the United States will still be reviewed).⁶
- HomVEE will not update model reviews more often than every two years, whether evidence-based or not.

For more information about the review process and subsequent steps, see: <http://hveedev.mathematica.net/Review-Procss/4/Overview/19/>.

Frequently Asked Questions

How does a model get on HomVEE's list for consideration?

HomVEE uses a systematic process to select models for review. Each year, HomVEE searches the literature published or released through December of the preceding year and adds relevant studies to its records, including submissions HomVEE receives through the call for studies. HomVEE uses newly identified eligible studies as well as those found in past years to assign a prioritization score, as described above.

May I submit research on my model for review?

Yes, HomVEE issues a call for papers each year between November and January. HomVEE sends the call to relevant listservs and posts it on the HomVEE website with submission instructions. If you want to be alerted when the call for studies opens, please subscribe to the HomVEE mailing list here: <https://homvee.acf.hhs.gov/EmailSubscribe.aspx>.

HomVEE considers all studies when prioritizing models for review. However, because HomVEE identifies far more literature than it can review in any given year, only studies about prioritized models will be reviewed in a given review cycle. HomVEE retains all studies that are not reviewed for consideration in future review cycles.

HomVEE can more accurately score studies and models when study authors include critical information in the study title and abstract. The HomVEE reporting guide for study authors provides direction on how to clearly report relevant information about studies and models. The guide is available at: <https://homvee.acf.hhs.gov/Publications/9/Webinars/55/2>.

Can I submit research outside of the call for papers?

Yes. HomVEE's goal is to treat all models consistently, using a systematic process for identifying all relevant research. Because of this process, HomVEE cannot review new studies on request. But HomVEE accepts and holds any research that the public submits at any time for screening during the next year's call for studies.⁷

How can I find out which models are prioritized for review?

The HomVEE project releases its content updates annually in early fall. HomVEE alerts its website subscribers when this new information is released. If you would like to receive alerts, please subscribe to the mailing list here: <http://homvee.acf.hhs.gov/EmailSubscribe.aspx>. Before the annual public release, HomVEE does not disclose the names of the home visiting models that have been prioritized for review.

A list of all models ever reviewed by HomVEE, and whether they meet HHS criteria, is available on the HomVEE website (<http://homvee.acf.hhs.gov/>). This information is shown in a model evidence summary table (<http://homvee.acf.hhs.gov/EvidenceOverview.aspx>).

For More Information

For more information about the model prioritization process, please visit the HomVEE website (<http://homvee.acf.hhs.gov>) or email the HomVEE team at homvee@acf.hhs.gov. Details about the prioritization and review process can be found at the review process section of the website (<https://homvee.acf.hhs.gov/Review-Process/4/Overview/19/>).

¹ The screening process used to identify studies is described here: <https://homvee.acf.hhs.gov/Review-Process/4/Screening-Studies/19/3>. Studies that meet the screening criteria are eligible for review and are included in the model prioritization process.

² More information about HomVEE's process for rating individual effectiveness studies as high, moderate, or low can be found at <https://homvee.acf.hhs.gov/Review-Process/4/Producing-Study-Ratings/19/5>.

³ These domains are specified in the MIECHV authorizing legislation and are of particular interest because, to date, fewer studies reviewed for HomVEE have focused on them. More information about these domains and outcomes can be found at <https://homvee.acf.hhs.gov/outcomes.aspx>.

⁴ According to 42 U.S.C. § 711 (d)(4), priority populations are as follows:

- Low-income families.
- Families who are pregnant women who have not attained age 21.
- Families that have a history of child abuse or neglect or have had interactions with child welfare services.
- Families that have a history of substance abuse or need substance abuse treatment.
- Families that have users of tobacco products in the home.
- Families that are or have children with low student achievement.
- Families with children with developmental delays or disabilities.
- Families who, or that include individuals who, are serving or formerly served in the Armed Forces, including such families that have members of the Armed Forces who have had multiple deployments outside of the United States.

⁵ HomVEE may contact study authors or model developers to confirm publicly available information.

⁶ If studies conducted outside of the United States are not reviewed, the model report on the HomVEE website will clearly indicate which research was and was not included in the updated report.

⁷ To submit a study outside of the annual call for studies, send an email to hvee@mathematica-mpr.com.