



# Addressing Evaluation Challenges

## Rigorous Evaluation in Tribal Maternal, Infant, and Early Childhood Home Visiting

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### Introduction

Tribal Home Visiting grantee evaluations did not always go as planned, as is the case with most program evaluations implemented in real-world practice settings. Nineteen of the 23 grantees reported adapting their studies after implementation began because of unforeseen issues with recruitment and retention, unavailable or missing data, time constraints, small sample sizes, or requirements associated with tribal oversight.

Lessons learned from addressing these challenges may inform future evaluations of other tribal grant programs and others working in tribal communities.



### Evaluation Challenges and Solutions

#### Solutions to Recruitment and Retention Challenges

Grantees noted challenges recruiting and retaining enough study participants to ensure

The Tribal Home Visiting Program is a federally funded initiative that supports the provision of maternal, infant, and early childhood services to American Indian and Alaska Native families. Grantees that received 5-year awards beginning in 2010, 2011, and 2012 conducted local evaluations to strengthen the evidence base for home visiting in tribal communities and to answer locally relevant questions. The evaluations combined scientific and cultural rigor to ensure results that are valid for both researchers and communities.

This brief, the fourth in a series about the local evaluations, describes challenges encountered during evaluation implementation and the unique strategies grantees used to solve them. The series is designed to help federal staff and leadership support tribal communities to build local evaluation capacity. It may also be of interest to other policymakers and researchers in the human services field. For more information, visit the [Tribal Home Visiting Program](#) website.

they had their planned sample size. To address this, grantees made changes that allowed for more data collection opportunities, such as expanding their sampling criteria and data collection strategies. Solutions included—

- ◆ Broadening comparison group criteria after discovering original criteria were too restrictive and may have limited the number of possible study participants
- ◆ Switching from a comparison group design to a within-person comparison design when only a few participants met eligibility criteria
- ◆ Adding design components (e.g., qualitative or retrospective data collection methods) to work within short study time frames
- ◆ Moving away from a randomized controlled trial design or broadening eligibility requirements to address community concerns about withholding interventions from those who could benefit



## Grantee Case Studies

Despite common challenges, each grantee's evaluation experience was unique due to community context, the focus of the study, and the team's evaluation capacity. The following case studies share two grantees' experiences evaluating culturally adapted home visiting programs and maintaining scientific and cultural rigor in the face of unexpected challenges.

### Case Study 1: Southcentral Foundation Nutaqsiivik Program

**Overview.** The Southcentral Foundation Nutaqsiivik Program serves American Indian and Alaska Native (AIAN) residents of Anchorage, AK, and the adjacent Matanuska-Susitna Borough using the Nurse-Family Partnership (NFP) home visiting model. Traditionally, NFP includes home visits from registered nurses to low-income, first-time mothers from pregnancy until the child is 2 years of age. The Nutaqsiivik Program made structural and cultural adaptations in collaboration with NFP, such as extending services to mothers of more than one child and modifying materials to reflect the needs and concerns of urban AIAN recipients.

## Solutions to Other Contextual Challenges

Grantees faced challenges obtaining historical data for comparison purposes. To solve this challenge, they adjusted how they operationalized, measured, or identified outcomes. Other grantees were challenged by timing and study feasibility. To address these challenges, grantees had to reassess original methodology decisions. One grantee, for example, began asking home visitors to collect data after recognizing that it was neither realistic nor appropriate to bring in an independent observer as planned.

Tribal institutional review board (IRB) requirements affected some plans. For example, one grantee had to shorten the evaluation time line to accommodate a data-sharing agreement, and another had to narrow its sampling frame to one community in its service area.

**Evaluation design rationale.** The Nutaqsiivik Program used a quasi-experimental design to compare health outcomes of mothers enrolled in the adapted NFP model with mothers who did not receive those services. The design used propensity scores<sup>1</sup> to match participants in the treatment group with those in a historical comparison group. The program used medical records from both groups to assess seven primary outcomes measured in previous NFP trials:

1. Third-trimester use of tobacco, alcohol, and other substances
2. Preterm delivery
3. Rapid subsequent births
4. Days child was hospitalized for injuries in the first 2 years of life
5. Count of emergency department encounters for child injuries in the first 2 years of life
6. Child's breastfeeding status at 6 months
7. Child's immunization status at 24 months

Home visiting staff and participants also completed individual interviews to share their views on the cultural relevance and functionality of the adapted model.

The evaluation design allowed the Nutaqsiivik Program to continue serving all participants, avoid additional data collection during home visits, use data from existing medical records, and align recruitment with service delivery approaches. It also honored requests by community stakeholders to compare outcomes between the locally adapted NFP program and the national NFP programs.

**Experience implementing the evaluation.** The Nutaqsiivik Program experienced challenges related to data quality and availability of the historical comparison group:

- ◆ Rates of missing data for some indicators and outcome variables were high because a structurally different medical record system was used by staff members when the historical comparison group received services.
- ◆ Many members of the historical comparison group interacted with the Nutaqsiivik Program in some capacity before it was structurally and culturally adapted; this made it impossible to measure exposure to and impact of the previous program.

### **Primary Evaluation Question: Nutaqsiivik Program**

Do high-social-risk primiparous and multiparous mothers<sup>2</sup> who participate in the NFP home visiting program, modified for cultural resonance and multiparous mothers, show improvement in selected child health outcomes and reductions in selected maternal and child health risk indicators compared with a historical comparison group of mothers who did not receive the modified NFP program?

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<sup>1</sup> Propensity score matching is a statistical technique that seeks to balance key baseline factors between the intervention and comparison groups.

<sup>2</sup> Primiparous refers to a mother with one child and multiparous to a mother with more than one child.

Evaluators excluded mothers with exposure to the earlier program from the data analysis, resulting in a smaller sample size than anticipated. The program matched as many intervention group participants as it could with the historical comparison group and made adjustments during the data analysis phase to assess statistical significance for most outcomes included in the original evaluation plan.

The program also found it difficult to reach several individuals for face-to-face interviews. Evaluators expanded their methods to include phone interviews, but problems with sample size persisted. The Nutaqsiivik Program contemplated additional recruitment but decided such efforts were unnecessary after initial qualitative analysis conducted after expanded sampling revealed no additional themes or observations from those interviews.

The Nutaqsiivik Program experienced challenges with missing data and participant recruitment early in its evaluation. Still, evaluators were able to adjust their data analysis plan to answer evaluation questions and yield findings and lessons to inform the program, its stakeholders, and the broader home visiting field.

## Case Study 2: United Indians of All Tribes Foundation Ina Maka Family Program

**Overview.** The United Indians of All Tribes Foundation's Ina Maka Family Program (IMFP) serves American Indian parents/caregivers and children in an urban community in the Seattle metropolitan area. The IMFP selected the Parents as Teachers (PAT) home visiting model for its evaluation and chose to focus on retention and program engagement. Evaluators aimed to address the lack of research on high attrition and low participation rates among AIAN families in home visiting programs.

United Indians of All Tribes designed and implemented the IMFP intervention and evaluation using a community-based approach. A needs assessment conducted in the first year of the program identified three community priorities to address when adapting the PAT-based intervention:

1. Addressing poor cultural fit driven by experiences of discrimination and assimilation
2. Focusing on resilience and strengths-based practices
3. Using enculturation as an evidence-based approach for building resilience

Working with community members and its Scientific and Community Advisory Board, IMFP adapted three main PAT components to be culturally appropriate for urban AIAN recipients:

1. Group connections focused on cultural activities and discussion of cultural strengths
2. Individual visits, including eight culturally enhanced modules
3. Specialized referrals to AIAN service providers

**Evaluation design rationale.** IMFP used an experimental, mixed-methods design to compare participants in a structural-level culturally enhanced PAT program with participants in a surface-level culturally enhanced<sup>3</sup> PAT program for 12 months. Families were randomly assigned to either of the two types of services.

Outcomes of interest included four constructs:

1. Confidence in parenting skills
2. Program engagement and participation
3. Program retention
4. Participant satisfaction

IMFP conducted focus groups and interviews with a subset of parents, home visitors, and elders to examine the relevance of the culturally adapted content and to assess the relationships between home visitors and families. Evaluators hypothesized that the culturally enhanced program would help parents more readily identify and engage in healthy parenting approaches, gain comfort advocating for their own needs, and develop more positive perceptions of parenting.

### **Primary Evaluation Question: Ina Maka Family Program**

Do urban AIAN parents/caregivers who receive culturally adapted IMFP home visitation services for 12 months demonstrate greater change in parenting outcomes compared with parents/caregivers who receive nonadapted IMFP home visitation services?

**Experience implementing the evaluation.** IMFP encountered early recruitment challenges because of limited program resources and the geographic spread of potential participants. To address this challenge, IMFP reduced the planned sample size. This allowed home visitors to spend more time with higher need families and to work within a more extended time frame for recruitment. As a result of this reduction in sample size, IMFP needed to reevaluate the types of statistical analyses that were possible, and used a more conservative test than initially planned.

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<sup>3</sup> Structural-level enhancements include group connections focused on cultural activities (e.g., storytelling, field trips, singing, drumming, arts/crafts, ceremonies); availability of elder visits; and referrals to traditional healers. Surface-level enhancements include hiring of AIAN home visitors; using materials that share AIAN cultural stories, histories, and languages; serving meals rooted in tradition; holding group connections at locations that are well known or have significance.

## Key Takeaways

This brief describes how Tribal Home Visiting Program grantees needed to modify their evaluation studies after implementation to address unanticipated challenges. Their experiences and solutions may benefit federal program staff and leadership working on evaluations with tribes and tribal communities.



Offer technical assistance to grantees early to address program enrollment and completion issues. For example, programs may need support monitoring recruitment and enrollment efforts to prevent future attrition and other problems.



Recognize that even the best-laid plans will not prevent setbacks. Provide continued technical assistance to help grantees identify and address potential limitations—for example, sample sizes that are too small to determine causality or yield generalizable findings.



Build in time for grantees to complete IRB and other local review processes, which often take longer than anticipated.



Switch gears if it becomes clear that the original evaluation design is not feasible. Incorporating qualitative research methods, for example, can provide a richer understanding of the program—especially when there are suboptimal sample sizes or high levels of missing quantitative data. Qualitative data may also shed light on barriers to participant recruitment, retention, and data quality.

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