# III. DESIGN PLAN FOR ASSESSING FIDELITY TO THE EVIDENCE-BASED MODEL

The goal of the cross-site evaluation analysis of fidelity to the evidence-based model grantees implement is to assess the extent to which an intervention is implemented as intended by its designers. This chapter provides an overview of the fidelity domain, lays out the key research questions, and describes the fidelity measures we will collect.

## Overview of Domain and Key Research Questions

For the cross-site evaluation:

*"Fidelity" refers to the extent to which an intervention is implemented as intended by the designers of the intervention. Fidelity refers not only to whether all the intervention components and activities were actually implemented, but also whether they were implemented in the proper manner.*

This definition implies that fidelity comprises:

- Structural aspects of the intervention, which demonstrate adherence to basic program elements such as reaching the intended target population, providing participants with the recommended service dosage and duration, maintaining low caseloads, and hiring and maintaining high-quality direct service and supervisory staff.
- Dynamic aspects of the intervention, particularly the quality and content of the relationship between the home visitor and the participant.

Both aspects of fidelity are important in determining whether a program is being implemented in the manner conceived and tested by the program's developer. More important, delivering a program with fidelity is presumably necessary, though perhaps not sufficient, for achieving intended outcomes.

Program evaluations increasingly emphasize documenting the service delivery process and unraveling the "black box" of the service experience (Chen 2005; Hebbeler and Gerlach-Downie 2002). Understanding both the structural elements and the manner in which services are provided is particularly important for relationship-based programs such as those supported by the grant initiative. The home visiting programs in the cross-site evaluation have established a wide range of performance standards that address issues such as service dosage and duration and provide guidelines on who can best serve as a home visitor, the initial and ongoing training levels for home visitors and supervisors, supervisory standards, and core characteristics of a high-quality relationship between the home visitor and participants. In addition, the models set thresholds for organizations to reach with respect to management capacity and financial stability.

In most cases, the grantees will draw on national model performance guidelines in structuring their own plans for monitoring the quality and rigor of their home visiting services. The EBHV grantee-selected models will serve as the foundation for the measurement of fidelity within the cross-site evaluation. In some instances, however, these national model performance guidelines have been revised to capture variations in the service delivery process that result from grantees' adaptation of the models to better address the needs of their target population.

Table III.1 presents the research questions for the fidelity to the evidence-based model domain, as well as an overview of the data collection modes and analytic approach used to answer the questions. Additional detail on the data collection and analyses are presented in Chapters VII and VIII, respectively. The first question in Table III.1 is the primary research question for the domain, already presented in Chapter I. The other questions expand on the primary question, examining variation in fidelity by program model and other factors. Chapter VIII includes cross-domain research questions that relate to the fidelity domain.

**Table III.1 Fidelity to Evidence-Based Model Domain Research Questions, Data Collection Modes, and Analytic Approach**

| | Data Collection Mode | | Analytic Approach | |
|---|---|---|---|---|
| Research Questions | Web-based Data System | Site Visit Interviews | Qualitative | Quantitative |
| Were the home visiting program models implemented and delivered with fidelity? | X | | | X |
| To what extent did the grantees modify the national model to "fit" their target population and local service delivery context? | X | X | X | X |
| Does the fidelity of implementation vary across home visiting program models? | X | | | X |
| Does fidelity of implementation vary by contextual factors, such as target population, geographic variation, or workforce availability? | X | | | X |
| Does fidelity to the model increase or decrease over time? How is it associated with the stage of implementation? | X | | | X |

**Initial Fidelity**

Implementation fidelity has two primary components, which we will assess for each EBHV grantee-selected program model implemented during the grant initiative: (1) initial fidelity, and (2) ongoing fidelity. Initial fidelity reflects the grantee's ability to meet the initial certification requirements of the national program model when implementing a new site. Ongoing fidelity reflects the grantee's ability to maintain the implementation and reporting standards of the model once a particular site is operational.

To document initial implementation fidelity, we will rely on the individual national model developers to certify that the grantees have met all necessary criteria for affiliation at each location. Although variation exists across the developers in the specific standards they impose on those seeking to replicate their model, all the national models screen potential applicants for their capacity to successfully implement and sustain services as intended. Grantees implementing a new model will be expected to meet criteria that include:

- The "readiness" of the applicant organization to take on the task of delivering the home visiting program, including the organization's capacity to house the service and manage the hiring, supervision, and payment of all personnel, and its general fiscal stability.
- Compliance with all staff qualifications and training requirements for the home visitors and supervisors, including education or experience requirements, attendance at all required training, and demonstration of key competencies as specified by the model.
- The agency's capacity to identify and enroll participants who reflect the model's target population by documenting that the proposed service area has enough births or families that meet the model's eligibility criteria and that the agency has identified appropriate linkages for securing referrals both to and from the program.
- A plan to monitor ongoing implementation and "quality control" through such strategies as consistent data collection on home visit activities or detailed supervisory guidelines and expectations. If appropriate, the ability to comply with all of the national model's data collection requirements.

Each national model has a procedure for tracking compliance with these criteria and does not allow sites to use its name until all required training and conditions have been addressed. Therefore, we will assume that, if a grantee has obtained approval from the national model to implement its program, all these initial criteria will have been met. Although these standards differ across the national models, this variation does not pose significant problems because the national models are making a comparable judgment: whether the grantee has complied with all the requirements the national model set for formal affiliation.

As summarized in Chapter I (Table I.1), 14 of the 17 grantees will be working with at least one new home visiting program or proposing an adaptation or enhancement to an existing program within the context of this initiative. In these cases, initial implementation will be assessed when services begin (most likely during 2010, year 2 of the initiative). For grantees continuing with or expanding implementation of a specific model and not proposing major modifications, we will discuss with each grantee its experiences in implementing these models. With the grantee's permission, we will also review these experiences with the appropriate national model to confirm when the grantee began implementing a given home visiting model and the extent to which the grantee has complied with national model standards.

This external assessment will be augmented by qualitative interviews with program managers, supervisors, and focus groups of direct service staff conducted during the initial Mathematica-Chapin Hall site visit. These methods will address such issues as:

- The extent to which respondents feel confident in delivering the model as designed
- Satisfaction with the training and preparation they received to deliver services
- Respondents' understanding of the type of information that must be provided on an ongoing basis to monitor service implementation
- Any constraints or challenges they anticipate

A final indicator of initial fidelity to the model will include documenting that each site has established a procedure for using the data gathered in response to national model guidelines in its ongoing program planning and decision making. It will also be particularly important to document any additional fidelity criteria the grantees establish to monitor any modification or adaption they propose to a given national model.

**Ongoing Fidelity**

A central feature of the initiative is testing the extent to which states and local communities can succeed in implementing and sustaining home visiting programs with fidelity. Although the specific home visiting programs being implemented under this initiative differ in content and structure, all share a common commitment to core principles, both in how they are structured and in how they are delivered. These common indicators of high-quality implementation include:

- A belief that low caseloads for each home visitor will improve outcomes
- Strong supervision of staff
- An ability to enroll a high proportion of families referred for service

- An ability to consistently deliver home visits to families enrolling in service
- Low staff turnover among home visitors and supervisors
- Expectations for sufficient service dosage

As noted in Chapter I (Table I.1), three of the models—Healthy Families America (HFA), Nurse-Family Partnership (NFP), and Parents as Teachers (PAT)—keep participants for several years, believing this is necessary to achieve attitudinal and behavioral changes. The other three models—Family Connections (FC), SafeCare, and Triple P—have a shorter service enrollment period tailored to the needs of individual families. These programs do not specify how many sessions a family needs to have a sufficient "dosage"; rather, they emphasize documenting that families have achieved mastery of the behaviors taught in a given module or articulated in the case plan. Some families may master these skills in two or three visits. Other families may take 12 visits to master them. Despite this variation in appropriate duration and dosage, the expectation for most of the models is that to make participant engagement easier, services are initially offered at least weekly.

The scope and intensity of service delivery reporting requirements vary across the national models (see Table III.2). Only NFP requires all affiliates to submit participant-level data (for example, after each home visit). HFA and PAT ask their replication sites to complete annual program reports that document aspects of program operations and include aggregate performance data. Both of these models collect more detailed performance information during their peer review and accreditation process, which occurs every three years. SafeCare has a detailed system for assessing the capacity of individual service providers to adhere to the model's core practice principles, as well as the extent to which program participants complete individual service modules and master the behaviors reflected in these modules. Although Triple P and FC do not require local sites to consistently provide ongoing data to the national office, both provide those replicating their programs with suggested assessment tools and performance expectations.

Finally, implementing these models with fidelity requires attention to the relationship between the participant and the home visitor, emphasizing how participants' needs are identified and addressed during the home visit. Although substantial variation exists across models in what is considered appropriate content for visits, all have guidelines regarding careful assessment of needs, as well as responsive and respectful practice. For example, NFP guidelines require the home visitors to use "professional knowledge and judgment and skill in applying program guidelines, individualizing them to the strengths and challenges of each family and apportioning time across

**Table III.2 Data Reporting Requirements for the EBHV Grantee-Selected Program Models**

| EBHV Grantee-Selected Program Model | Data Reporting Requirements |
|---|---|
| Family Connections | Fidelity guidelines provided/no national data submission |
| Healthy Families America | Annual aggregate program report/accreditation every 3 years |
| Nurse-Family Partnership | Participant-level data collected on ongoing basis |
| Parents as Teachers | Annual aggregate program report/accreditation every 3 years[a] |
| SafeCare | Fidelity checklists provided/national data submission for new programs only |
| Triple P | Guidelines provided/no national data submission |

Source: Written materials and group discussions with program model purveyors.

[a]The national Parents as Teachers office is establishing a web-based data system to track PAT performance indicators for its programs.

EBHV = evidence-based home visiting.defined program domains." SafeCare guidelines instruct the home visitors to "encourage the parent to ask questions and express concerns" and ask that the provider's demeanor communicate "empathy, warmth, and understanding." FC instructs providers to deliver "tailored, direct therapeutic services" to help clients reduce risks, strengthen protective factors, and achieve outcomes. PAT requires that parent educators "build and maintain rapport through interaction that is responsive to each family member's personal style." In short, each model places high value on creating a service context governed by mutual respect and individualized services.

## Fidelity Indicators and Analytic Approach

In this section, we describe how we will select the sample of service delivery locations[8] for which we will collect fidelity data, the quantitative fidelity indicators, our methods for constructing key quantitative fidelity indicators, and the qualitative data on fidelity.

[8] A service delivery location is the site at which the EBHV program is delivered. If more than one EBHV model is delivered in one site, we will collect fidelity data separately for each model.

### Sample

The fidelity indicators will be collected for all service delivery locations that the grantee has identified as the focus of the systems change activities during the grant initiative. For most grantees, only one or two service delivery locations are identified as part of the grant initiative; however, a few grantees, such as Illinois and New Jersey, have multiple service delivery locations. These grantees will sample service delivery locations in their state to identify a small number of locations for which fidelity data will be collected. There are approximately 40 service delivery locations, for which we will collect data in the first year, with potentially 20 more added during the grant initiative. We will collect fidelity data for all participants served at a location, whether or not the participant is part of the family and child outcomes evaluation sample.[9] The client referred for services—usually the caregiver of the child—will be the person for whom fidelity data are collected. The target child for the fidelity measures will be the youngest child in the family.

### Fidelity Indicators

We derived a common set of program- and participant-level fidelity indicators for all program models. A common set of indicators will allow us to compare data across locations but also be useful to grantees in their own local evaluations. The set of indicators could not capture all critical elements articulated by the national models; however, the indicators have relevance across the models and include data the grantees will be tracking during their ongoing operation and local evaluations. Table III.3 lists the indicators we will be collecting and the frequency of collection. These indicators fall into five groups: (1) program-level descriptive data, (2) staff characteristics, (3) program-level service data, (4) participant characteristics, and (5) participant-level service data.[10]

1. ***Program-Level Descriptive Data.*** For each implementing agency, the grantees will provide descriptive information on the evidence-based program being implemented, including the number of home visitors and supervisors employed, the program's service capacity when fully enrolled, the date the program is certified by the national model, and its primary funding sources. These data will be entered into the web-based system at the onset of data collection and updated as information changes.

[9] Some grantees plan to select a subsample of EBHV program participants to participate in their family and child outcomes evaluation.

[10] The NFP National Service Office (NSO) has agreed to provide Mathematica-Chapin Hall with monthly participant-level data for the sites implementing NFP. The grantees implementing programs other than NFP will provide monthly participant-level data through a web-based system Mathematica-Chapin Hall has constructed for tracking program fidelity data. The web-based system is described in more detail in Chapter VII.

**Table III.3 Ongoing Fidelity Data**

| Indicator | Frequency of Collection |
|---|---|
| **Program-level Descriptive Data** | |
| Program identification number[a] | Baseline |
| EBHV grantee-selected program model | Baseline |
| EBHV grantee-selected program model implementation status | Baseline[b] |
| Certification by national model developer | Baseline[b] |
| Program's service capacity | Baseline[b] |
| Primary funding sources | Baseline[b] |
| **Staff Characteristics[b]** | |
| Staff identification number[a] | Baseline |
| Race-Ethnicity | Baseline |
| Languages in which home visitors are fluent (for home visits) | Baseline |
| Gender | Baseline |
| Age category | Baseline |
| Date of hire | Baseline |
| Date of certification or completion of model-specific training | Baseline |
| Position (home visitor or supervisor or both) | Baseline |
| Full-time employment status | Baseline |
| Highest degree and field of study | Baseline |
| Prior experience in delivering home-based interventions | Baseline |
| Ever been a primary caretaker of a child | Baseline |
| Termination date (if applicable) | Monthly (as necessary) |
| Reason for termination | Monthly (as necessary) |
| **Program-level Service Data** | |
| Each home visitor's current caseload | Monthly |
| Each supervisor's current caseload of home visitors | Monthly |
| Average hours of one-to-one supervision provided each home visitor | Monthly |
| **Participant Characteristics** | |
| Participant identification number[a] | Baseline |
| Date of initial referral | Baseline |
| Referral source | Baseline |
| Relationship to target child | Baseline |
| Gender | Baseline |
| Race-Ethnicity | Baseline |
| Primary language | Baseline |
| Country of birth and time in U.S. | Baseline |
| Date of birth | Baseline |
| Marital status | Baseline |
| Employment status | Baseline |
| Whether parent is currently in school | Baseline |
| Highest grade or degree completed | Baseline |
| Estimated household income | Baseline |
| Receipt of public assistance | Baseline |
| Age at first birth | Baseline |

Table III.3 (continued)

| Indicator | Frequency of Collection |
|---|---|
| Number of live births | Baseline |
| Pregnancy status (number of weeks gestation or "enrolled at birth") | Baseline |
| Date of target child's birth | Baseline |
| Target child's gender | Baseline |
| Number of other children in household | Baseline |
| **Participant-level Service Data** | |
| Program identification number[a] | Visit by visit |
| Code/identification of participant's home visitor[a] | Visit by visit |
| Date of scheduled home visit | Visit by visit |
| Visit completed | Visit by visit |
| Duration of visit | Visit by visit |
| Location of visit | Visit by visit |
| Content of visit | Visit by visit |
| Percentage of planned content covered during visit | Visit by visit |
| WAI-Adapted participant score[c] | Periodically |
| WAI-Adapted home visitor score[c] | Periodically |
| Termination date | Monthly (as necessary) |
| Reason for termination (planned, moved, unable to locate, etc.) | Monthly (as necessary) |
| Date of last home visit | Monthly (as necessary) |

[a]The identification number would be assigned by the Mathematica data manager.

[b]Updated as necessary.

[c]The WAI-Adapted questionnaires are modified versions of the client/therapist short form of the WAI for home visitors and their clients (WAI; Santos 2005 modifying Horvath 1994; Tracey and Kokotovic 1989).

EBHV = evidence-based home visiting; WAI = Working Alliance Inventory.

2. ***Staff Characteristics.*** Grantees will be asked to enter individual staff-level data into the web-based system for all home visitors and supervisors. These data include demographic characteristics; training, experience, and certification; and hiring and termination information.

3. ***Program-Level Service Data.*** On a monthly basis, program managers will be asked to compute and report indicators of caseloads and supervision from data available in their internal management information system and case records.

4. ***Participant Characteristics.*** These data will be entered into the web-based data system at participant intake. These data include demographic characteristics, including information on the youngest child in the household, participant referral date, and source.

5. ***Participant-Level Service Data.*** These data will be entered into the web-based data system at baseline and after every home visit, or as necessary. The participant-level data will include the participant's initial start and termination dates, and reason for termination. We will also collect information on the frequency, duration, and content of the home visits. We will collect a modified version of the Working Alliance Inventory (WAI) for both the participant and the home visitor (Horvath and Greenberg 1994; Horvath 1995), at two points during the participants' service receipt, for the subset of participants who are in the local evaluation family and child outcomes sample. These

relationship questionnaires measure the sense of collaboration and goal alignment between the home visitor and the participant.

**Participant-Home Visitor Relationship Indicators.** The perceptions of participant/home visitor relationship will be collected using modified versions of the WAI (WAI-Adapted) client and therapist short-form instruments (WAI; Horvath 1994; Santos 2005; Tracey and Kokotovic 1989). Because these data report the participant's perception of the home visitor and vice-versa, they must be completed by home visitors and participants and collected by a third party. Therefore, these data will be collected only on the sample of the participants who are also taking part in the family and child outcomes local evaluations. They will be used to supplement the broader range of fidelity measures. To assess the representativeness of the WAI-Adapted relationship data, the fidelity indicators and demographics described above about the WAI-Adapted respondents will be compared to the fidelity indicators and demographics of the sample not asked to complete the WAI-Adapted questionnaire.

While the modified WAI we will use captures one aspect of the relationship between the participant and the home visitor, the results cannot capture all dimensions of this relationship. Aspects of participants and home visitors that appear to be central to each model's philosophy include:

- A systematic assessment of participants' needs
- Individualized or responsive practice based on a family's assessed needs
- Participants' involvement in decision making and encouraging participants to ask questions and raise concerns
- Cultural relevance/sensitivity

Each national model has one or more criteria related to these concepts embedded within its data collection system or performance standards. We will look at participant satisfaction forms, which some grantees are using, when families terminate from the program. These forms include specific questions regarding participant engagement in decision making, the extent to which participants view services as being responsive and respectful of cultural differences, and the extent to which services address key participant needs. Furthermore, we will consider drawing on existing data to determine the proportion of cases in which staff judged that these concepts were adequately addressed. For NFP, Triple P, and SafeCare, in which these standards are routinely documented at the individual participant or home visitor level when services are provided, program staff will have a robust database on which to make these assessments. For HFA and PAT, this annual request would

correspond to the annual reporting requirements of these two national models and would reflect data included in both programs' practice guidelines.

**Constructing Key Fidelity Indicators**

We will construct key fidelity indicators, using the data described above. These will include indicators such as participants' dosage, duration of services, and reasons for service termination; home visitors' training, education, and experience, as well as their average caseload and reasons for termination among their caseload; and, for each location, the ratio of supervisors to home visitors and the ratio of clients served to program capacity. For each fidelity measure, we will present the indicator two ways: (1) the actual level of the indicator (for example, for the participant's dosage, we will calculate the number of home visits a participant received); and (2) whether the indicator met the model standards (using the example of participant dosage, we will determine whether the participant received the number of home visits required by the national model guidelines).

The fidelity indicators will be collected monthly; however, they will likely be aggregated up to a longer time frame, such as six months, to smooth out random monthly variation. We will aggregate the fidelity measures up to the service delivery location level to facilitate comparisons. For example, we will present the average participant dosage for each particular location. Finally, we will group these aggregate location-level measures by key subgroups, such as by grantee, program model, primary target population, or geographic area, to better understand the patterns of fidelity across locations.

**Qualitative Fidelity Data**

Additional information on program fidelity or quality will be obtained during the site visits by holding focus groups with supervisors and direct service providers to obtain their assessment of service quality and the consistency of supervisors' interactions with direct service staff. In the second site visit, we might collect additional fidelity data through two activities: (1) case record reviews to validate the information in the project-generated fidelity reports on enrollment rates, frequency of visits, and adherence to model standards; and (2) observations of home visits (or, perhaps, supervisory sessions). These data collection activities are described in more detail in Chapters VI and VII.