IV. DESIGN PLAN FOR ASSESSING COSTS OF HOME VISITING PROGRAMS

Given the critical need to use public resources efficiently, a key component of the cross-site evaluation will be to assess the costs of implementing the EBHV grantee-selected home visiting program models. The provision and management of home visiting services within service delivery location is the focus of the program cost domain. Specifically, the cross-site evaluation will work with grantees to assess the costs of delivering the program and of the essential infrastructure for supporting it, including training, supervision, and program management. These costs will reflect the full costs of the program and related support, beyond simple accounting costs, by including donated resources and volunteer time. In the cross-domain analyses, the Mathematica-Chapin Hall team will use the program cost data provided by the grantees through the web-based data system to explain and describe the context for the evaluation results in other domains.

In this chapter, we first provide an overview of the program costs we will examine and describe the key research questions for this domain. We then describe the cost measures and how we selected those measures, and provide a brief overview of the analytic approach.

Overview of Domain and Key Research Questions

To design a cost analysis, two questions must be addressed: (1) Who incurs the costs, and (2) What costs will be included? A key issue in undertaking cost analysis is determining the most appropriate perspective for the analysis (Corso and Lutzker 2006; Foster et al. 2003; Gold et al. 1996)—that is, whose costs will be examined. Typically, one of three perspectives is taken in a cost analysis: (1) the costs to those who fund the program, (2) the costs to those who operate the program, or (3) the costs to society of the program. The costs-to-funder perspective uses accounting or financial records to ascertain how money provided by a funder was spent on program-related activities. This perspective is useful to funding agencies in understanding how their funds are used to support programs. The second perspective, program costs, includes all the resources needed to deliver a program, including accounting costs and nonmonetary resources such as donations and volunteer time. This perspective is useful to organizations and sites interested in sustaining or replicating a program, because it provides program directors with information about the resources necessary to deliver essential program activities. The societal costs perspective includes all societal-level resources devoted to a program, including forgone opportunities, such as the value of clients' time spent participating in the program, usually measured as forgone wages. The societal costs

perspective is most useful for comparing the costs to society of disparate, publicly funded interventions. It requires making multiple assumptions about the value of time and resources.

The cross-site evaluation will use the program costs perspective. This perspective best reflects the priorities of the grantees and the aims of the cross-site evaluation. A primary goal of the grantees' projects is to support the implementation and sustainability of home visiting programs. Using the program costs perspective, grantees will have a full, consistent accounting of the costs of implementing a range of home visiting programs as part of this initiative. Using this perspective also allows the cross-site evaluation team to align the cost domain with the fidelity to the evidence-based model domain, which assesses the implementation of a specific home visiting program.

The second key issue in planning a cost study is identifying the program components to be included in the cost analysis. We will include the costs of the programs' core operations, which focus on delivery and management of services. To enhance the consistency and usefulness of the cross-site evaluation, we propose using the definition of core operations developed for the systems domain, which includes "direct home visiting services (such as outreach, assessment, referral, home visiting, case management, and other services) and daily management of those activities (hiring, training, supervision, fidelity monitoring, operations planning, data collection, and storage)" (Fixen et al. 2005). These operations include delivery of services, as well as infrastructure capacities essential to manage and deliver services, such as staff supervision, training, and monitoring of fidelity. We will also include the costs of materials, such as supplies and office space, which are necessary for carrying out core operations, as well as the costs of volunteer time and donations. We will not include grantee activities that are outside core operations, such as systems change activities.

Table IV.1 presents the cost domain research questions and an overview of the data collection modes and analytic approach we will use to answer each question. (Chapters VII and VIII present additional detail on the cost domain data collection and analytic approach.) The first question is the primary research question for the domain, as presented in Chapter I. The next four questions expand on the primary question, examining unit and program component costs, as well as factors associated with program costs. Chapter VIII includes the cross-domain research questions that relate to the cost domain.

Table IV.1   Cost Domain Research Questions, Data Collection Modes, and Analytic Approach

Research Questions	Data Collection Mode		Analytic Approach	
	Web-based Data System	Site Visit Interviews	Qualitative	Quantitative
What are the total costs of delivering and supporting the home visiting programs during a typical operating year?	X			X
What does each program cost per participating family?	X			X
How are costs allocated across key program components?	X	X		X
How do costs vary by key program features, such as program model, stage of implementation, and target population?	X			X
How do program costs vary by context, such as region of the country, urban/rural location, or political and economic factors?	X	X	X	X

Cost Measures and Analytic Approach

The plan for the cost domain analysis is based on three goals: (1) measure "steady-state" costs that best reflect the level of resources needed to operate ongoing programs; (2) collect costs from providers of all core operations, including direct services and essential infrastructure; and (3) break costs down into commonly defined program components to make it easier to compare programs. To achieve these goals, we will use a two-step approach: (1) build up an estimate of aggregate program costs, and (2) assign the costs to program components (Thompson 1998). This section discusses the primary data elements we plan to collect and analyze, as well as the plans for collecting these data.

Aggregate Program Costs

Aggregate program costs (total resources used in operating the program) will be assessed by collecting detailed information about each grantee's expenditures. We will examine the full range of costs associated with delivering services and operating the program—including all financial costs, such as salaries and benefits, program overhead, and purchases—as well as the value of volunteer labor and in-kind resources associated with delivering services, and the accounting costs or value of essential infrastructure supporting program delivery.

Grantees will be able to enter the total program cost data into the web-based system, described in more detail in Chapter VII. A list of the measures we will collect via the web-based system is provided in Volume II of this report. Collection of accurate, consistent cost data depends on clear, detailed definitions of what should be included. Therefore, we will work with the grantees to construct clear, detailed written instructions for the cost data collection. We will also provide technical assistance to sites during the collection of aggregate program costs to ensure consistent reporting across grantees. This will help grantees assign costs to categories, such as volunteer time or donated services.

The cross-site evaluation team will collect total aggregate program costs for calendar year 2011, when the programs should be fully operational but not yet winding down, and will ideally have stable program services, staffing, and a regular flow of clients into and out of the program. Grantees will provide cost data for the same service delivery locations as for the fidelity domain, described in Chapter III, to allow for analyses across domains. Grantees with only a small number of service delivery locations will provide program costs for all locations. Grantees with many service delivery locations, such as Illinois and New Jersey, have proposed a sampling strategy to identify the service delivery locations that will provide both fidelity data and program costs. We will collect program costs by service delivery location. If grantees are working with more than one program model in one location, we will work closely with those grantees to obtain the information separately by model to correspond to the fidelity data. If their financial records do not allow for this separation, we will collect the combined program costs for that location. We expect this to be a rare occurrence, as most grantees are providing services for different program models in distinct locations.

Program Component Costs

Once we have total program costs, they can be disaggregated into program component costs, which can be useful to various constituencies. Comparing program component costs allows for more detailed comparisons across alternative program approaches. Knowing component costs will be useful to program administrators who may be operating or planning similar programs, as well as to the EBHV grantees themselves. Finally, having the program component costs will also help the evaluation team understand those factors that contribute the most to program costs. Table IV.2 provides the definitions of each program component required for the analysis of program costs.

Table IV.2 Description of Essential Program Components and Infrastructure Capacities

Essential Program Components and Infrastructure Capacities	Description
Training and Supervision	Time spent in training, supervision, and case consultation in support of delivering home visiting services
Program Management and Administration	Time spent in program management and administration (such as hiring staff, budget planning and monitoring, managing/negotiating contracts, state and local collaboration/meetings)
Home Visit Preparation, Delivery, and Followup	Time spent planning and delivering direct services to children and families
Case Management and Service Referral/Linkage	Time spent arranging/coordinating services on behalf of the children and families; case management
Fidelity Monitoring	Monitoring fidelity to the EBHV grantee-selected program model
Outreach and Recruitment	Outreach to local agencies/groups/providers; referrals from partner organizations
Screening and Assessment	Screening and assessing participants for the home visiting program
Evaluation Activities	Setting up systems for data collection, compilation, and analysis
Materials and Rent	Rent for office space, office supplies, and equipment; costs of communication services

EBHV = evidence-based home visiting.

Personnel time is usually the largest component of program costs. Therefore, the allocation of program costs to program components is based primarily on determining the amount of personnel time devoted to each element of core operations. Using consistent definitions of the program components across grantees is essential for correctly categorizing activities and ensuring the validity of the costs data across program components. The Mathematica-Chapin Hall cross-site evaluation team, in conjunction with the grantees, are working to further refine common program components and definitions. This process began through the PLN costs domain calls. We will provide grantees with our proposed definition of program components early in the first year of program services (fall 2009), with the idea that we will be flexible about grantees' feedback on the program components, based on what it is feasible to collect.

Program component costs will be allocated based on retrospective data.[11] To collect these data, we will ask supervisors, and administrators and managers, as appropriate, about the allocation of personnel time spent on program components, including key program activities and essential infrastructure. Program directors and other key staff with knowledge of staff time spent on core operations, such as supervisors, will be asked to complete the web-based system cost data collection in early 2012. Mathematica staff members will be available to provide technical assistance on definitions of the program components and collection of the costs data. During the spring 2012 site visit, we will do additional in-person quality reviews and request any clarifications needed about the data submitted by the grantees.

Analytic Approach

Our analytic approach is consistent with the data collection strategy: first, build up an estimate of aggregate program costs; second, assign the costs to program components. To determine the total program costs, we will sum the financial information provided by the grantees for 2011 (based on the calendar year). By applying this approach, the cost analysis will provide an estimate of the total costs of the home visiting program during a steady state of operation.

After we develop the aggregate program cost estimates, we will standardize the total cost estimates by converting them into costs per participating family. Calculating these unit costs will allow fairer comparisons across alternative programs. Using information on the number of families served, we will estimate the average total program cost per participating family. In this analysis, we will use several definitions of families served, such as the number of families enrolled in the program in that year and the number of families who completed the program in that year. Furthermore, we will examine whether the caseload of the home visiting program is related to the average cost per family, because programs that serve many families may benefit from economies of scale.

As described above, information collected from key staff will allow us to allocate total program costs across program components. First, we will estimate the proportion of personnel resources dedicated to each program component. Materials and resources will be allocated in the same

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[11] A key strength of the retrospective approach is that it is less burdensome, and the interviewer can guide staff to a consistent definition of the program components. The weakness is that retrospective data could suffer from recall error. Studies suggest that retrospective reporting of typical work hours is similar to collecting data through time diaries, if the reference periods for data collection are the same across methods (Frazis and Stewart 2004).

proportions as personnel costs. If appropriate, we will estimate the average cost per family of key program components.

We will group programs according to characteristics that might be associated with their costs, such as program model, time since implementation, geographic region, or urban/rural locale, to determine whether costs vary by those factors. Through the implementation study, we will identify contextual factors that could influence program costs, such as major economic or political developments, or even natural disasters. Finally, we will examine relationships between program costs and key systems change outcomes, such as scale-up and sustainability, as outlined in Chapter II and described in more detail in Chapter VIII, in the section on the cross-domain analyses.