

**Costs of Early Childhood Home
Visiting: An Analysis of Programs
Implemented in the Supporting
Evidence-Based Home Visiting to
Prevent Child Maltreatment
Initiative**

Final Report

January 30, 2014

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Policy Research

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CONTENTS

| | |
|--|----|
| EXECUTIVE SUMMARY..... | IX |
| I INTRODUCTION..... | 1 |
| A. Overview of the EBHV Initiative..... | 2 |
| B. Characteristics of Implementing Agencies and Program Models..... | 3 |
| C. Organization of the Report..... | 5 |
| II STUDY FRAMEWORK AND APPROACH..... | 7 |
| A. Design..... | 7 |
| B. Data Sources..... | 9 |
| 1. Cost Data..... | 9 |
| 2. Time-Use Data..... | 11 |
| 3. EBHV Cross-Site Fidelity Data..... | 12 |
| C. Study Sample and Program Characteristics Used in the Analysis..... | 12 |
| D. Limitations..... | 13 |
| III HOW ARE RESOURCES USED TO DELIVER HOME VISITING PROGRAMS?..... | 15 |
| A. Total Annual Costs and Allocations Across Resource Categories..... | 15 |
| 1. Total Annual Costs..... | 15 |
| 2. Allocation of Total Costs Across Resource Categories..... | 17 |
| 3. Allocation of Resource Costs in Agency Subgroups..... | 20 |
| B. Allocation of Costs Across Program Components..... | 20 |
| 1. Allocation of Program Component Costs Among All Agencies..... | 21 |
| 2. Allocation of Program Component Costs in Agency Subgroups..... | 21 |

- IV HOW MUCH DOES IT COST TO SERVE A FAMILY? 25
 - A. Characteristics of Participating Families 25
 - B. Cost per Family..... 26
 - 1. Method for Calculating Costs per Family..... 27
 - 2. Average Cost per Family 28
 - C. Cost per Home Visit..... 31
- V COSTS OF EBHV PROGRAMS IN CONTEXT 35
 - A. Comparisons with Previous Cost Estimates 35
 - B. Implications for Program Implementers, Policymakers, and Other Stakeholders 37
- REFERENCES..... 41
- APPENDIX A IMPLEMENTING AGENCY COST TABLES A.3
- APPENDIX B: IMPLEMENTING AGENCY COST SURVEY B.7
- APPENDIX C: IMPLEMENTING AGENCY STAFF TIME-USE SURVEY.....C.4
- APPENDIX D VARIABLES CREATED FOR ANALYSES OF COSTS PER FAMILY AND HOME VISITD.5

TABLES

| | | |
|-------|---|-----|
| ES.1 | Cost per Exiting Family by Selected Agency Characteristics | xvi |
| II.1 | Characteristics of Implementing Agencies in the Cost Study | 3 |
| I.2 | Home Visiting Program Models Implemented by Agencies in the Cost Study..... | 4 |
| II.1 | Resource Categories for the Cost Study of EBHV Programs..... | 8 |
| II.2 | Home Visiting Program Components | 10 |
| II.3 | Number of Implementing Agencies by Home Visiting Model and Agency Characteristics..... | 13 |
| III.1 | Total Costs by Selected Program Characteristics | 16 |
| III.2 | Average Percentage of Annual Costs Allocated to Program Components..... | 24 |
| IV.1 | Demographic and Socioeconomic Characteristics of Participants Served During the Cost Study Period: July 2011–June 2012 (percentages unless otherwise indicated) | 26 |
| IV.2 | Cost per Exiting Family by Selected Agency Characteristics | 29 |
| IV.3 | Average Cost per Home Visit | 32 |
| IV.4 | Comparison of Average Costs per Family Based on Cost per Week of Enrollment and Cost per Home Visit | 33 |
| V.1 | Comparison of Costs per Family in EBHV Home Visiting Program Models with Selected Estimates from Previous Studies (2012 Dollars)..... | 36 |
| A.1 | Total Estimated Costs of Operations for the Home Visiting Program for a One-Year Period (2012 Dollars) ^a | A.3 |
| A.2. | Allocation of Costs Across Components of the Home Visiting Program | A.5 |
| A.3 | Costs per Week, Exiting Family, and Home Visit (2012 Dollars) ^a | A.6 |
| D.1 | Variables Created for Analyses of Costs per Family and Home Visit..... | D.3 |

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FIGURES

| | | |
|-------|--|----|
| III.1 | Total Costs by Number of Families Served During the Cost Period..... | 17 |
| III.2 | Average Percentage of Costs Allocated to Resource Categories for IAs | 18 |
| III.3 | Average Percentage of Costs Allocated to Program Components..... | 22 |
| IV.1 | Number of Implementing Agencies with Costs per Family in Ranges Above and Below the Average Among All Agencies (\$6,583)..... | 30 |

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EXECUTIVE SUMMARY

Home visiting programs offer a promising method for delivering support services to at-risk families and children and preventing child maltreatment. As interest grows in scaling up home visiting programs as a strategy to promote parent and child well-being and prevent child maltreatment, program implementers and policymakers are seeking more information about the costs of implementing these programs.

The Cost Study of Evidence-Based Home Visiting Programs applied a uniform approach and common time frame to analyze costs among agencies implementing five different home visiting program models. The study assessed (1) the total cost of providing home visiting programs during a year of steady-state operation, (2) the allocation of annual costs among cost categories and program activities or components, (3) the cost to serve a participating family, and (4) variation in average costs across program models and other agency characteristics.

Mathematica Policy Research and Chapin Hall at the University of Chicago conducted the study with support from the Doris Duke Charitable Foundation and in collaboration with Casey Family Programs.¹ It included agencies that participated in the Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment (EBHV) initiative, a five-year grant program launched in 2008 by the Children’s Bureau of the Administration for Children and Families at HHS.² In 2011, the EBHV grant program was formally incorporated into the Maternal, Infant and Early Childhood Home Visiting Program (MIECHV) State Formula Grant Program administered by the Health Resources and Services Administration of HHS.

Study Framework and Approach

The cost study sample includes 25 implementing agencies (IA) that delivered home visiting services in 13 states.³ The IAs offered one of five home visiting program models: (1) Healthy Families America (HFA, 7 IAs), (2) the Nurse-Family Partnership (NFP, 10 IAs), (3) Parents as Teachers (PAT, 3 IAs), (4) SafeCare (SC, 4 IAs), and (5) the Positive Parenting Program (Triple P, one IA). Most of the IAs (15 agencies) were private nonprofit organizations. Seven were state or county government agencies, and 3 were hospitals or medical centers. IAs located in urban areas (16 agencies) were more common than those located in suburban or rural areas (5 and 4 agencies, respectively).

We analyzed program costs from the implementing agency’s perspective. Costs include all resources used by an agency to deliver a program during a one-year period of “steady-state” operation (July 1, 2011, through June 30, 2012), and cost estimates provide an indication of the resources that an agency would need in order to replicate a program at a similar scale in a similar

¹ The Doris Duke Charitable Foundation awarded a grant to the Corporation for the Advancement of Policy Evaluation, which subcontracted with Mathematica to complete the study. Chapin Hall also contributed funding to support the participation of its researchers in the study.

² See Boller et al. (2013) for additional findings from the cross-site evaluation of the EBHV initiative.

³ A total of 47 IAs participated in the EBHV initiative. The cost study sample includes only agencies that provided data needed to conduct cost analyses.

context. To conduct the study, we collected three types of data from IAs: (1) data on resources used for program operations, to estimate total costs; (2) data on staff time use, to allocate costs among program components; and (3) data on the number of families served and their receipt of home visiting services, to estimate costs per family.

The cost analysis was conducted using the “ingredient” or resource cost method, which involved itemizing the types of resources (or ingredients) needed to provide services, gathering information on the types and value of resources used by each agency during the study period, and aggregating costs to estimate total program costs (Levin and McEwan 2001). To represent more accurately the total resources required to implement a program, we incorporated costs not typically captured by budgets or accounting records, including donated resources such as volunteer time and in-kind contributions of services or materials, as well as the value of staff time spent on the program beyond normal working hours (and not reflected in salaries or fringe benefits).

How Are Resources Used to Deliver Home Visiting Programs?

Across all agencies in the cost study sample, the average estimated annual cost to operate a home visiting program was \$580,972. Agencies served an average of 110 families during the year. The one-year cost varied across the agencies in the sample, ranging from \$206,426 to \$1,207,054. This range reflects numerous differences across the programs operated by each agency as well as differences in agency characteristics, including, but not limited to, the size of the program in terms of the number of staff employed or the number of families served and the intensity and duration of the home visiting program model. Among agencies in our sample, the scale of the programs in terms of the number of families served was not a consistent predictor of whether annual costs would be above or below average.

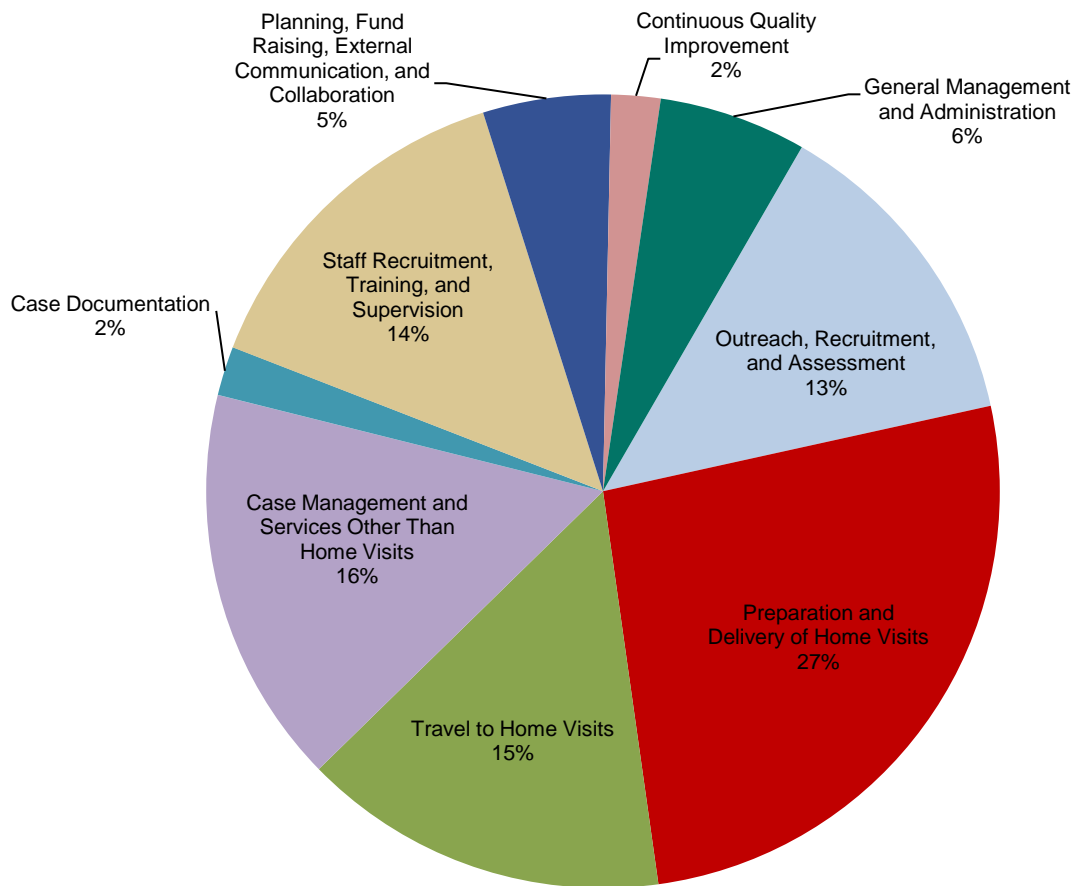
Personnel costs, which included salaries, fringe benefits, and the value of volunteer or donated labor, represented the largest share of total program costs—on average, 72 percent. Among IAs, the share of total costs allocated to personnel ranged from 54 to 89 percent for the one-year period. Nonpersonnel costs made up the remaining portion of program expenses—on average, 28 percent of the annual operating costs. Among the agencies in the study, these costs ranged from 11 to 46 percent of total program costs. Nonpersonnel costs included supplies, materials, and durable equipment; contracted services; office space and other facilities; miscellaneous direct costs (such as cell phone charges and payments to model developers); and indirect or overhead costs for shared functions within an agency.

Compared to agencies implementing other models, NFP agencies allocated a larger share of total costs to personnel (78 percent). Salaries for staff working on NFP, particularly the home visitors, were generally higher than salaries for staff working on other home visiting models, since NFP requires all home visitors to be bachelor’s level or registered nurses.

Activities related to delivering services directly to families—home visits, case management, travel, and outreach and recruitment—accounted for more than two-thirds of program costs (72 percent), on average. The remaining costs were allocated to management and administrative activities associated with service delivery, including case documentation; staff recruitment, training, and supervision; planning, fundraising, and external communication; continuous quality

improvement; and general management and administrative activities.⁴ Among direct service activities, the preparation and delivery of home visits represented the largest share of program costs (Figure ES.1). Staff recruitment, training, and supervision represented the largest share of program costs for a management and administrative activity (14 percent). About half of the agencies participating in the cost study reported staff transitions during the cost period, and each of the five home visiting program models implemented by the agencies in the cost study strongly emphasized regular supervision of direct service staff.

Figure ES.1. Average Percentage of Costs Allocated to Program Components



Source: Cost Survey of Implementing Agencies and Implementing Agency Staff Time-Use Survey.

Note: Costs were reported for the period of July 1, 2011, through June 30, 2012. Averages are at agency level. N = 24 agencies. One agency was removed from this analysis because data on staff time use were not available.

⁴ The total does not equal 100 percent, as averages are calculated at the agency level.

On average, agencies implementing NFP, PAT, and SafeCare allocated a larger share of resources to direct services than agencies implementing other models. For NFP, PAT, and SafeCare agencies, direct services accounted for 74 to 79 percent of total costs as compared to 69 percent for HFA and 62 percent for Triple P. Although we cannot identify program features that conclusively resulted in differences in the share of costs allocated to direct services, it is noteworthy that NFP, PAT, and SafeCare agencies allocated, on average, a larger share of costs than agencies implementing other models to the preparation and delivery of home visits and to outreach and assessment of new clients.

How Much Does It Cost to Serve a Family?

To estimate costs per family, we adopted an approach that accounts for differences in service dosage by basing estimates on the average duration of enrollment. To calculate costs per participating family at each IA, we followed these steps:

1. Determined the number of weeks each family was enrolled during the cost period
2. Calculated the *total number of weeks of family enrollment* by summing across all families the number of weeks each family was enrolled during the cost period
3. Calculated a *cost per week of family enrollment* by dividing the total annual cost of operating the program by the total number of weeks of family enrollment
4. Calculated the *average cost per family* by multiplying the cost per week of family enrollment by the *average number of weeks of enrollment* (including weeks before the cost period) among families served by the IA and exiting during the cost period

Thus, our calculation of average cost per family may be summarized in the following equation:

$$\begin{aligned} \text{Average cost per family} = \\ \text{Cost per week of family enrollment during the cost study period} \\ \times \text{Average number of weeks of enrollment} \end{aligned}$$

We also calculated weighted averages across all IAs and for subgroups of IAs. For these calculations, we weighted each IA-level average based on the number of families exiting the IA during the cost period.

Average Cost per Family

On average, the IAs in our analysis enrolled a family for 44 weeks and spent \$6,583 serving that family (Table ES.1).⁵ Costs per family ranged widely among IAs, from a minimum of \$2,122 to a maximum of \$13,962. IAs were nearly equally divided between those with costs per family above (10

⁵ Our calculation of averages of cost per family among all IAs and IA subgroups includes 19 IAs. Four IAs were excluded from the calculation because 10 or fewer families exited during the cost study period, and estimates based on the experiences of a relatively small number of exiting families may be less accurate. We excluded one IA because data on average duration of participation were not available. One additional IA was excluded as an outlier. This IA implemented a version of PAT that included links to professional mental health services, and its cost per family was nearly twice as much as that of the next-highest IA. To prevent this estimate from skewing the overall average and the average for certain subgroups, we excluded it from the calculation.

IAs) and below (9 IAs) the overall average. Across all IAs, the weighted average cost per family (\$5,962) was somewhat lower than the arithmetical average.

Variation by program model. In our sample, the average for cost per family was lowest for the two IAs implementing a standard version of PAT (\$2,372). Although PAT is designed to be a longer-term, intensive program model, for these two IAs, costs per family were lower than average. In both agencies, the number of families served and the number exiting during the cost study period were above the overall average, reflecting high demand for services in the communities that PAT IAs served.

Higher-than-average costs per participant for NFP IAs may be related to the compensation levels for home visitors in these programs. NFP is the only program model requiring a bachelor's degree in a specific discipline (nursing), and data collected for the cost study reveal that salaries for home visitors in NFP IAs tended to be higher than those of direct service staff in other IAs.

Given that the intended duration of SafeCare (approximately 24 weeks) is shorter than the duration of HFA or PAT (both designed as multiyear programs), the average costs for SafeCare programs were higher than might be expected. This finding may reflect the actual average duration of participation for families served by IAs in our sample, which was about 8 weeks longer than the duration recommended by model developers. The higher-than-expected cost for SafeCare programs could also be related to caseload sizes that were smaller than model specifications would suggest, on average, among SafeCare IAs in the EBHV initiative. Smaller caseloads would generate higher-than-expected costs per family because home visitor compensation and other program costs in SafeCare IAs were distributed among fewer participants than anticipated. Finally, it is possible that higher-than-expected costs for SafeCare IAs reflect an augmented version of SafeCare implemented in one site in our cost analysis. This version of SafeCare included motivational interviewing (an approach to counseling), safety planning, and problem solving to address risks of intimate partner violence, substance abuse, and depression. The augmentation may have required a larger investment of resources to serve each family.

Variation by other agency characteristics. We observed cost variation among all the agency characteristics we examined: program model implementation status (new or continuing), agency location (rural, suburban, or urban), and agency type (government, medical center, or private nonprofit). IAs that newly implemented their home visiting program model at the beginning of the EBHV initiative averaged higher costs per family than those experienced in implementing their program model (\$7,760 compared to \$5,274). Average costs per participant were lower among rural programs (\$5,459) than among suburban or urban programs (\$7,145 and \$6,787, respectively). The variation based on location may be related to lower costs in rural areas for resources such as personnel and facilities. Among agency types, costs per participant were lowest among private nonprofits (\$5,214, on average) and highest among medical centers (\$9,226). The two medical centers in the analysis differed substantially in their costs per participant, however.

Table ES.1. Cost per Exiting Family by Selected Agency Characteristics

| | Number of IAs | Average Number of Families Exiting During Cost Study Period | Average Duration of Participation Among Exiting Families (weeks) | Average Cost per Exiting Family ^a | Range in Average Cost per Exiting Family | Weighted Average Cost per Exiting Family ^b |
|--|---------------|---|--|--|--|---|
| All IAs | 19 | 44 | 44 | \$6,583 | \$2,122—\$13,962 | \$5,962 |
| Program Model | | | | | | |
| HFA | 4 | 26 | 33 | \$5,615 | \$2,848—\$10,502 | \$5,270 |
| NFP | 10 | 40 | 55 | \$8,003 | \$4,228—\$13,692 | \$7,596 |
| PAT | 2 | 78 | 36 | \$2,372 | \$2,122—\$2,622 | \$2,415 |
| SafeCare | 2 | 70 | 32 | \$6,263 | \$5,826—\$6,699 | \$5,982 |
| Triple P | 1 | 46 | 26 | \$5,306 | n.a. | \$5,306 |
| Model Implementation Status at Outset of EBHV Initiative | | | | | | |
| New | 10 | 49 | 49 | \$7,760 | \$4,228—\$13,692 | \$7,080 |
| Continuing | 9 | 39 | 39 | \$5,274 | \$2,122—\$10,502 | \$4,382 |
| Location | | | | | | |
| Rural | 4 | 56 | 36 | \$5,459 | \$2,848—\$8,540 | \$5,697 |
| Suburban | 4 | 45 | 50 | \$7,145 | \$2,122—\$10,502 | \$6,104 |
| Urban | 11 | 40 | 45 | \$6,787 | \$2,622—\$13,962 | \$6,039 |
| Type of Agency | | | | | | |
| Government | 6 | 47 | 55 | \$8,211 | \$5,320—\$12,941 | \$7,438 |
| Medical center | 2 | 22 | 55 | \$9,226 | \$4,490—\$13,962 | \$11,163 |
| Private nonprofit | 11 | 47 | 37 | \$5,214 | \$2,122—\$10,502 | \$4,717 |

Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Notes: Costs are in 2012 dollars for the period of July 1, 2011, to June 30, 2012. Analysis includes IAs with more than 10 families exiting during the cost study period and excludes the IA implementing a version of PAT that provides access to mental health services. Averages and ranges pertain to the agency level within each category. The average cost per exiting family is not discounted for participation before the cost study period.

^aAverage cost per family = Average cost per week of participation for each IA x Average number of weeks of participation for families served by the IA and exiting during the cost period.

^bWeighted averages are based on the number of families exiting each IA during the cost period.

n.a. = not applicable; IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

Cost per Home Visit

As with costs per participant, information on the cost of providing a unit of service can be helpful for understanding and comparing program cost structures. We calculated the average cost per home visit by dividing the total annual costs for each IA by the number of home visits delivered during the cost study period. The average includes the costs for other direct services and program management and administration. Thus, the average cost per home visit denotes the level of

resources used by agencies to deliver a core service, based on the total resources required to operate the program.

Among the IAs in our sample, a completed home visit cost an average \$534. The cost per home visit ranged widely, from \$201 to \$1,397.⁶ On average, costs per home visit were lowest among PAT programs (\$210) and highest among HFA programs (\$673). The average number of home visits delivered during the cost study year was also largest among PAT agencies (2,067) and smallest among HFA agencies (928).

Costs of EBHV Programs in Context

The results of our cost analysis of EBHV programs provide insights into resource use and allocation that can inform the continuing expansion of home visiting services. Here, we highlight key findings and implications for operators of home visiting programs and policymakers.

In addition to delivering home visits, agencies participating in the EBHV initiative spent substantial funds on other activities. The provision of home visits was central to the work of EBHV IAs. On average, agencies spent the largest proportion of their annual costs to prepare for, travel to, and deliver home visits. Yet the allocation of costs across program activities indicates that supporting the delivery of home visits requires substantial investments in other activities, such as general case management; recruiting, training, and supervising staff; and identifying and assessing potential clients.. Further, the overall allocation of program costs across components helps pinpoint activities that may need to be examined closely in order to understand and plan for program costs in diverse agency contexts. Agencies that offer more intensive case management or ancillary services, experience high rates of staff turnover, or face challenges in recruiting and enrolling clients, for example, may experience higher costs than agencies without these characteristics. If program implementers or policymakers assign a high priority to increasing program efficiency, it may be useful to explore strategies for adjusting these elements of agency operations and assessing how changes affect costs.

Both program model and agency characteristics appear to influence costs per family. Although we cannot definitely link cost patterns to specific agency features, we observed differences in costs by program model and agency characteristics. Moreover, we identified circumstances in individual agencies, such as service enhancements, target populations that were difficult to engage, and caseload dynamics, that appeared to influence program costs substantially. Thus, the different requirements of program models are likely to influence costs per family, but agency-level factors also appear to affect them.

Integrating cost analysis into broader program evaluations offers opportunities for systematic and comprehensive data collection. In general, conducting cost analyses of home visiting programs in the context of a broader evaluation is likely to be beneficial for several reasons. First, a process study that may be conducted as part of a larger evaluation can inform the design of cost studies by gathering information needed to help evaluators identify and define program components or activities. Second, data on service use and program implementation supports

⁶ N = 23 IAs. This calculation excludes as outliers the average costs per home visit for two IAs: (1) a PAT IA that enhanced its program by providing access to mental health care and (2) a SafeCare IA that targeted a hard-to-serve population of parents on probation and with a known history of substance abuse and mental health issues.

analyses of costs per family and variation across agencies. Such data can provide information on families' duration of participation, so that cost estimates can be based on actual, rather than assumed, service dosage. In addition, detail on the design and delivery of home visiting services at the agency level, along with information on agencies' strategies and experiences with respect to outreach, staff supervision and training, and other functions, will be useful for interpreting cost differences among agencies. This type of information may shed light on how the differing circumstances in which programs are implemented contribute to cost variation as a program model is replicated.

Finally, integrating cost studies into evaluations that assess families' outcomes or impacts relative to a comparison group creates a foundation for further economic analyses, such as cost-benefit and cost-effectiveness analyses. Even though such types of analyses were beyond the scope of the EBHV cost study, future studies may be able to expand further the knowledge base on the costs and benefits of home visiting program models and explore how they may vary with agency characteristics and contexts.

I. INTRODUCTION

Home visiting programs offer a promising method for delivering support services to at-risk families and children and preventing child maltreatment. Reviews of research on home visiting program models have found evidence that some can improve important short- and long-term outcomes related to women's prenatal health, the quality of parent-child interactions, children's health and school readiness, and family economic self-sufficiency, although programs may not achieve positive impacts in all outcome areas or across all participants (Avellar et al. 2013; Peacock et al. 2013; Howard and Brooks-Gunn 2009). In addition, some home visiting programs have reduced rates of self-reported and/or substantiated child maltreatment and use of emergency rooms to treat child injuries (Fergusson et al. 2005; Lowell et al. 2011; Olds et al. 1986, 1997; Silovsky et al. 2011). To date, 14 home visiting program models have met criteria established by the U.S. Department of Health and Human Services (HHS) for designation as an evidence-based early childhood home visiting service delivery model (Avellar et al. 2013).

In addition to evidence of effectiveness, credible information on program costs is vital to policymakers and practitioners seeking to implement and expand interventions, including home visiting, to prevent child maltreatment. An understanding of the costs of providing services—and, ultimately, of how a program's costs compare with its benefits—helps funders allocate limited resources effectively. It also is important for providers planning replication of a program model. For this reason, federal agencies and other funders increasingly are seeking information on how much it costs to deliver home visiting programs and how resources are used in implementing them.

Estimated costs of implementing some home visiting program models are available from previous research and from the model developers. However, the data sources and methods for producing these estimates vary, making it difficult to compare program models. For example, some cost estimates rely mainly on information from program budgets, which may not accurately represent actual expenditures or all resources used to implement a program. In addition, the types of costs and time frame differ among existing estimates.

In this report, we present the results of a multisite study that applied a uniform approach and common time frame to cost analyses of several home visiting programs. The study addressed four main research questions:

1. **What are the total costs of providing the home visiting programs during a year of steady-state operation?** What is the average total cost and range in total costs of the home visiting programs?
2. **How are resources allocated among major cost categories and program activities?** What is the distribution of costs between activities related to direct services and administration?
3. **What does each program cost per participating family?** What are the ranges in cost per family?
4. **How do average costs vary across program models and other agency characteristics?** What is the difference in costs observed among program models, programs operated by different types of agencies, and programs in various geographic locations?

The study, which was supported by the Doris Duke Charitable Foundation and conducted in collaboration with Casey Family Programs, included agencies that participated in the Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment (EBHV) grant program funded by the Children’s Bureau of the Administration for Children and Families at HHS.⁷ In this chapter, we describe the EBHV initiative, the characteristics of the agencies participating in the cost study and the program models they implemented, and the organization of the report.

A. Overview of the EBHV Initiative

In 2008, the Children’s Bureau awarded EBHV grants to organizations in 15 states with the aim of building the infrastructure and service systems needed to support implementation of evidence-based home visiting models. Each organization receiving funds through the EBHV initiative selected one or more home visiting models either for first-time implementation in its state or community or enhancement, adaptation for a new target population, or expansion. The initiative had three overarching goals: (1) to support implementation with fidelity to evidence-based home visiting program models, (2) to support scale-up of home visiting models, and (3) to promote sustainability of the home visiting model beyond the grant period.

The Children’s Bureau funded the EBHV initiative for five years, with the first year devoted to planning and the remaining four years focused on implementation. EBHV funds were not intended to cover the cost of direct home visiting services. Rather, grantees were to use other funding sources to operate their selected home visiting models.⁸ Therefore, grantees sought separate public or private funds for new or expanded home visiting operations or partnered or coordinated with agencies implementing home visiting programs. In 2011, the EBHV grant program was formally incorporated into the Maternal, Infant and Early Childhood Home Visiting Program (MIECHV) State Formula Grant Program administered by the Health Resources and Services Administration of HHS. After this change, EBHV grantees entered into subcontracts with MIECHV agencies in their states. Therefore, in the remainder of this report, we refer to recipients of EBHV funds as subcontractors.

Each EBHV subcontractor was required to participate in a national cross-site evaluation that was conducted by Mathematica Policy Research and its partner, Chapin Hall at the University of Chicago, under a contract with the Children’s Bureau.⁹ The cost study was funded separately from the cross-site evaluation, but work under the EBHV initiative’s cross-site evaluation established the study’s framework and identified the sample of agencies for studying the costs of home visiting programs. Moreover, data on family participation in home visiting programs and staff members’ use of time in delivering services, which were collected through the cross-site evaluation, supported the analyses of program costs. (We describe the data sources in Chapter II.)

⁷ The Doris Duke Charitable Foundation awarded a grant to the Corporation for the Advancement of Policy Evaluation, which subcontracted with Mathematica to complete the study. Chapin Hall also contributed funding to support the participation of its researchers in the study.

⁸ Though instructed not to do so, some EBHV subcontractors relied on a portion of their grant funding for direct operation of a home visiting program.

⁹ See Boller et al. (2013) for additional findings from the cross-site evaluation of the EBHV initiative.

B. Characteristics of Implementing Agencies and Program Models

The cost study sample includes 25 implementing agencies (IA) that delivered home visiting services in 13 states. In Table I.1, we summarize key characteristics of the agencies. Most of the IAs (15 agencies) were private nonprofit organizations. Seven were state or county government agencies, and 3 were hospitals or medical centers. IAs located in urban areas (16 agencies) were more common than those located in suburban or rural areas (5 and 4 agencies, respectively). On average, IAs employed the full-time equivalent (FTE) of 6.3 home visitors and supervisors; counts of these staff members ranged from 2.8 to 12 FTEs.

Table I.1. Characteristics of Implementing Agencies in the Cost Study

| Agency | State | Type of Agency | Geographic Location | Number of Home Visitors and Supervisors (FTE) | Home Visiting Program Model Implemented | Implementation Status of Program Model at Outset of EBHV Initiative |
|--------|-------|-------------------|---------------------|---|---|---|
| 1 | CA | County government | Urban | 6.0 | NFP | New |
| 2 | CA | County government | Rural | 12.0 | SC | New |
| 3 | CO | State government | Urban | 8.5 | SC | New |
| 4 | DE | Private nonprofit | Suburban | 7.0 | NFP | New |
| 5 | HI | Private nonprofit | Rural | 7.0 | HFA | Continuing |
| 6 | HI | Private nonprofit | Suburban | 5.8 | HFA | Continuing |
| 7 | IL | Private nonprofit | Suburban | 6.7 | PAT | Continuing |
| 8 | IL | Medical center | Urban | 3.5 | HFA | Continuing |
| 9 | IL | Private nonprofit | Rural | 2.8 | HFA | Continuing |
| 10 | IL | County government | Urban | 7.6 | NFP | Continuing |
| 11 | IL | Private nonprofit | Urban | 9.0 | PAT | Continuing |
| 12 | NY | Private nonprofit | Urban | 9.6 | PAT | Continuing |
| 13 | OH | Medical center | Urban | 7.0 | HFA | New |
| 14 | OK | Private nonprofit | Urban | 3.8 | SC | Continuing |
| 15 | OK | Private nonprofit | Urban | 4.0 | SC | Continuing |
| 16 | RI | Private nonprofit | Urban | 4.1 | NFP | New |
| 17 | SC | Medical center | Urban | 5.0 | NFP | New |
| 18 | SC | State government | Rural | 5.0 | NFP | New |
| 19 | SC | State government | Suburban | 8.0 | NFP | New |
| 20 | TN | Private nonprofit | Urban | 7.0 | NFP | New |
| 21 | TN | Private nonprofit | Urban | 7.3 | NFP | New |
| 22 | TX | Private nonprofit | Urban | 5.0 | Triple P | New |
| 23 | UT | County government | Urban | 4.9 | NFP | Continuing |
| 24 | UT | Private nonprofit | Urban | 7.0 | HFA | Continuing |
| 25 | UT | Private nonprofit | Suburban | 3.0 | HFA | Continuing |

Source: Boller et al. (2013) and the Cost Survey of Implementing Agencies.

FTE = full-time equivalent; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers; SC = SafeCare.

The IAs offered one of five home visiting program models: (1) Healthy Families America (HFA, 7 IAs), (2) the Nurse-Family Partnership (NFP, 10 IAs), (3) Parents as Teachers (PAT, 3 IAs), (4) SafeCare (SC, 4 IAs), and (5) the Positive Parenting Program (Triple P, one IA).¹⁰ In Table I.2, we summarize key features of the program models. One IA implemented an “enhanced” version of PAT that included intensive mental health services provided by a university-based program. In view of the distinctive nature of this service arrangement and its cost implications, we consider this IA separately from other IAs implementing PAT.

Table I.2. Home Visiting Program Models Implemented by Agencies in the Cost Study

| Home Visiting Program Model | Target Population | Brief Description | Number of IAs Implementing Model |
|-----------------------------|--|--|----------------------------------|
| Healthy Families America | Pregnant women or new parents within two weeks of infant’s birth | A multiyear, intensive program for new parents identified during pregnancy or birth who demonstrate an elevated risk for maltreatment on the basis of a standardized risk assessment administered to all children born in the program’s service area. Services focus on promoting healthy parent-child interaction and attachment, increasing knowledge of child development, improving access to and use of services, and reducing isolation. | 7 |
| Nurse-Family Partnership | First-time pregnant women up to 28 weeks’ gestation | A multiyear, intensive home-based program that targets pregnant first-time, low-income mothers who self-refer or are directed to the program by local health and social service programs or practitioners. Services focus on improving maternal health behaviors and life choices, parent-infant bonding, and children’s cognitive skills and healthy development. | 10 |
| Parents as Teachers | Prenatal or birth up to age 5 | A multiyear, intensive home- and group-based program provided to any parent requesting assistance with child development knowledge and parenting support. Services focus on increasing parental knowledge of early childhood development, improving parenting practices and skills, and providing early detection of developmental delays and health issues among children. | 3 |
| SafeCare | Birth to age 5 | A 24-week program providing bimonthly home visits for families with children birth to 5 years that focuses on changing parental behavior in three core domains: (1) health, (2) safety, and (3) parent-child interactions. Home visits focus on training parents to use health reference materials and access appropriate treatment, identify and eliminate safety and health hazards, and increase positive parent-child interactions. | 4 |
| Triple P | Birth to age 12 | As implemented in the EBHV initiative, provides weekly home visits for 24 to 26 weeks and targets families with children up to age 8. Services focus on promoting the development, growth, health, and social competencies of children and improving parental competence, resourcefulness, and self-sufficiency. | 1 |

Sources: Boller et al. (2013), Koball et al. (2009), and EBHV subcontractors.

¹⁰ The 2008 federal grant announcement for the EBHV initiative required applicants to select home visiting programs that met specified criteria in order to be considered an evidence-based model. During grant review, an independent panel of peer reviewers evaluated applications based on the criteria listed in the announcement to determine whether the home visiting programs proposed by the applicant met the standards related to evidence-based models. The criteria used in the 2008 federal grant announcement were not related to those used for HHS’s Home Visiting Evidence of Effectiveness review.

The models share a basic goal of using home visiting to enhance parental capacity and promote healthy child development. However, the models differ in their target populations, service duration, and outcome priorities. NFP requires enrollment during pregnancy, and HFA targets parents at the time of a child's birth or during pregnancy; the other three models serve any family with a child from birth to age 8.¹¹ Three models (HFA, NFP, and PAT) provide interventions lasting from two to five years while SafeCare and Triple P provide interventions for 24 to 26 weeks.

IAs exhibited different levels of experience in implementing the program models. According to the model implementation status identified by EBHV subcontractors at the start of the EBHV initiative (“continuing” or “new”; Table I.1), IAs in the cost study were about evenly divided between those newly implementing their program model (12 agencies) and those continuing implementation (13 agencies). Each of the five home visiting models specified certification requirements for agencies interested in newly implementing the models or expanding programs to new locations. Model purveyors wanted to ensure that the agencies met model requirements and were prepared for implementation. Six IAs in the cost study sample had received certification from model developers before the start of the EBHV initiative; the remaining IAs (including some classified as “continuing” implementers) received certification sometime between 2008 and 2011.

C. Organization of the Report

In the remainder of the report, we present our approach to conducting the cost analysis and reporting the study findings. In Chapter II, we outline the study's framework (including the types of costs and time frame), describe the data sources used in conducting the analyses, explain how the sample of IAs was identified, and define the subgroups of programs considered in the analysis. In Chapter III, we present findings on how the agencies use resources to deliver home visiting programs, specifically, the allocation of costs across cost categories and program activities. In Chapter IV, we present estimates of costs per participating family, including comparisons of estimates across program models and other subgroups, and discuss how the estimates compare to those reported in previous research.

¹¹ Triple P focuses on population-based prevention strategies that include integrated, or “scaled,” interventions designed to provide a common set of parenting messages to parents facing varying degrees of difficulty or challenges. Program components range from universal strategies (mass mailings, media articles, community forums) to targeted interventions (such as two- to three-week skill development classes), to intensive behavioral therapy. The EBHV subcontractor selecting Triple P implemented the model's most intensive component, a home-based behavioral family intervention targeting high-risk parents with children from birth to age 8.

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II. STUDY FRAMEWORK AND APPROACH

The Cost Study of Evidence-Based Home Visiting assessed the total annual cost of implementing home visiting programs, how costs are distributed among resource inputs and program activities, and the average cost per participating family. Establishing a framework for the cost study set the stage for the data collection and analysis methods. In this chapter, we present the study's design, including the perspective used to assess costs, the time period covered by the study, the program activities of interest, and the limitations of the design. We also describe the study's data sources and how we identified the sample of agencies in the cost study, and we define the program characteristics considered in the cost comparisons.

A. Design

The design of the cost analysis addressed three key elements: (1) the perspective for the analysis; (2) the time period and stage of implementation for assessing program costs; and (3) the definition of program components. These elements framed the cost study and provided a basis for specifying approaches to data collection and analysis.

Study perspective. We viewed program costs from the implementing agency's perspective. Accordingly, costs include all resources used by an agency to deliver a program, and cost estimates provide an indication of the resources that an agency would need to replicate a program at a similar scale in a similar context (Corso and Lutzker 2006; Gold et al. 1996). To represent more accurately the total resources required to implement a program, we incorporated costs not typically captured by budgets or accounting records, including donated resources such as volunteer time, the value of staff time spent on the program beyond normal working hours (and not reflected in salaries or fringe benefits), and in-kind contributions of services or materials. The inclusion of donated resources in cost estimates also reflects an understanding that such resources involve an opportunity cost—that is, they could potentially be used productively in some other way. We exclude costs related to external program evaluation because such an evaluation typically would not be an expected part of program replication.

The perspective of the implementing agency does not include costs to participants or to the government, which were beyond the scope and purpose of this study. Costs to participants would include, for example, any out-of-pocket expenses incurred by families to participate in the program and the value of the time participants spent engaged in program activities. Costs to government would include the value of government services used by participants if their use of services increased as a result of program participation. The implementing agency perspective provides useful information to program operators and policymakers interested in replication.

To reflect the full cost of service provision, the cost analysis employed the “ingredient” or resource cost method for calculating program costs. This approach involves itemizing the types of resources (or ingredients) needed to provide services, gathering information on the types and value of resources used by each agency during the study period, and aggregating costs to estimate overall program cost (Levin and McEwan 2001). In Table II.1, we present a list of resource categories used in data collection and descriptions of information collected under each category.

Table II.1. Resource Categories for the Cost Study of EBHV Programs

| Resource | Information Collected |
|---|---|
| Personnel: Salaries | Salaries paid to staff working on the home visiting program based on full-time annual salary for each position and the percentage of time allocated to the home visiting program. |
| Personnel: Fringe Benefits | Value of payroll taxes and other benefits for staff working on the home visiting program (such as health insurance), reported as a percentage of salary or total amount. |
| Personnel: Volunteer/Donated Labor | For each volunteer position, number of hours worked per week, number of months worked per year, and estimated average hourly wage for a paid staff member in a similar position. |
| Contracted Services | Costs for contracted service providers and consultants working with the home visiting program. |
| Supplies and Materials ^a | Expenditures for supplies and materials (for example, office supplies and educational materials) and the estimated value of any donated supplies and materials. |
| Durable Equipment ^a | Original purchase price, year purchased, and expected useful life of any durable equipment or capital assets used by the home visiting program for more than one year. Examples include computer systems, automobiles, or office furniture. |
| Office Space and Other Facilities ^a | Value of annual rent/lease/mortgage payments for space or facility and proportion used by the home visiting program. For donated space, estimated annual cost of space based on fair market value and portion of the year the program used the space. |
| Other Direct Costs | Program costs not included in above categories. These costs may include payments to home visiting program model developers, expenditures on cell phones and other utilities, transportation or mileage reimbursement related to client services, staff travel expenditures for other purposes, and other costs. |
| Indirect (overhead) Costs | Indirect (overhead) costs allocated to the home visiting program (for shared functions within an agency, such as human resources or building maintenance) and not reported under other resource categories. |

^aThese resources may be included in an organization's overhead costs and allocated to individual programs or projects through an indirect cost rate.

When analyzing costs, we made adjustments to the reported value of two resources: (1) salary expenses and (2) durable equipment. We standardized the salary expenses to national levels in order to account for the differences across states in the average wages for the types of positions held by home visiting program staff. The adjustments to the equipment costs reflect the annual cost of equipment expected to last more than one year. In Chapter III, we describe the procedures for the adjustments.

Cost study period. Operations and costs are likely to differ across phases in a program's development and implementation. Therefore, it is important to define the time frame for the study at its outset (Corso and Filene 2009). Program activities that affect costs may vary over the year; for example, the frequency of service delivery may fluctuate seasonally. The cost study period was July 1, 2011, through June 30, 2012.¹² Given that programs affiliated with the EBHV initiative had been operating for two years or longer by July 2011, the study period was intended to represent 12 months of "steady-state" operation, during which each agency would be operating at a relatively

¹² Three agencies reported costs for periods that conformed to their fiscal reporting year rather than to the cost study year; however, these alternative reporting periods overlapped with the cost study period.

constant level in terms of number of participants enrolled and home visitor caseloads.¹³ Start-up costs, which can be sizeable for a home visiting program, are not reflected in our total program cost estimates. These costs vary across program models but may involve training for home visiting and supervisory staff to deliver the model and monitor its implementation; the purchase of initial program supplies and materials; ongoing consultation from technical assistance providers; payments to the model purveyor for affiliation, certification, or accreditation; and, potentially, a management information system. The one-year time frame facilitated standardized data collection across programs, particularly because the expected intervention length varied among the home visiting program models implemented by the participating agencies.

Definitions of program components. Disaggregating costs by program components or activities is useful for understanding programs in which personnel costs account for a large proportion of costs. Identifying the proportion of costs allocated to individual program components, including the isolation of evaluation-related costs, helps show how resources are used to implement a program (Corso and Filene 2009; Foster and Jones 2006). During cost study planning, the Mathematica-Chapin Hall team worked with the EBHV subcontractors to identify and define program components relevant to the home visiting models adopted by subcontractors (Burwick et al. 2012). The team intended the final set of program components to be comprehensive, capturing all activities in which staff members engage as part of the home visiting program. The final set of activities include categories for (1) assessing potential participants and enrolling families; (2) planning and delivering home visits, including time for travel for home visits; (3) case management and connecting families to needed services; (4) case documentation; (5) staff recruitment and development; and (6) organizational planning, quality improvement, and management (Table II.2).

B. Data Sources

To conduct the cost analysis, we collected three types of data from implementing agencies: (1) data on resources used for program operations, to estimate total costs (cost data); (2) data on staff time use, to allocate costs among program components (time-use data); and (3) data on the number of families served and their receipt of home visiting services, to estimate costs per family (fidelity data).

1. Cost Data

Using a self-administered, spreadsheet-based instrument developed for the study, we collected cost data retrospectively for the cost period. The instrument specified items and costs to be reported under each resource category.¹⁴ Following reviews of the instrument by internal and external experts, we conducted a pilot test with staff from two IAs. In response to feedback received during the pilot test, we made changes to questions on staff salaries, equipment, and indirect (overhead) costs to clarify the type of information to be reported under these categories.

Before distributing the instrument to IAs, we identified a staff member at each agency who was knowledgeable about agency finances and expenditures. A cost analyst from Mathematica or Chapin

¹³ We removed one IA from the survey sample after determining that it had undergone substantial organizational changes during the cost period and was not operating at a steady state.

¹⁴ See Appendix B for the cost instrument.

Hall emailed the instrument to the identified individual, along with detailed instructions for completing it, and then followed up by telephone to answer any questions about the study and the process for completing the instrument. After receiving the first round of cost information from the IA, the cost analyst reviewed the instrument for completeness. The analyst then discussed the

Table II.2. Home Visiting Program Components

| Program Component | Definition |
|---|---|
| Direct Services to Enrolled Clients | |
| Initial Screening and Assessment | Assessing clients' needs, analyzing family situations, and collecting information needed to develop service delivery plans (includes any initial screening and assessment conducted in the client's home). |
| Home Visit Preparation and Delivery | Preparing for future home visits, including developing service delivery plans and communicating with clients to schedule visits. Delivery of services to families and children through home visits, including providing counseling and support, demonstrating or modeling skills, conducting periodic screenings and assessments, and other activities during visits. |
| Case Management and Service Linkage | Arranging and coordinating services on behalf of a family or child, including advocacy on behalf of the client, consultations with other staff and providers, and identifying appropriate resources. |
| Services/Activities Other Than Home Visits | Providing or participating in program services other than home visits, such as parent group meetings or meetings with clients outside their homes. |
| Case Documentation | Completing case notes and recording data to document services provided to clients in home visitor's caseload and client status. |
| Travel/Transportation | Traveling to clients' homes or other locations to provide services. Transporting clients to locations outside their home. Documenting travel. |
| Management and Administration | |
| Outreach and Recruitment | Communicating with other agencies/groups/providers and people (such as potential participants) to inform them about services available through the program in order to promote referrals or applications to the program. |
| Eligibility Determination and Referral | Determining eligibility for the program (including conducting screenings and assessments related to eligibility determination) and enrolling clients. Referring to other agencies those clients who cannot be served. |
| Staff Recruitment | Recruiting and hiring program staff. |
| Providing or Attending Training | Providing or attending training on topics related to delivery of services or program operations. |
| Providing or Receiving Supervision/Consultation | Providing or receiving feedback and supervision, individually or in groups, related to delivery of services or program operations. Participating in staff consultations related to service delivery. |
| Fundraising | Grant writing, fundraising, researching funding sources, and leveraging funds to support direct services. |
| Planning and Collaboration | Strategic planning and decision making, participating in professional/organizational/community committees that support program operations, and developing relationships and working through existing relationships to align goals and strategies with partners. |
| External Communication and Building Awareness | Communicating information about evidence-based home visiting, including lessons learned and research findings, to partners, stakeholders, or the public. Building awareness of or support for evidence-based home visiting programs and policies within the community and among policymakers. |
| Continuous Quality Improvement | Analyzing data to monitor program implementation and assess fidelity to the home visiting program model. Using data to support program improvement. |
| General Management and Administration | Budgeting and financial reporting, managing or negotiating contracts, completing paperwork not specific to individual clients, and other management or administrative activities that do not fall into other categories. |
| Evaluation ^a | Planning program evaluation activities, such as those conducted for the EBHV local or cross-site evaluation or as required by other funders; providing or collecting data required for program evaluation; or traveling for evaluation-related purposes. |

^aThese costs are excluded from the estimate of total annual program costs.

response with the IA representative to ensure that all costs were included, to clarify any unexpected or ambiguous responses, and to attempt to gather any missing information. Out of 31 agencies that received the survey, 25 provided responses sufficiently complete for inclusion in the cost analysis, for a response rate of 81 percent.

Up to five agencies were unable to provide full information on costs for one or more of three resource categories: (1) durable equipment, (2) office space, and (3) indirect (overhead) costs.¹⁵ In these cases, we estimated the value of the resource(s) by using the following procedures:

- **Durable equipment.** All agencies provided a full list of equipment used for the home visiting program. In four agencies, data were missing on the purchase price and estimated useful life of equipment. To estimate the purchase price, we calculated the average price of similar items, as reported by other agencies completing the survey. We then assumed a useful life of five years.
- **Office space.** Three agencies were unable to report the value or amount of office space used by the home visiting program. To estimate this value, we calculated the average percentage of total costs allocated to office space for agencies in a similar geographic area (rural, suburban, or urban). We then used the average percentage of costs for the location to estimate the cost of space in agencies that did not report the cost. On average, agencies spent 1.9 percent of total costs on building space in rural areas, 4.9 percent in suburban areas, and 4.1 percent in urban areas.
- **Indirect (overhead) costs.** Five agencies did not report indirect (overhead) costs and did not indicate that other resource categories captures such costs. To estimate the value of indirect costs for these agencies, we calculated the average percentage of total costs allocated to indirect costs for all agencies reporting indirect costs (8.75 percent) and used the percentage to estimate indirect costs for agencies without the information by applying the rate to their total reported costs.

2. Time-Use Data

During spring 2012 (around the midpoint of the cost study period), we conducted a web-based survey of program staff to collect information on how they apportioned their time across program activities. IA staff reported their position or title, how many hours they worked for the home visiting program during a typical or average week in the past month, whether they had worked any hours in excess of scheduled hours, and how all hours worked were allocated across the program components described above. We then used the information to allocate all costs across program components.

We selected a retrospective approach for time-use data collection to minimize the burden on program staff while maintaining the potential to collect reasonably accurate estimates of time use. Respondents reported on an average or typical week in the past month. We note that earlier cost studies have successfully employed retrospective data collection (Meckstroth et al. 2008; Perez-Johnson et al. 2002; Zarkin et al. 2004).

¹⁵ In Appendix Table A.1, we present the total cost estimate for each agency in the cost study sample and identify resource categories with estimated values where data were missing.

The survey included detailed definitions of activity categories and automatic checks to ensure that staff accounted for all hours worked in a typical week. Out of a sample of 347 staff members in 32 IAs, 320 completed the survey, for a response rate of 92 percent. The survey instrument and a full description of methods appear in Appendix C.

3. EBHV Cross-Site Fidelity Data

To support the estimate of costs per family, we used data on home visiting program participants and the services received per family as collected by the EBHV cross-site evaluation. As part of their participation in the EBHV cross-site evaluation, IAs regularly reported data on staff and participant characteristics and service delivery. These data were submitted through monthly program reports, a database developed for the cross-site evaluation (the EBHV Fidelity Database), and the NFP—Efforts to Outcomes system (for NFP programs). The cross-site evaluation team collected fidelity data between October 1, 2009, and June 30, 2012.¹⁶

For the analysis of costs per participant, the cost study incorporated a subset of fidelity data on home visiting service receipt. Compared with the full data set, the subset of data analyzed for the cost study covered a shorter time period (to align with the cost study period) and included fewer agencies (only those that submitted cost data). The analysis of fidelity data for the cost study encompassed families served between July 1, 2011, and June 30, 2012. A family was classified as receiving services if it received at least one home visit during the period. Analysis of the home visiting service data focused on variables that identified the number of families served during the cost period, the number of families exiting the program during the cost period, the number of home visits provided (overall and to each participating family), and families' duration of participation in weeks (see Appendix D for a description of the variables). Exiting families included both program completers and noncompleters, as identified by reporting IAs.

The cross-site evaluation team did not collect the service data from the home visitors, home visitor supervisors, or participants. Rather, each subcontractor or IA collected the data for submission to Mathematica. Such an arrangement introduced potential error in the data collection process or affected the extent to which data were missing. However, the EBHV cross-site team provided training and ongoing technical assistance to the EBHV subcontractors and implementing agencies to minimize potential data inconsistencies.

C. Study Sample and Program Characteristics Used in the Analysis

To be included in the cost study sample, IAs must have (1) reported participant-level fidelity data for the EBHV cross-site evaluation and (2) provided cost data sufficiently complete for inclusion in the analysis. Of the 47 IAs in the EBHV initiative, 25 met these criteria. Data on staff time use was collected for 24 of these IAs. We adjusted the sample for some analyses to exclude outliers or to include only IAs with more than 10 families exiting the program during the cost study period. We describe these adjustments in Chapter IV.

¹⁶ A full description of the methods for collecting and analyzing EBHV cross-site fidelity data is available in the cross-site evaluation's final report (Boller et al. 2013).

For the analysis, we considered four program characteristics to explore variations in cost patterns across IAs: (1) home visiting program model (HFA, NFP, PAT, Enhanced PAT, SafeCare, or Triple P), (2) agency service area (rural, suburban, or urban as reported by the IA in the cost survey), (3) type of agency operating the home visiting program (state and local government, medical center, or private nonprofit as reported in the IA in the cost survey), and (4) the implementation status of the program model in the agency at the start of the EBHV initiative (new or continuing as reported by the EBHV cross-site evaluation team). In Table II.3, we present the number of agencies implementing each home visiting model by location, agency type, and implementation status. In Chapters III and IV, we review variation in cost estimates by these characteristics. We present differences in costs by agency characteristics for descriptive purposes. Given the small sample sizes, particularly within the subgroups, we cannot attribute cost differences conclusively to any agency characteristic.

Table II.3. Number of Implementing Agencies by Home Visiting Model and Agency Characteristics

| Home Visiting Program Model | Number of IAs | Geographic Location | | | Type of Agency | | | Implementation Status | |
|-----------------------------|---------------|---------------------|-----------|----------|----------------|----------------|-------------------|-----------------------|------------|
| | | Rural | Urban | Suburban | Government | Medical Center | Private Nonprofit | New | Continuing |
| HFA | 7 | 2 | 3 | 2 | 0 | 2 | 5 | 1 | 6 |
| NFP | 10 | 1 | 7 | 2 | 5 | 1 | 4 | 8 | 2 |
| PAT | 2 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 2 |
| Enhanced PAT | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| SafeCare | 4 | 1 | 3 | 0 | 2 | 0 | 2 | 2 | 2 |
| Triple P | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Total | 25 | 4 | 16 | 5 | 7 | 3 | 15 | 12 | 13 |

Source: Cost Survey of Implementing Agencies and the EBHV Cross-Site Evaluation.

HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

D. Limitations

The cost study has several limitations to consider when interpreting its findings. First, the sample is not representative of all home visiting programs or all home visiting programs of a specific model; the study findings therefore cannot be generalized. Second, although we describe differences in estimated costs among subgroups of IAs, we cannot draw causal conclusions regarding the relationship between IA characteristics and program costs. Third, the EBHV cross-site evaluation team did not directly collect fidelity data from the home visitors, home visitor supervisors, or participants, as noted above. Variation might exist in how data were collected, the timing of data collection, and the extent to which data are missing. Finally, data on program costs and staff time use were self-reported by IA staff, which could be a source of additional bias and error.

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III. HOW ARE RESOURCES USED TO DELIVER HOME VISITING PROGRAMS?

The foundation of the cost analysis is the total cost estimate for each agency, which provides the basis for understanding the total annual cost of program operations. The estimate of total cost may be broken down into the cost of the individual resources needed to operate the program, including both personnel and nonpersonnel resources. The estimate of total cost may also be allocated to a set of program components that represent major activities involved in operating the program.

In this chapter, we first present estimates of total annual costs and describe how we calculated the costs based on the resources needed to operate the program. We then discuss how we allocated the total costs across a set of common program components or activities. In describing total annual costs and cost allocations, we present averages and ranges among implementing agencies and compare averages for subgroups of agencies based on program models and other agency characteristics.

A. Total Annual Costs and Allocations Across Resource Categories

Each agency's estimate of total costs included the market value of all resources used to operate the home visiting program, including personnel (staff salaries and fringe benefits), supplies and materials, equipment, contracted services, office space and other facility costs, other direct costs (such as staff travel for delivering home visits and payments to home visiting model developers), and indirect (overhead) costs.

1. Total Annual Costs

Across all agencies in the cost study sample, the average estimated cost to operate a home visiting program for one year totaled \$580,972 (Table III.1). The total one-year cost varied considerably across the agencies in the sample, ranging from \$206,426 to \$1,207,054.¹⁷ As for the program models represented, the four agencies operating SafeCare programs accounted for the lowest average annual cost (\$361,131), and the agency implementing an enhanced version of PAT accounted for the highest cost (\$1,207,054).

The range in total costs reflects numerous differences across the programs operated by each agency as well as differences in agency characteristics, including the size of the program in terms of the number of staff employed, the number of families served, and the intensity and duration of the home visiting program model. The number of full-time equivalent (FTE) direct service employees working in an agency, defined as supervisors and home visitors, ranged from 2.8 to 12 FTEs (Table I.1). The average number of families served during the 12-month cost period was 110. On average, the four agencies implementing SafeCare served the fewest number of families during the period (68 families) while the two agencies implementing PAT served the greatest number of families (186 families). For these reasons, the estimate of total costs presents a useful, but limited, indicator of the cost of operating a home visiting program.

¹⁷ In Appendix Table A.1, we present the total cost estimate for each agency in the cost study sample.

Table III.1. Total Costs by Selected Program Characteristics

| | Number of IAs | Average Number of Families Served During Cost Period | Average Total Annual Cost | Personnel Costs (average percentage of total costs) | Non-Personnel Costs (average percentage of total costs) |
|--|---------------|--|---------------------------|---|---|
| All IAs | 25 | 110 | \$580,972 | 72 | 28 |
| Program Model | | | | | |
| HFA | 7 | 75 | \$509,367 | 70 | 30 |
| NFP | 10 | 135 | \$618,037 | 78 | 22 |
| PAT | 2 | 186 | \$433,010 | 72 | 28 |
| Enhanced PAT | 1 | 91 | \$1,207,054 | 54 | 46 |
| SafeCare | 4 | 61 | \$361,131 | 70 | 30 |
| Triple P | 1 | 113 | \$642,747 | 57 | 43 |
| Implementation Status at Outset of EBHV Initiative | | | | | |
| New | 12 | 121 | \$628,009 | 74 | 26 |
| Continuing | 13 | 98 | \$489,245 | 69 | 31 |
| Location | | | | | |
| Rural | 4 | 98 | \$437,701 | 70 | 30 |
| Suburban | 5 | 129 | \$589,709 | 74 | 26 |
| Urban | 16 | 107 | \$586,704 | 72 | 28 |
| Type of Agency | | | | | |
| Government | 7 | 105 | \$583,380 | 75 | 25 |
| Medical center | 3 | 140 | \$461,446 | 75 | 25 |
| Private nonprofit | 15 | 106 | \$572,991 | 70 | 30 |

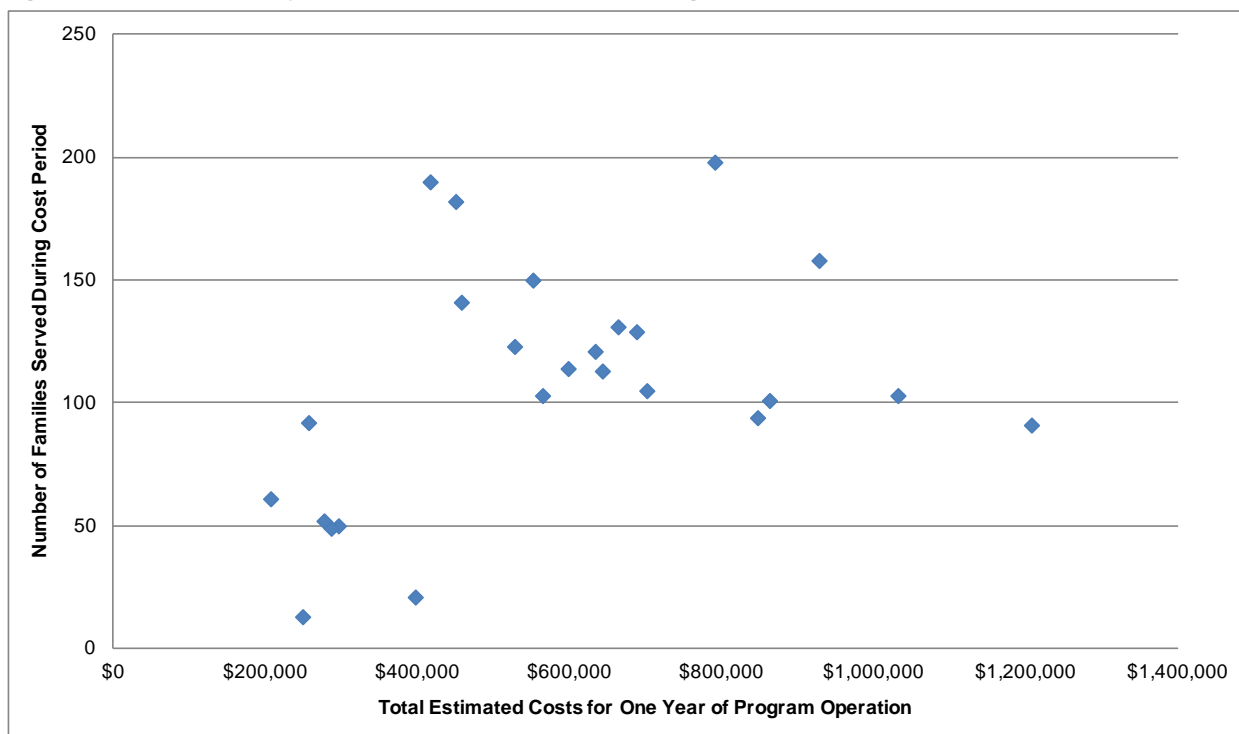
Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Notes: Costs are in 2012 dollars and were reported for July 1, 2011, through June 30, 2012. Averages are at the agency level within each category. A family was served during the cost period if it received at least one home visit during the period.

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

Notably, among agencies in our sample, the number of families served was not a consistent predictor of whether an IA's annual costs would be above or below average. Six IAs served fewer families than average but reported annual costs that were higher than average. Two IAs served an above-average number of participants but reported below-average costs. Figure III.1 depicts annual costs for each IA by the number of families served during the cost period.

Figure III.1. Total Costs by Number of Families Served During the Cost Period



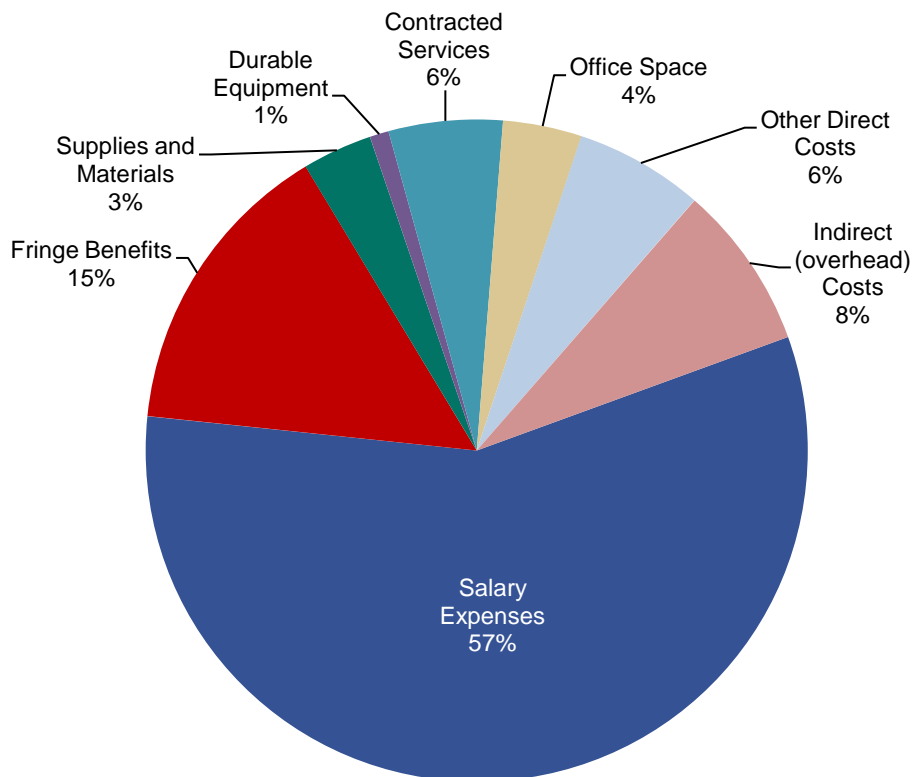
Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Notes: Costs are in 2012 dollars and were reported for July 1, 2011, through June 30, 2012. A family was served during the cost period if it received at least one home visit during the period.

2. Allocation of Total Costs Across Resource Categories

Given the nature of the services provided by home visiting programs and the programs’ heavy reliance on staff labor, it is not surprising that personnel costs represented the largest share of total program costs among resource categories. Our estimates of personnel costs are adjusted to account for differences in average pay across states. To make these adjustments, we adopted a method similar to one used by Miller (2012) in analyzing costs of NFP programs in six states. Drawing on data from the Bureau of Labor Statistics (2013) on the average national and state wages for community and social service occupations, we created an index equal to the ratio of the state average hourly wage to the national average hourly wage. We then applied an adjustment factor (ranging from 0.85 to 1.22) to the salary expenses reported by each agency to adjust these expenses for differences from the national average. (Given that other types of resources represented a smaller proportion of program costs, we did not attempt to adjust other types of costs for average differences across states.)

On average, personnel costs, which included salaries, fringe benefits, and the value of volunteer or donated labor, represented 72 percent of total costs; salary expenses averaged 57 percent of total costs, and fringe benefits averaged 15 percent (Figure III.2). Typical staff positions funded by the home visiting program were direct service staff responsible for conducting home visits, supervisors of the home visitors, and a program director or manager. Agencies also often reported that other managers within the agency and office assistants allocated at least a portion of their time to the home visiting program.

Figure III.2. Average Percentage of Costs Allocated to Resource Categories for IAs

Source: Cost Survey of Implementing Agencies.

Note: Costs were reported for the period of July 1, 2011, through June 30, 2012. Averages are at agency level. N = 25 agencies.

Among implementing agencies, the share of total costs allocated to personnel ranged from 54 to 89 percent for the one-year period. The cost estimate for the agency with the lowest share of personnel costs may not fully reflect all of its personnel costs. That agency had a large subcontract (\$437,494) to support implementation of a mental health program enhancement. The subcontract likely covered labor costs, but it did not allocate costs between personnel and nonpersonnel costs. If the subcontract is excluded from the agency's cost estimate, personnel costs then account for 85 percent of the remaining costs reported by the agency, placing that agency among the agencies with the highest allocation of total costs to personnel. Seven agencies reported that they allocated more than 80 percent of their costs to personnel.

Personnel costs include an estimated value of any hours that staff reported working on the home visiting program beyond their scheduled hours. The cost survey asked agencies to report expenses for any overtime paid to staff. Only one IA reported such expenses. We also gathered information on hours worked from the staff time-use survey. As part of the time-use survey, staff reported both the number of hours they were scheduled to work on the home visiting program and the number of hours they worked on the home visiting program beyond their scheduled hours in a typical week. To represent the total value of personnel resources actually required to operate the home visiting program, we estimated the value of staff time worked beyond scheduled hours by multiplying the additional hours by the average hourly pay rate for staff members in the relevant position in that agency. We included this value in the estimate of personnel costs for each agency. On average, the additional hours worked by staff accounted for a small percentage of personnel and total costs (about 4 and 3 percent, respectively). Staff from five agencies reported working no

additional hours beyond their scheduled hours. Among agencies with staff reporting that they worked hours beyond their scheduled hours, the share of personnel costs attributed to these additional hours ranged from 1 to 14 percent.

Only three agencies reported receiving assistance from a volunteer for some portion of the 12-month cost period. In two agencies, the volunteer was a practicum student¹⁸; in the third agency, the volunteer provided office assistance. For each agency, we estimated the value of the volunteer's time and accounted for its value when calculating program costs. In each of the agencies, the total value of the volunteer labor was about \$1,500, a small share of total personnel costs. Given that the value of volunteer time was generally small and that only a few agencies reported using volunteer services, the estimated value of volunteer time did not accrue as a separate share of personnel costs when averaged across the full sample of agencies (not depicted in Figure III.2).

Nonpersonnel costs made up the remaining portion of program expenses—on average, 28 percent of the annual costs of operating a home visiting program (Table III.1). Such costs included supplies, materials, equipment, contracted services, office space, other direct costs, and indirect (overhead) costs. Across the agencies in the cost study, nonpersonnel costs ranged from 11 to 46 percent of total program costs. The agency reporting that 46 percent of its total costs were nonpersonnel is the previously discussed agency with a large subcontract that likely included personnel costs. Two additional agencies reported nonpersonnel costs that accounted for more than 40 percent of total program costs.

Supplies, materials, and durable equipment comprised the smallest share of nonpersonnel costs, at an average 4 percent of total program costs. Depending on the agency, supplies and materials may have included computer software, client supports, office supplies, program materials, postage, and cell phones. Common types of equipment reported by agencies included computers, printers, copy machines, and office furniture. We estimated the annual value of durable equipment by using either the annual depreciation cost reported by the agency or the reported purchase price of the equipment divided by its expected useful life in years. When information about the expected life of the equipment was not available, we assumed a life of five years to align with the grant period.

Contracted services averaged 6 percent of total program costs, but not all agencies reported these services. Of the 25 agencies in the cost study, 14 agencies reported contracted services. The value of the contracts ranged from \$2,075 to \$437,494. Contracted services did not appear to drive up costs, given that total program costs were no higher, on average, for agencies that contracted services versus those that did not. Two common reasons that home visiting agencies entered into contracts with outside organizations were (1) to receive technical assistance from the home visiting program model developer or (2) to expand the services available to participants in the home visiting program.

Office space or other facilities averaged 4 percent of total annual costs, and other, miscellaneous direct costs averaged 6 percent of total costs. Miscellaneous direct costs commonly included utilities (such as cell phone service), fees to model developers, mileage reimbursements paid

¹⁸ No information was provided on the degree sought by the interns or the nature of the internship being completed.

to staff conducting home visits, reimbursement of other staff travel (for example, to attend conferences), and the cost of staff training.

Indirect (overhead) costs are costs for functions shared across the agency, such as human resources, accounting, or building maintenance. Not all agencies reported indirect costs. Five agencies reported that they did not share costs with the rest of the agency and that the home visiting program directly incurred all costs. In estimating indirect costs, we applied the indirect cost rate or total amount of indirect costs reported by the IA but subtracted any costs that the agency also reported under other resource categories. Across all agencies, indirect costs averaged 8 percent of total program costs, ranging from 0 to 22 percent.

3. Allocation of Resource Costs in Agency Subgroups

To analyze further the pattern in the allocation of personnel versus nonpersonnel costs, we grouped agencies around four characteristics/subgroups: (1) home visiting program model, (2) status of the program model implementation at the outset of the EBHV initiative, (3) location, and (4) type of agency (Table III.1). Even though no group exhibited a change in the pattern—personnel costs still accounted for a larger share of total costs than nonpersonnel costs—we did observe differences in the allocation of personnel and nonpersonnel costs across the groups. Agencies are included in multiple subgroups. Therefore, we cannot conclusively identify factors that are drivers of cost differences. However, we present the differences in order to describe cost variations and suggest factors that *may* influence costs.

Compared to agencies implementing other models, NFP agencies allocated a larger share of total costs to personnel. Salaries for staff working on NFP, particularly the home visitors, were generally higher than salaries for staff working on other home visiting models. NFP requires all home visitors to be bachelor's level or registered nurses, thus representing a higher education standard than in other models. The agency implementing the Enhanced PAT program accounted for the smallest share of total costs allocated to personnel. However, as mentioned, as part of its enhancement, the same agency had entered into a large subcontract with an outside agency. It is likely that the subcontract covered personnel costs not included in our estimate of personnel costs. Similar to Enhanced PAT, the estimated share of costs allocated to personnel for the agency implementing Triple P (57 percent) was lower than for the agencies implementing HFA, NFP, PAT, and SafeCare. The same Triple P agency reported the second-highest expenditures on indirect (overhead) costs, along with other direct costs that were higher than average. Because only one IA in our sample implemented Triple P, it is difficult to determine whether the relatively low proportion of personnel costs for this IA reflects the cost structure in this particular agency or factors related to the program model.

B. Allocation of Costs Across Program Components

We allocated costs across program components by using data on how staff used their time to deliver program services, as reported in the staff time-use survey. We used the staff time-use data to determine the fraction of time each type of staff spent per component and then applied the fractions to the labor costs for each staff type. Most nonpersonnel costs were not directly associated with a particular component. We identified nonpersonnel costs linked to a specific component and allocated these costs directly to the relevant component. For example, we allocated client support materials to home visit delivery and mileage reimbursement for visit-related travel to the home visit travel component. Using the percentage of staff time allocated across all staff positions, we allocated the remaining nonpersonnel costs to components.

1. Allocation of Program Component Costs Among All Agencies

Direct services accounted for more than two-thirds of costs; home visits, case management, travel, and outreach and recruitment all contributed to direct service costs. In total, the average share of costs allocated to direct services was 72 percent as compared to 27 percent allocated to management and administrative activities.¹⁹ For direct service activities, the preparation and delivery of home visits represented the largest share of program costs (an average 26 percent), followed by case management and services other than home visits (16 percent), travel to home visits (15 percent), and outreach, recruitment, and assessment (13 percent) (Figure III.3). The delivery of home visits was a primary service component of each home visit program model; therefore, the allocation of total costs is consistent with the design of the programs.

Among the management and administrative components, the largest share of program costs (average 14 percent) went to staff recruitment, training, and supervision. About half of the agencies participating in the cost study reported staff transitions during the cost period, and each of the five home visiting program models implemented by the agencies in the cost study strongly emphasized regular supervision of direct service staff. Other management and administrative activities represented only a small share of total program costs: planning, fundraising, external communication, and collaboration (5 percent); general management and administration (6 percent); and continuous quality improvement (2 percent).

Only one agency reported that it allocated a higher share of its costs (51 percent) to management and administrative activities than to direct service activities.²⁰ For this agency, the combination of staff recruitment, training, and supervision and planning, fund-raising, and collaboration activities represented 39 percent of its total costs—a proportion higher than in any other agency. The agency accounted for the smallest share of total costs allocated to the direct service components of travel to home visits (6 percent) and outreach and recruitment of new clients (3 percent). The agency also reported that it allocated a slightly smaller-than-average share of its costs to the delivery of home visits (23 versus the average 25 percent).

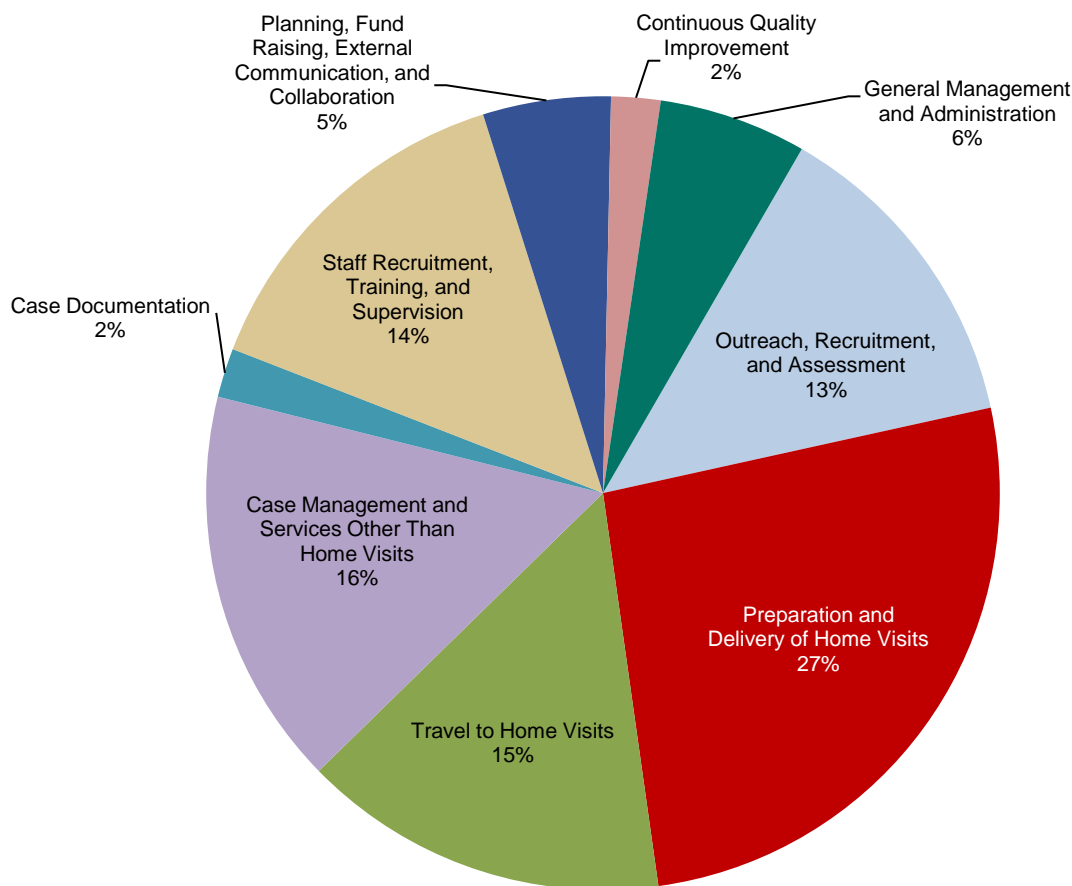
2. Allocation of Program Component Costs in Agency Subgroups

As with the analysis of program resources, we grouped agencies by the same four characteristics to see if patterns emerged related to agency characteristics. Among the agencies in the study sample, we observed differences in allocations of program component costs by the home visiting program models, the location of the agency, and the type of agency (Table III.2). We observed fewer differences based on the length of program operations, defined by whether the program was new or continuing at the outset of the EBHV initiative. Both new and continuing agencies reported similar patterns in the allocation of costs across program components.

¹⁹ The total does not equal 100 percent, as average percentages are calculated at the agency level.

²⁰ Appendix Table A.2, Agency #13.

Figure III.3. Average Percentage of Costs Allocated to Program Components



Source: Cost Survey of Implementing Agencies and Staff Time-Use Survey.

Note: Costs were reported for the period of July 1, 2011, through June 30, 2012. Averages are at agency level. N = 24 agencies. One agency was excluded from the analysis of program component costs because data on staff time use were unavailable.

On average, agencies implementing NFP, PAT, and SafeCare allocated a larger share of resources to direct services than agencies implementing other models. For NFP, PAT, and SafeCare agencies, direct services accounted for 74 to 79 percent of total costs as compared to 59 percent for Enhanced PAT, 62 percent for Triple P, and 69 percent for HFA. Although we cannot identify program features that conclusively resulted in differences in the share of costs allocated to direct services, it is noteworthy that NFP, PAT, and SafeCare agencies—as opposed to agencies implementing other models—allocated, on average, a larger share of costs to the preparation and delivery of home visits and to outreach and assessment of new clients. In addition, higher proportions of costs related to management and administrative activities contributed to a smaller share of costs dedicated to direct service provision, on average, among agencies implementing HFA, Triple P, and Enhanced PAT. HFA agencies, on average, spent a slightly larger share of their costs on quality improvement efforts and reported that staff recruitment and training costs were higher than average. The agency implementing Triple P spent a larger share of its costs on staff

recruitment, staff training, and general management/administration than the agencies implementing other models.

On average, agencies operating in rural communities allocated a smaller percentage of their total costs to direct services as compared to agencies operating in suburban or urban communities (62 percent for rural agencies versus 71 percent for suburban agencies and 73 percent for urban agencies). Among agencies operating in rural locations, costs associated with outreach and recruitment of families, delivery of home visits, and travel to home visits required a smaller share of resources compared to agencies in other locations. Agencies operating in suburban communities reported that the largest share of costs went to travel to home visits. Even though it is reasonable to assume that staff working in rural communities spent more time traveling to conduct home visits than staff working in other locations, the suburban agencies in the cost study may have served larger geographic areas, faced higher costs for gasoline or other transportation expenses, or spent more time in traffic. In addition, it is possible that staff in agencies serving rural communities focused on certain sections of the community or county, or planned their home visits in ways that minimized travel, such as by scheduling visits with several families in the same area on the same day. However, we cannot determine conclusively the reason for differences in observed costs based on the data gathered for the study.

Programs operated by government agencies allocated a larger share of costs to direct service activities compared to agencies operated by medical centers or private nonprofits. On average, preparation and delivery of home visits represented the largest share of costs among programs operated by government agencies (32 percent), whereas staff recruitment, training, and supervision accounted for the smallest share of costs (9 percent). Note that low staff turnover probably did not contribute to the small share of costs allocated to recruitment, training, and supervision among government programs. Based on the number of positions that agencies reported as filled for less than the full 12 months of the cost study period, government programs seemed to have a level of staff turnover similar to that of programs operated by medical centers or private nonprofit agencies. Other possible explanations for the lower percentage of costs allocated to recruitment, training, and supervision include the following: (1) the agency operating the home visiting program may not have borne all costs associated with hiring new staff; (2) the pool of candidates to fill vacant positions within home visiting programs operated by government agencies may have been especially accessible; or (3) training and supervision processes may have differed in a way that contributed to a smaller share of costs allocated to these activities.

Table III.2. Average Percentage of Annual Costs Allocated to Program Components

| | Number of IAs | Direct Services | | | | | Management and Administration | | | |
|--|---------------|---------------------------------------|---|-----------------------|---|---------------------|--|---|---------------------------------|--|
| | | Outreach, Recruitment, and Assessment | Preparation and Delivery of Home Visits | Travel to Home Visits | Case Management and Services Other Than Home Visits | Case Documenta-tion | Staff Recruitment, Training, and Supervision | Planning, Fundraising, External Communica-tion, and Collaboration | Continuous Quality Improve-ment | General Management and Administra-tion |
| All IAs | 24 | 13 | 26 | 15 | 16 | 2 | 14 | 5 | 2 | 6 |
| Program Model | | | | | | | | | | |
| HFA | 7 | 11 | 26 | 15 | 16 | 2 | 16 | 4 | 4 | 6 |
| NFP | 9 | 16 | 27 | 14 | 18 | 3 | 11 | 5 | 2 | 5 |
| PAT | 2 | 12 | 26 | 20 | 18 | 3 | 14 | 5 | 0 | 2 |
| Enhanced PAT | 1 | 13 | 18 | 12 | 16 | 0 | 12 | 14 | 3 | 12 |
| SafeCare | 4 | 12 | 31 | 13 | 13 | 3 | 19 | 3 | 1 | 4 |
| Triple P | 1 | 11 | 16 | 18 | 15 | 3 | 21 | 2 | 0 | 15 |
| Implementation Status at Outset of EBHV Initiative | | | | | | | | | | |
| New | 12 | 12 | 25 | 13 | 16 | 3 | 13 | 4 | 2 | 5 |
| Continuing | 12 | 13 | 26 | 15 | 16 | 2 | 15 | 4 | 3 | 5 |
| Location | | | | | | | | | | |
| Rural | 4 | 10 | 24 | 12 | 15 | 2 | 9 | 3 | 3 | 2 |
| Suburban | 5 | 12 | 26 | 18 | 13 | 2 | 16 | 4 | 2 | 7 |
| Urban | 15 | 14 | 26 | 13 | 17 | 3 | 15 | 5 | 2 | 6 |
| Type of Agency | | | | | | | | | | |
| Government | 7 | 15 | 32 | 14 | 17 | 3 | 9 | 4 | 2 | 4 |
| Medical center | 3 | 10 | 24 | 14 | 17 | 3 | 17 | 8 | 3 | 4 |
| Private nonprofit | 14 | 13 | 24 | 15 | 15 | 2 | 17 | 4 | 3 | 7 |

Source: Cost Survey of Implementing Agencies and Staff Time-Use Survey.

Note: Costs were reported for the period of July 1, 2011, through June 30, 2012. Figures are averages at agency level within each category.

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

IV. HOW MUCH DOES IT COST TO SERVE A FAMILY?

Costs per family represent the average value of resources that home visiting programs expended to provide services to an enrolled family. The estimates provide a uniform measure of costs for programs of different scale and thus are important for comparisons across program models, geographic settings, agency characteristics, or other factors. When information on program impacts is available, estimates of costs per family may also provide a foundation for comparing program costs and benefits at the participant level.

In this chapter, we present estimates of average costs per participating family and describe cost variation across IA subgroups. To provide context for cost estimates per family, we begin by describing the demographic and socioeconomic characteristics of families served by the IAs during the cost study period. Next, we describe our methods for calculating costs per family based on the average length of time families were enrolled in a program. We then present our estimates of these costs. Finally, we report costs per home visit delivered, since information on this unit cost may be informative to policymakers and providers, and test the sensitivity of cost estimates per family to an alternative estimation approach based on the average number of home visits delivered to a family.

A. Characteristics of Participating Families

Information on the characteristics and risk profile of families enrolled in the home visiting programs provides useful background for understanding the level of resources spent to serve them. The 25 IAs in the cost study sample served 2,709 participants between July 1, 2011, and June 30, 2012. In Table IV.1, we summarize key demographic and socioeconomic characteristics of families by program model. In general, participants were nearly all female, and most were pregnant at the time of enrollment, although pregnancy status varied across program models. Participants were also likely to be economically disadvantaged. IA staff collected demographic information and transmitted it to the EBHV cross-site evaluation team. For some characteristics in the table, especially income and receipt of public assistance, data may have been challenging to collect and are missing for many participants. Distributions with more than 20 percent of missing cases are italicized and should be interpreted with caution.

Nearly all participants served by EBHV IAs during the cost study period were women (98.5 percent). At least 95.5 percent of participants in the HFA, NFP, PAT, and Triple P programs were female. In SafeCare agencies, women comprised 82.2 percent of participants. Across all IAs, about two-thirds (37.3 percent) of participants were African American, and one-quarter (24.2 percent) were Hispanic.

Participants varied across program models with respect to pregnancy status. The proportion of participants who were pregnant at enrollment in the HFA, PAT, and SafeCare programs ranged from 2.1 percent for PAT to 31.4 percent for HFA. All participants in NFP were pregnant at enrollment per NFP eligibility criteria.

Information on income and receipt of public assistance was available for participants in the HFA, NFP, PAT, and SafeCare programs. Among participants in these programs, 60.2 percent had annual household income under \$12,000. HFA and SafeCare participants were more likely than NFP

Table IV.1. Demographic and Socioeconomic Characteristics of Participants Served During the Cost Study Period: July 2011–June 2012 (percentages unless otherwise indicated)

| | All Models | Healthy Families America | Nurse-Family Partnership | Parents as Teachers | Safe Care | Triple P |
|--------------------------------|--------------|--------------------------|--------------------------|---------------------|------------|------------|
| Female | 98.5 | 100.0 | 100.0 | 99.5 | 82.2 | 95.5 |
| Pregnant at Enrollment | 76.1 | 31.4 | 100.0 | 2.2 | 11.2 | NA |
| Race/Ethnicity | | | | | | |
| African American | 37.3 | 18.0 | 46.3 | 53.3 | 4.5 | 20.5 |
| Hispanic | 24.2 | 18.4 | 22.6 | 29.1 | 35.8 | 30.4 |
| White, non-Hispanic | 27.9 | 27.7 | 26.5 | 17.0 | 50.8 | 46.4 |
| Other/multiple | 10.6 | 36.0 | 4.7 | 0.5 | 8.9 | 2.7 |
| Household Income | | | | | | |
| Less than or equal to \$12,000 | 60.2 | 70.3 | 58.3 | 50.9 | 69.2 | NA |
| Between \$12,000 and \$20,000 | 21.2 | 13.2 | 22.0 | 35.6 | 30.8 | NA |
| More than \$20,000 | 18.6 | 16.5 | 19.7 | 13.6 | 0.0 | NA |
| Public Assistance | | | | | | |
| Any assistance | 93.2 | 100.0 | 90.4 | 100.0 | 98.6 | NA |
| Medicaid, SCHIP | 66.9 | 55.9 | 72.6 | 25.6 | 67.1 | NA |
| TANF, food stamps, SSI | 49.7 | 82.4 | 34.8 | 87.8 | 82.9 | NA |
| Unemployment insurance | 2.0 | 1.6 | 1.9 | 2.2 | 3.4 | NA |
| WIC | 77.2 | 92.0 | 72.3 | 94.4 | 76.7 | NA |
| Sample Size | 2,709 | 548 | 1,350 | 463 | 235 | 113 |

Source: EBHV Cross-Site Fidelity Database.

Note: Distributions in italics are missing data for at least 20 percent of cases. The “All Models” column reflects the unweighted averages across all IAs.

NA = not available; SCHIP = State Children’s Health Insurance Program; TANF = Temporary Assistance for Needy Families; SSI = Supplemental Security Income; WIC = Women, Infants, and Children program.

and PAT participants to have incomes at this level. Across all programs, the vast majority of participants received some form of public assistance (93.2 percent).²¹

B. Cost per Family

To estimate costs per family, we adopted an approach that accounts for differences in service dosage by basing estimates on the average duration of enrollment (in weeks) among participants served by an IA. Other cost studies of home visiting programs have used a similar approach (for

²¹ Obtaining complete and accurate data on household income is challenging. Some agencies may not have collected the information. If agencies collected the information through parent self-reporting, participants may not have known their household’s annual income or may have been reluctant to report it, and home visitors may not have asked participating families about their income.

example, Miller 2012; DuMont et al. 2010; Meckstroth et al. 2008).²² Below, we describe our method for estimating cost per family, discuss variation in costs among IA subgroups, and examine the sensitivity of our estimates to an alternative estimation method based on the average number of home visits received by a family. (Average duration differs from average number of home visits received because home visits are not always completed weekly and their frequency may vary across models, IAs, and participants.)

1. Method for Calculating Costs per Family

We created estimates of cost per family by using information for each IA on the duration of enrollment (in weeks) among families served by the program during the cost study period. We measured duration of enrollment from the time of the first home visit to the time of program exit as indicated in the EBHV fidelity data. (Families that had not received a visit within 90 days were considered to have exited the program.) Fidelity data on the enrollment and exit of families cover the period October 1, 2009, through June 30, 2012. Thus, some families began receiving services before the outset of cost study period (July 1, 2011, through June 30, 2012).

To calculate costs per participating family at each IA, we followed these steps:

1. Determined the number of weeks each family was enrolled during the cost period
2. Calculated the *total number of weeks of family enrollment* by summing across all families the number of weeks each family was enrolled during the cost period
3. Calculated a *cost per week of family enrollment* by dividing the total annual cost of operating the program by the total number of weeks of family enrollment
4. Calculated the *average cost per family* by multiplying the cost per week of family enrollment by the *average number of weeks of enrollment* (including weeks before the cost period) among families served by the IA and exiting during the cost period

Thus, our calculation of average cost per family may be summarized in the following equation:

$$\begin{aligned} \text{Average cost per family} = \\ \text{Cost per week of family enrollment during the cost study period} \\ \times \text{Average number of weeks of enrollment} \end{aligned}$$

We also calculated weighted averages across all IAs and for subgroups of IAs. For these calculations, we weighted each IA-level average based on the number of families exiting the IA during the cost period.

We focused on families that had exited the program so that the cost estimates per family reflect the full duration of enrollment. In the absence of data on family participation after the end of the cost period, we included only families that left the programs before July 1, 2012. In addition, when calculating average costs per family across all IAs or for IA subgroups, we included only IAs with

²² An alternative approach to estimating costs per family is to divide total annual program costs by the number of families served during the year. However, estimates created with this approach provide the average cost per family per year rather than the average cost to serve a family for the entire period of enrollment.

more than 10 families exiting during the cost study period.²³ We established this threshold because estimates per family based on the experiences of a relatively small number of exiting families may be less accurate. We also removed as an outlier the IA with the highest estimated cost per family. This IA implemented a version of PAT that included professional mental health services, and its cost per family was nearly twice as much as that of the next-highest IA. To prevent this estimate from skewing the overall average and the average for certain subgroups, we excluded it from the analysis of costs per family. (In Appendix A, we present IA-level estimates of costs per participant for all IAs, including those removed from the analysis.)

Given that our estimates are based on total annual costs, they are inclusive of all resources used to deliver the home visiting program. It is important to note that the estimates do not represent *marginal* costs—the cost to a program of serving an additional participant. Marginal costs could be lower or higher than average costs.

2. Average Cost per Family

On average, the 19 IAs in our analysis enrolled a family for 44 weeks and spent \$6,583 serving that family (Table IV.2). Costs per family ranged widely among IAs, from a minimum of \$2,122 to a maximum of \$13,962. Among all IAs, the weighted average cost per family (\$5,962) was somewhat lower than the arithmetical average. Averages are inclusive of costs for both direct services and for program management and administration.

IAs were nearly equally divided between those with costs per family above (10 IAs) and below (9 IAs) the overall average. In Figure IV.1, we present the number of IAs with costs per family in ranges above and below the average for all IAs. NFP and HFA IAs had costs per family in ranges both above and below the overall average. Costs for both PAT programs were well below average, and estimates for SafeCare and the Triple P program were just above average.

Variation by program model. In our sample, the average for cost per family was lowest for the two IAs implementing a standard version of PAT (\$2,372). Although PAT is designed to be a longer-term, intensive program model, for these two IAs, costs per family were lower than average (Table III.1). In both agencies, the number of families served and the number exiting during the cost study period were above the overall average, reflecting high demand for services in the communities that PAT IAs served.

With respect to the other program models, average costs per family were just over \$8,000 for NFP IAs, \$6,263 for SafeCare IAs, \$5,615 for HFA IAs, and \$5,306 for the Triple P IA. Higher-than-average costs per participant for NFP IAs may be related to the compensation levels for home visitors in these programs. NFP is the only program model requiring a bachelor's degree in a specific discipline (nursing), and data collected for the cost study reveal that salaries for home visitors in NFP IAs tended to be higher than those of direct service staff in other IAs.

²³ We removed four IAs from the sample for calculation of average costs per participant because they had 10 or fewer exiting families. We removed one additional IA because data on average duration of participation were not available.

Table IV.2. Cost per Exiting Family by Selected Agency Characteristics

| | Number of IAs | Average Number of Families Exiting During Cost Study Period | Average Duration of Participation Among Exiting Families (weeks) | Average Cost per Exiting Family ^a | Range in Average Cost per Exiting Family | Weighted Average Cost per Exiting Family ^b |
|--|---------------|---|--|--|--|---|
| All IAs | 19 | 44 | 44 | \$6,583 | \$2,122—\$13,962 | \$5,962 |
| Program Model | | | | | | |
| HFA | 4 | 26 | 33 | \$5,615 | \$2,848—\$10,502 | \$5,270 |
| NFP | 10 | 40 | 55 | \$8,003 | \$4,228—\$13,692 | \$7,596 |
| PAT | 2 | 78 | 36 | \$2,372 | \$2,122—\$2,622 | \$2,415 |
| SafeCare | 2 | 70 | 32 | \$6,263 | \$5,826—\$6,699 | \$5,982 |
| Triple P | 1 | 46 | 26 | \$5,306 | n.a. | \$5,306 |
| Model Implementation Status at Outset of EBHV Initiative | | | | | | |
| New | 10 | 49 | 49 | \$7,760 | \$4,228—\$13,692 | \$7,080 |
| Continuing | 9 | 39 | 39 | \$5,274 | \$2,122—\$10,502 | \$4,382 |
| Location | | | | | | |
| Rural | 4 | 56 | 36 | \$5,459 | \$2,848—\$8,540 | \$5,697 |
| Suburban | 4 | 45 | 50 | \$7,145 | \$2,122—\$10,502 | \$6,104 |
| Urban | 11 | 40 | 45 | \$6,787 | \$2,622—\$13,962 | \$6,039 |
| Type of Agency | | | | | | |
| Government | 6 | 47 | 55 | \$8,211 | \$5,320—\$12,941 | \$7,438 |
| Medical center | 2 | 22 | 55 | \$9,226 | \$4,490—\$13,962 | \$11,163 |
| Private nonprofit | 11 | 47 | 37 | \$5,214 | \$2,122—\$10,502 | \$4,717 |

Sources: Cost Study of EBHV Programs Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

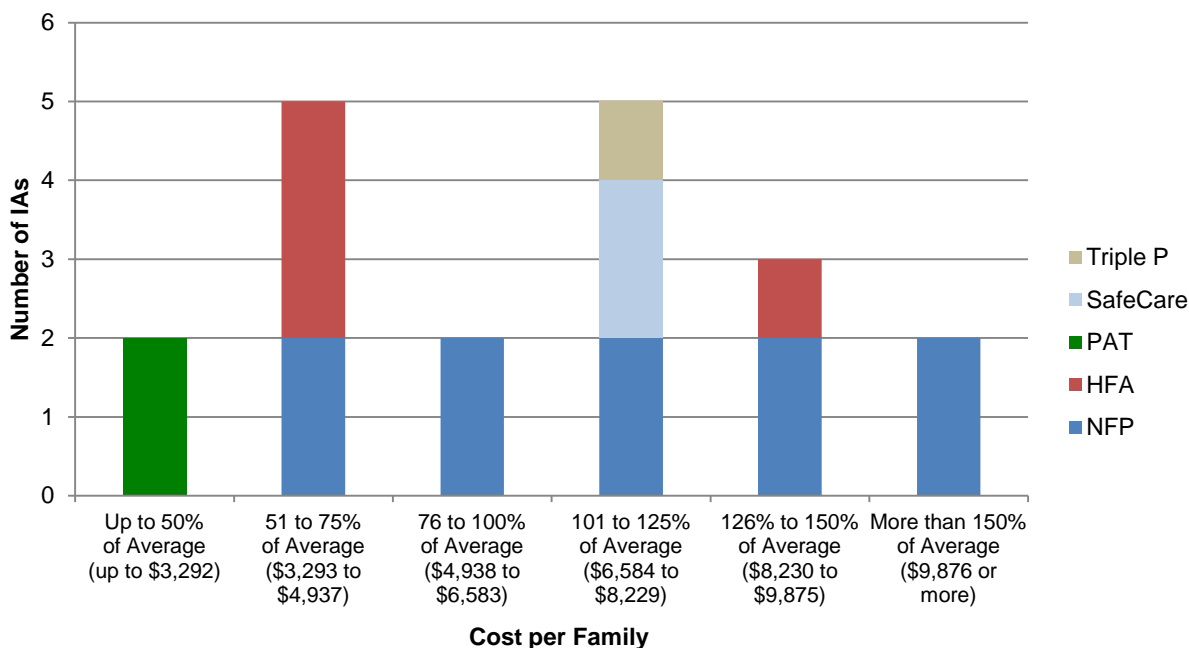
Notes: Costs are in 2012 dollars and were reported for the period of July 1, 2011, through June 30, 2012. The analysis includes IAs with more than 10 families exiting during the cost study period and excludes the IA implementing an enhanced version of PAT that provides access to mental health services. Averages and ranges pertain to the agency level within each category. Average cost per exiting family is not discounted for participation before the cost study period.

^aAverage cost per family = Average cost per week of participation for each IA x Average number of weeks of participation for families served by the IA and exiting during the cost period

^bWeighted averages are based on the number of families exiting each IA during the cost period.

n.a. = not applicable; IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

Figure IV.1. Number of Implementing Agencies with Costs per Family in Ranges Above and Below the Average Among All Agencies (\$6,583)



Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Note: Costs are in 2012 dollars and were reported for the period of July 1, 2011, through June 30, 2012. The data include programs with more than 10 families exiting during the cost period and exclude the IA implementing an enhanced version of PAT that provides access to mental health services (N = 19).

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

Given that the intended duration of SafeCare (about 24 weeks) is shorter than the duration of HFA or PAT (both designed as multiyear programs), the average costs for SafeCare programs were higher than might be expected. This pattern may reflect the actual duration of participation for families served by SafeCare IAs in our sample, the caseload size for SafeCare home visitors, or both. For example, among SafeCare IAs in the analysis, the average duration of enrollment was 32 weeks—about 8 weeks longer than the intended duration.²⁴ SafeCare families may have received lower service levels after the first 24 weeks, in keeping with model standards. But the estimated cost per family rises with enrollment duration because home visitors must continue to monitor and reach out to families in their caseloads.

Another factor driving costs higher may be that the average caseload size among SafeCare home visitors was smaller than expected. Analyses conducted for the EBHV cross-site evaluation indicate that, in SafeCare agencies, an average 79.2 percent of visitors carried caseloads below the

²⁴ The average enrollment duration for families exiting the two SafeCare IAs in the cost-per-family analysis was longer than for the six SafeCare IAs in the analyses of fidelity data for the EBHV cross-site evaluation. Among the six SafeCare IAs in the cross-site evaluation, average enrollment was 22 weeks (Boller et al. 2013). Calculations of average enrollment for the cross-site evaluation included families exiting over a longer time period (October 1, 2009, through June 30, 2012) than those in the cost study.

level expected for the program model (Boller et al. 2013). These smaller caseloads would generate higher-than-expected costs per family because home visitor compensation and other program costs would be distributed among fewer participants than suggested in model guidelines. Finally, it is possible that higher-than-expected costs for SafeCare IAs reflect the augmented version of SafeCare implemented in one site included in our analysis of costs per family. This version of SafeCare included motivational interviewing (an approach to counseling), safety planning, and problem solving to address risks of intimate partner violence, substance abuse, and depression. The augmentation may have required a larger investment of resources to serve each family.

Variation by agency characteristics. We observed cost variation among all the agency characteristics we examined: program model implementation status (new or continuing), agency location (rural, suburban, or urban), and agency type (government, medical center, or private nonprofit). IAs that newly implemented their home visiting program model at the beginning of the EBHV initiative averaged higher costs per family than those experienced in implementing their program model (\$7,760 compared to \$5,274). Average costs per participant were lower among rural programs (\$5,459) than among suburban or urban programs (\$7,145 and \$6,787, respectively). The variation based on location may be related to lower costs in rural areas for resources such as personnel and facilities. IAs with rural service areas had lower total annual costs than IAs with suburban or urban service areas and tended to spend a smaller proportion of annual costs on personnel and facilities.

Among agency types, costs per participant were lowest among private nonprofits (\$5,214, on average) and highest among medical centers (\$9,226). The two medical centers in the analysis differed substantially in their costs per participant, however. At one of the two IAs, the cost (\$4,490) was below the average across all IAs while the cost at the other IA (\$13,692) was well above the overall average. Such variation makes it difficult to discern whether medical centers might generally implement programs with costs per participant that are higher on average than in other types of agencies. However, based on costs per family among the 11 private nonprofits in our sample, it appears that this type of agency is likely to have lower costs relative to government agencies and medical centers.

C. Cost per Home Visit

As with costs per participant, information on the cost of providing a unit of service can be helpful for understanding and comparing program cost structures. Home visiting program models in the EBHV study differed in the expected frequency of home visits and in the other types of assistance they offered participants, but home visits were the primary service offered by all programs. The average cost per home visit is inclusive of costs for other direct services and program management and administration. Thus, the cost denotes of the level of resources used by agencies to deliver a core service, based on the total resources required to operate the program. Average costs per home visit may be interpreted as a partial indicator of how efficiently programs deliver their core service. However, this indicator does not take into account the quality of services provided.

Using EBHV cross-site fidelity data and estimates of total annual costs, we calculated the average cost of a home visit for each IA by dividing the total annual cost of operating the program by the total number of home visits delivered to all enrolled families during the cost period. In Table IV.3, we show the average cost per home visit for all IAs and IAs implementing each program model. We exclude as outliers the average cost calculated for two agencies: (1) a PAT IA that enhanced its program by providing access to mental health care and (2) a SafeCare IA that targeted a

hard-to-serve population of parents on probation and with a known history of substance abuse and mental health issues.

Among all IAs, a completed home visit cost an average \$534. Costs per home visit were lowest among PAT programs (\$210) and highest among HFA programs (\$673).

Table IV.3. Average Cost per Home Visit

| | Number of IAs | Average Number of Home Visits Delivered During Cost Study Period | Average Cost per Home Visit | Range in Average Cost per Home Visit |
|---------------|---------------|--|-----------------------------|--------------------------------------|
| All IAs | 23 | 1,269 | \$534 | \$201–\$1,397 |
| Program Model | | | | |
| HFA | 7 | 928 | \$673 | \$233–\$1,397 |
| NFP | 10 | 1,502 | \$503 | \$265–\$1,131 |
| PAT | 2 | 2,067 | \$210 | \$201–\$218 |
| SafeCare | 3 | 847 | \$492 | \$259–\$754 |
| Triple P | 1 | 1,000 | \$643 | n.a. |

Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Note: Costs are in 2012 dollars and were reported for the period of July 1, 2011, through June 30, 2012. Averages are at the agency level within each category. Two IAs (one implementing an enhanced version of PAT and one implementing SafeCare) are excluded as outliers from these estimates.

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership; PAT = Parents as Teachers.

n.a. = not applicable

We also used information on the average cost per home visit to test the sensitivity of our cost estimates per family to an alternative estimation method. Under the alternative method, we used a two-step process to calculate costs per family:

1. For each IA, we determined the average number of home visits received by families exiting during the cost period (including home visits occurring before the cost period).
2. We multiplied the average total number of home visits received by exiting families at each IA by the average cost per home visit delivered by that IA.

When calculating averages across all IAs or subgroups of IAs, we included only agencies with more than 10 families exiting during the cost period per our primary approach to calculating costs per family.

The average cost per family among all IAs did not differ markedly depending on the method used. As shown in Table IV.4, the estimate based on the cost-per-home-visit method was 6.7 percent higher than the estimate based on the cost-per-week-of-enrollment method. Among IAs implementing different program models, estimates using the two methods differed by 6.5 percent or less for HFA, NFP, and PAT IAs. However, differences in estimates were larger for IAs implementing SafeCare (22.6 percent higher using the cost-per-home-visit method) and Triple P (40.9 percent higher). The results suggest that our primary estimates of costs per family for SafeCare or Triple P agencies should be considered provisional. In general, we believe that estimates based on the duration of participation are more likely to represent the “true” cost of serving a family. One reason is that programs might provide assistance to families through activities such as case

management or referrals to other providers, even if they did not deliver home visits. Programs may also incur costs for continuing efforts to engage families that are not receiving home visits consistently.

Table IV.4. Comparison of Average Costs per Family Based on Cost per Week of Enrollment and Cost per Home Visit

| | Number of IAs | Average Cost per Family Based on Cost per Week of Enrollment | Average Cost per Family Based on Cost per Home Visit | Percentage Difference |
|---------------|---------------|--|--|-----------------------|
| All IAs | 19 | \$6,583 | \$7,024 | +6.7 |
| Program Model | | | | |
| HFA | 4 | \$5,615 | \$5,860 | +4.4 |
| NFP | 10 | \$8,003 | \$8,213 | +2.6 |
| PAT | 2 | \$2,372 | \$2,526 | +6.5 |
| SafeCare | 2 | \$6,263 | \$7,680 | +22.6 |
| Triple P | 1 | \$5,306 | \$7,475 | +40.9 |

Sources: Cost Survey of Implementing Agencies and EBHV Cross-Site Fidelity Data.

Note: Costs are in 2012 dollars and were reported for the period of July 1, 2011, through June 30, 2012. Averages are at the agency level within each category. Analysis includes IAs with more than 10 families exiting during the cost study period.

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership- PAT = Parents as Teachers.

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V. COSTS OF EBHV PROGRAMS IN CONTEXT

As interest grows in scaling up home visiting programs to promote child and family well-being and to prevent child maltreatment, program implementers and policymakers are seeking more information about the costs of implementing these programs. In this study, we aimed to provide new information on home visiting program costs by applying a consistent analytic method to estimate and compare costs among agencies implementing five home visiting models. In this chapter, we place our findings into context by addressing two questions:

1. How do our estimates of costs per family compare with previous estimates for the program models we studied?
2. What are the possible implications of our findings for program implementers and policymakers?

A. Comparisons with Previous Cost Estimates

Comparing cost estimates for EBHV IAs to estimates from earlier studies can illuminate whether the experience of EBHV IAs appears to be typical of other agencies that operate similar home visiting programs. Such comparisons may also indicate whether differences in methods of cost estimation across studies appear to influence results. To conduct the comparison, we identified a limited number of recently published estimates of costs per family that reflect the cost of serving a family for the duration of its participation in a program rather than the cost per family per year. We focused on recently published estimates (2010 or later) to identify estimates that reflect the current implementation of program models.

At least one previous cost estimate is available for four program models: HFA, NFP, PAT, and SafeCare. We were unable to find cost estimates for a Triple P program that resembled the intensive version implemented as part of the EBHV initiative.²⁵ The literature on costs of individual program models is not extensive, and several of the estimates come from a single review of the costs and benefits of a range of evidence-based programs related to child welfare (Lee et al. 2012). In some cases, the cited estimates are based on assumptions about the duration of participation and information on annual costs provided by program developers rather than on the results of a systematic cost analysis. In Table V.1, we present the average and range in cost per family among EBHV IAs and average costs per family reported in previous studies.

Estimates of HFA and NFP program costs from earlier studies do not precisely match the average costs we calculated for IAs in the EBHV sample, but they differ from our estimates by no more than 22 percent—a gap that might be expected given the studies' separate contexts and data sources. In addition, previous estimates of both HFA and NFP costs fall within the range of costs observed among EBHV agencies. Estimates from two earlier studies of costs per family in HFA programs are 91 and 120 percent of the EBHV cost study estimate. For NFP programs, the estimates of average costs from two earlier studies are higher than our estimates—

²⁵Foster et al. (2008) estimated the costs of the universal media and communication component of Triple P and of training service providers.

Table V.1. Comparison of Costs per Family in EBHV Home Visiting Program Models with Selected Estimates from Previous Studies (2012 Dollars)

| Program Model | EBHV Cost Study | | Previous Estimates | Sources |
|---------------|-----------------|------------------|----------------------|---|
| | Average | Range | | |
| HFA | \$5,615 | \$2,848—\$10,502 | \$4,693 ^a | Lee et al. (2012) |
| | | | \$6,157 ^b | Dumont et al. (2010) |
| NFP | \$8,003 | \$4,228—\$13,692 | \$9,793 ^c | Lee et al. (2012) |
| | | | \$9,339 ^d | Miller (2012) |
| PAT | \$2,372 | \$2,122—\$2,622 | \$4,324 ^e | Lee et al. (2012) |
| SafeCare | \$6,263 | \$5,826—\$6,699 | \$2,053 ^f | Lee et al. (2012) |
| | | | \$2,322 ^g | U.S. Department of Health and Human Services (2013) |

Note: All costs are in 2012 dollars. Previous estimates are adjusted for inflation by using the Consumer Price Index.

^aEstimated cost per family based on annual costs reported in a 2004 survey of HFA sites. Assumes 1.2 years (approximately 62 weeks) of participation.

^bBased on cost analysis conducted as part of a multiyear evaluation of Healthy Families New York. Average duration of participation was 20.7 months (approximately 83 weeks).

^cEstimated cost per family based on annual cost provided by Nurse-Family Partnership Northwest Regional Office. Assumes two years of participation (104 weeks).

^dBased on cost analysis of statewide NFP programs in six states. Average duration of participation was 511.2 days (approximately 73 weeks).

^eEstimated cost per family based on annual cost provided by Parents as Teachers National Resource Center in 2003. Assumes three years (156 weeks) of participation.

^fEstimated cost per family based on information provided by the Washington Department of Social and Health Services. Assumes one year (52 weeks) of participation.

^gEstimated cost per family reported in the Home Visiting Evidence of Effectiveness Review (HomVEE). Based on information provided by the National SafeCare Training Resource Center. HomVEE also reports cost estimates for the HFA, NFP, and PAT programs, but these estimates are the cost per family per year, not the costs for the duration of program participation.

IA = implementing agency; HFA = Healthy Families America; NFP = Nurse-Family Partnership- PAT = Parents as Teachers.

117 and 122 percent of the average cost per family for IAs in the EBHV sample. Previous estimates of HFA and NFP program costs are based on observed or assumed participation periods longer than the duration among EBHV participants in HFA or NFP programs. This difference may explain why most previous estimates are higher than those in the EBHV study.

In contrast, our cost estimates for PAT and SafeCare differ substantially from previous estimates. Estimates for EBHV IAs offering PAT and SafeCare appear to reflect the distinct experiences of the small number of agencies in our sample, and we cannot state confidently that costs for other agencies implementing these programs are likely to be similar. For both programs, estimates from earlier studies are outside the range observed for EBHV agencies.

The average cost per family among PAT programs implemented as part of the EBHV initiative was approximately 55 percent of the cost estimated by Lee et al. (2012). A key difference between the cost per family identified in the EBHV cost study and the previous estimate is the duration of participation. Among PAT IAs included in the calculation of average costs per family in the EBHV cost study, average duration of participation was 36 weeks while Lee assumes that PAT families spend three years in the program. This assumption contributes to a higher estimated cost per family.

The average cost per family for SafeCare programs implemented as part of the EBHV initiative was 270 and 305 percent of the costs estimated in two previous studies (U.S. HHS [2013] and Lee et al. [2012], respectively). The experience of EBHV IAs may have differed in some way from that of the agencies considered in the previous estimates. As noted in Chapter III, among SafeCare IAs in the EBHV initiative, home visitor caseloads were smaller than expected, possibly contributing to higher costs per participant. It is also possible that differences in the approach to calculating total annual costs are a factor leading to relatively high estimates for EBHV IAs implementing SafeCare. Our study aimed to take into account the full range of resources required to implement programs, which may have been broader than the types of resources included in previous cost estimates for SafeCare.

B. Implications for Program Implementers, Policymakers, and Other Stakeholders

The results of our cost analysis of EBHV programs provide insights into resource use and allocation that can inform the continuing expansion of home visiting services. Here, we highlight key findings and implications for operators of home visiting programs and policymakers.

In addition to delivering home visits, agencies participating in the EBHV initiative spent substantial funds on other activities. The provision of home visits was central to the work of EBHV IAs. On average, agencies spent the largest proportion of their annual costs—41 percent—to prepare for, travel to, and deliver home visits. Yet the allocation of costs across program activities indicates that delivering these services requires substantial investment in other activities. Major cost categories in addition to home visit provision included general case management and services other than home visits (16 percent of annual costs, on average); recruiting, training, and supervising staff (14 percent); and identifying and assessing potential clients (13 percent). Activities related to general management; planning, fund raising, and collaboration; case documentation; and continuous quality improvement are important functions in home visiting programs but were less resource-intensive and together comprised 15 percent of annual costs, on average.

Further, the allocation of program costs across all activities helps pinpoint functions that may need to be examined closely in order to understand and plan for program costs in diverse agency contexts. Agencies that offer more intensive case management or ancillary services; experience high rates of staff turnover; or face challenges in recruiting, enrolling, and retaining clients, for example, may experience higher costs than agencies without these characteristics. If program implementers or policymakers assign a high priority to increasing program efficiency, it may be useful to explore strategies for adjusting these elements of agency operations and assessing how changes affect costs.

Both program model and agency characteristics appear to influence costs per family.

Costs per family varied widely among the IAs in our sample, from \$2,122 to \$13,692. Although we cannot definitely link cost patterns to specific agency features, we observed differences in costs by program model and across agency characteristics. On average, programs implementing NFP were the most expensive per participant, and those implementing PAT were the least expensive. Programs tended to cost more per family when a model was newly implemented at the outset of the EBHV initiative, located in suburban or urban settings (as compared to rural settings), or implemented by government agencies or medical centers (as compared to private nonprofits).

Moreover, we identified circumstances in individual agencies that appeared to influence program costs substantially. For example, one agency combined its home visiting program with access to professional mental health treatment. The combination of services added considerable expense to the program, with costs per family estimated to be the highest among all agencies in our sample.²⁶ Another agency's target population included parents on probation and with a known history of substance abuse and mental health issues. This population was likely difficult to engage, and the agency served a small number of families (13) during the cost study period. As a result, annual costs were high relative to the number of families served. Finally, as noted in the previous chapter, caseload dynamics appeared to influence estimated costs per family. Costs per family may have been lower than expected in PAT agencies because home visitors were likely to maintain caseloads above model standards while participants were enrolled for shorter periods than model standards would suggest. In contrast, SafeCare agencies may have experienced higher-than-expected costs per family because home visitors' caseloads tended to be smaller than model standards would suggest.

In sum, the different requirements of program models are likely to influence costs, but agency-level factors and community characteristics also appear to drive costs. Program implementers and policymakers may be able to use comparative information to project differences in program costs across agency and community contexts. Implementers may benefit from assessing the potential for changes in program features as they affect costs per home visit and family. For example, an agency might determine a baseline cost per family or home visit and then monitor whether changes in elements of program operation—such as service mix, enrollment levels, and home visitor caseloads—are associated with changes in unit costs.

Policymakers and other stakeholders are likely to continue to find that costs vary widely among funded agencies. To understand this variation more completely, it would be useful to specify further how particular program and agency features influence costs for home visiting programs. Future cost

²⁶ The average cost per family for this agency was removed as an outlier from calculations of average cost per family across all IAs and IA subgroups.

analyses including larger numbers of agencies may help identify the relative importance of program models and individual agency characteristics with respect to costs per family.

Integrating cost analysis into broader program evaluations offers opportunities for systematic and comprehensive data collection. The EBHV cross-site evaluation established a useful framework for conducting a systematic cost analysis of several home visiting programs by employing consistent methods of data collection and analysis. The cross-site evaluation also provided the participant-level data needed for calculating average costs per participant. In general, conducting cost analyses of home visiting programs in the context of a broader evaluation is likely to be beneficial for several reasons. First, a process study that may be conducted as part of a larger evaluation can inform the design of cost studies by gathering information needed to help evaluators identify and define program components or activities. Second, data on service use and program implementation supports analyses of costs per family and variation across agencies. Such data can provide information on families' duration of participation, so that cost estimates can be based on actual, rather than assumed, service dosage. In addition, detail on the design and delivery of home visiting services at the agency level, along with information on agencies' strategies and experiences with respect to outreach, staff supervision and training, and other functions, will be useful for interpreting cost differences among agencies.

Finally, integrating cost studies into evaluations that assess families' outcomes or impacts relative to a comparison group creates a foundation for further economic analyses, such as cost-benefit and cost-effectiveness analyses. Even though such types of analyses were beyond the scope of the EBHV cost study, future studies may be able to expand further the knowledge base on the costs and benefits of home visiting program models and explore how they may vary with agency characteristics and contexts.

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APPENDIX A
IMPLEMENTING AGENCY COST TABLES

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Table A.1. Total Estimated Costs of Operations for the Home Visiting Program for a One-Year Period (2012 Dollars)^a

| IA | Total Personnel Costs ^b | Nonpersonnel Costs | | | | Total Nonpersonnel Costs | Total Estimated Costs (Personnel Plus Nonpersonnel) |
|----|------------------------------------|------------------------|---------------------|-------------------------------------|---------------------------|--------------------------|---|
| | | Supplies and Equipment | Contracted Services | Office Space and Other Direct Costs | Indirect (Overhead) Costs | | |
| 1 | 730,789 | 55,287 | 31,132 | 65,337 | 148,872 | 300,628 | 1,031,417 |
| 2 | 432,428 | 13,045 | 139,976 | 13,255 | 34,577 | 200,853 | 633,281 |
| 3 | 157,585 | 10,863 | 51,805 | 3,293 | 24,960 | 90,920 | 248,505 |
| 4 | 735,050 | 61,580 | 4,579 | 126,453 | 0 | 192,612 | 927,662 |
| 5 | 449,736 | 63,469 | 0 | 72,404 | 115,569 | 251,442 | 701,177 |
| 6 | 574,253 | 53,040 ^c | 0 | 170,110 | 49,433 | 272,584 | 846,837 |
| 7 | 309,365 | 18,000 | 0 | 55,061 | 33,794 | 106,855 | 416,220 |
| 8 | 240,213 | 15,631 | 0 | 16,171 | 23,578 ^e | 55,380 | 295,593 |
| 9 | 148,495 | 46,174 ^c | 2,075 | 31,313 | 28,274 ^e | 107,836 | 256,331 |
| 10 | 447,693 | 904 | 37,049 | 28,589 | 49,827 | 116,369 | 564,062 |
| 11 | 318,180 | 19,296 | 0 | 37,784 ^d | 74,540 | 131,620 | 449,799 |
| 12 | 656,261 | 40,558 | 437,494 | 72,742 | 0 | 550,794 | 1,207,054 |
| 13 | 592,293 | 32,610 | 0 | 122,942 | 114,685 | 270,237 | 862,530 |
| 14 | 210,996 | 17,297 | 11,500 | 32,077 | 14,189 | 75,063 | 286,059 |
| 15 | 205,364 | 10,889 | 4,500 | 33,808 ^d | 22,117 | 71,314 | 276,678 |
| 16 | 433,132 | 29,689 ^c | 0 | 64,422 | 0 | 94,111 | 527,243 |
| 17 | 555,886 | 24,075 | 0 | 59,522 ^d | 48,176 ^e | 131,773 | 687,659 |
| 18 | 503,780 | 19,594 | 11,407 | 17,303 | 45,633 ^e | 93,937 | 597,717 |
| 19 | 446,193 | 8,329 | 14,794 | 42,731 | 39,352 | 105,206 | 551,399 |
| 20 | 449,027 | 18,031 | 13,711 | 70,075 | 112,520 | 214,337 | 663,364 |
| 21 | 639,653 | 28,147 | 0 | 84,897 | 37,901 | 150,945 | 790,597 |
| 22 | 367,312 | 16,348 | 35,940 | 82,406 | 140,741 | 275,435 | 642,747 |
| 23 | 362,325 | 10,944 | 10,342 | 73,671 | 0 | 94,957 | 457,282 |
| 24 | 354,843 | 9,003 | 0 | 32,827 | 0 | 41,829 | 396,672 |
| 25 | 126,980 | 8,510 | 0 | 62,137 | 8,800 | 79,446 | 206,426 |

Source: Mathematica Cost Survey of IAs.

^a Costs estimated for July 1, 2011, through June 30, 2012. Three agencies used an alternative period that aligned with availability of their cost data. Total costs include the estimated value of overtime hours and exclude the estimated costs associated with the local evaluations conducted as part of the EBHV initiative. The value of both were estimated using the data from the survey on staff time use.

^b Personnel costs include fringe benefits and an estimated value of volunteer or donated labor, where applicable.

Table A.1 *(continued)*

^c Value of some equipment was estimated, due to incomplete data.

^d Value of office space was estimated by calculating the average percentage of costs on office space among the reporting agencies in similar geographic areas and applying the location-specific percentage to the agency's initial total cost estimate.

^e Value of indirect (overhead) costs was estimated for agencies that did not report these costs and reported that they were unable to provide these costs. We calculated the average percentage of costs on indirect (overhead) among agencies reporting these costs and applied that percentage to the agency's initial total cost estimate.

IA = implementing agency

Table A.2. Allocation of Costs Across Components of the Home Visiting Program

| IA | Direct Services | | | | | Management and Administration | | | | |
|----|---------------------------------------|---|-----------------------|---|--------------------|--|--|--------------------------------|---------------------------------------|--|
| | Outreach, Recruitment, and Assessment | Preparation and Delivery of Home Visits | Travel to Home Visits | Case Management and Services Other than Home Visits | Case Documentation | Staff Recruitment, Training, and Supervision | Planning, Fundraising, External Communication, and Collaboration | Continuous Quality Improvement | General Management and Administration | |
| 1 | 11% | 25% | 9% | 23% | 3% | 11% | 6% | 1% | 11% | |
| 2 | 15% | 30% | 11% | 23% | 4% | 12% | 3% | 1% | 1% | |
| 3 | 11% | 44% | 15% | 7% | 3% | 13% | 2% | 1% | 4% | |
| 4 | 11% | 20% | 15% | 11% | 1% | 19% | 11% | 4% | 7% | |
| 5 | 7% | 26% | 15% | 21% | 2% | 18% | 4% | 1% | 5% | |
| 6 | 10% | 18% | 15% | 18% | 1% | 20% | 6% | 4% | 8% | |
| 7 | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| 8 | 13% | 29% | 19% | 16% | 3% | 15% | 2% | 0% | 4% | |
| 9 | 12% | 24% | 22% | 20% | 3% | 13% | 7% | 0% | 0% | |
| 10 | 13% | 33% | 18% | 10% | 1% | 8% | 2% | 12% | 2% | |
| 11 | 17% | 31% | 13% | 16% | 5% | 7% | 4% | 5% | 2% | |
| 12 | 13% | 18% | 12% | 16% | 0% | 12% | 14% | 3% | 12% | |
| 13 | 3% | 23% | 6% | 15% | 2% | 28% | 11% | 6% | 6% | |
| 14 | 9% | 29% | 12% | 7% | 3% | 32% | 3% | 2% | 1% | |
| 15 | 14% | 22% | 14% | 16% | 4% | 17% | 3% | 2% | 8% | |
| 16 | 19% | 19% | 12% | 18% | 1% | 19% | 1% | 2% | 10% | |
| 17 | 16% | 27% | 13% | 17% | 3% | 9% | 7% | 3% | 7% | |
| 18 | 13% | 28% | 16% | 20% | 4% | 6% | 5% | 3% | 5% | |
| 19 | 13% | 39% | 21% | 14% | 3% | 8% | 1% | 1% | 1% | |
| 20 | 21% | 25% | 11% | 22% | 4% | 8% | 4% | 2% | 1% | |
| 21 | 17% | 29% | 16% | 17% | 3% | 12% | 2% | 2% | 2% | |
| 22 | 11% | 16% | 18% | 15% | 3% | 21% | 2% | 0% | 15% | |
| 23 | 23% | 27% | 16% | 18% | 3% | 7% | 4% | 1% | 0% | |
| 24 | 15% | 28% | 12% | 21% | 2% | 15% | 2% | 1% | 5% | |
| 25 | 12% | 22% | 23% | 8% | 1% | 17% | 2% | 2% | 14% | |

Source: Mathematica Cost Survey of IAs and Time-Use Survey of IA Staff.

IA = implementing agency; NA = not available.

Table A.3. Costs per Week, Exiting Family, and Home Visit (2012 Dollars)^a

| IA | Number of Families Served During Cost Study Period | Number of Families Exiting During Cost Study Period | Total Weeks of Family Participation | Average Cost per Week of Family Participation | Average Duration of Participation (Weeks) | Average Cost per Exiting Family | Total Number of Home Visits Delivered During Cost Study Period | Average Cost per Home Visit Delivered |
|----|--|---|-------------------------------------|---|---|---------------------------------|--|---------------------------------------|
| 1 | 103 | 28 | 4,268 | 242 | 54 | 12,941 | 912 | 1,131 |
| 2 | 121 | 115 | 2,729 | 232 | 25 | 5,826 | 840 | 754 |
| 3 | 13 | 10 | 495 | 502 | 37 | 18,642 | 109 | 2,280 |
| 4 | 158 | 61 | 5,681 | 163 | 46 | 7,561 | 1,377 | 674 |
| 5 | 105 | 48 | 3,258 | 215 | 21 | 4,622 | 1,052 | 667 |
| 6 | 94 | 19 | 3,117 | 272 | 39 | 10,502 | 606 | 1,397 |
| 7 | 182 | 91 | 6,713 | 67 | 39 | 2,622 | 2,060 | 218 |
| 8 | 190 | 64 | 6,302 | 66 | 32 | 2,122 | 2,074 | 201 |
| 9 | 50 | 13 | 1,893 | 156 | 29 | 4,490 | 921 | 321 |
| 10 | 92 | 24 | 3,733 | 69 | 41 | 2,848 | 1,483 | 380 |
| 11 | 103 | 32 | 3,600 | 157 | 53 | 8,245 | 1,098 | 514 |
| 12 | 91 | 21 | 2,952 | 409 | 61 | 24,976 | 407 | 2,966 |
| 13 | 101 | 6 | 4,198 | 205 | 17 | 3,566 | 1,128 | 765 |
| 14 | 49 | 25 | 1,624 | 176 | 38 | 6,699 | 1,106 | 259 |
| 15 | 52 | 0 | 2,711 | 102 | NA | NA | 596 | 464 |
| 16 | 123 | 47 | 4,563 | 116 | 37 | 4,228 | 1,447 | 364 |
| 17 | 129 | 31 | 4,022 | 171 | 82 | 13,962 | 1,710 | 402 |
| 18 | 114 | 37 | 4,047 | 148 | 58 | 8,540 | 1,273 | 470 |
| 19 | 150 | 36 | 5,475 | 101 | 83 | 8,397 | 1,759 | 313 |
| 20 | 131 | 56 | 4,305 | 154 | 37 | 5,640 | 1,108 | 599 |
| 21 | 198 | 36 | 7,104 | 111 | 47 | 5,201 | 2,612 | 303 |
| 22 | 113 | 46 | 3,129 | 205 | 26 | 5,306 | 1,000 | 643 |
| 23 | 141 | 33 | 5,001 | 91 | 58 | 5,320 | 1,728 | 265 |
| 24 | 21 | 6 | 937 | 423 | 53 | 22,316 | 417 | 951 |
| 25 | 61 | 9 | 1,787 | 116 | 30 | 3,411 | 886 | 233 |

Sources: Mathematica Cost Survey of IAs and Evidence-Based Home Visiting cross-site home visit service data.

Notes: Figures are in 2012 dollars. Only IAs with more than 10 families exiting during the cost study period were used for calculating average costs per family.

^a Average cost per family = average cost per week of family participation x average duration of participation for families served by the IA and exiting during the cost period.

IA = implementing agency; NA = not available.

APPENDIX B
IMPLEMENTING AGENCY COST SURVEY

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Supporting Evidence-Based
Home Visiting to Prevent
Child Maltreatment

Cost Study of Evidence-Based Home Visiting Programs Implementing Agency Cost Survey

Introduction and Instructions

Please scroll down to read all instructions.

The Cost Study of Evidence-Based Home Visiting Programs aims to expand the knowledge base on home visiting by using rigorous and standardized methods to assess the costs of a variety of home visiting programs. Mathematica Policy Research and Chapin Hall are conducting the study, which is supported by the Doris Duke Charitable Foundation and Casey Family Programs. The study is focused on agencies participating in the Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment (EBHV) Cross-Site Evaluation funded by the Children's Bureau in the U.S. Department of Health and Human Services.

What is this survey about?

This survey is for implementing agencies affiliated with the EBHV initiative. It asks questions about the resources required to implement your home visiting program during a recent 12-month period (preferably July 2011 through June 2012). The survey is designed to gather information on all resources used by the home visiting program, including resources that the program does not pay for directly and that may not be reflected in expenditure records (such as the value of volunteer time or donated office space).

How is the survey organized?

The survey is divided into nine sections, labeled A through I. Each section asks questions about a specific type of cost or resource and appears as a separate tab in this Excel workbook. You can access each section by clicking on the tabs at the bottom of this page. You should complete the questions in all sections. Please save this file after completing each section.

What time period is covered?

Please report costs for the 12 months of July 2011 through June 2012 when completing the survey. If you do not have information for that period available, please report costs during the most recent fiscal year completed prior to July 2012. The survey refers to the 12-month time frame you select as the "reporting year".

What information or records will I need to complete the survey?

You will need information about agency expenditures and use of resources, such as facilities and equipment. **Please use actual expenditure records rather than budgets when gathering information to answer survey questions. Information from budgets does not always represent actual expenditures or resource use.** It may be helpful to review the entire survey before starting it to identify the kinds of information that are required. (To print the entire survey, click *Print* and select the *Entire workbook* option under *Print what*.)

Who in my agency should complete the survey?

A person who is familiar with agency expenditures and accounting records should have primary responsibility for completing the survey. This person may need to consult with other people in the agency to gather information required to address some questions.

How do I navigate through the survey?

Each section of the survey appears on a separate tab in this workbook. Click on the tabs below to view and complete each section of the survey. In each section, enter information or select answers in fields with the labels "Click here and start typing" or "Click here and select from list". You can use the tab key or mouse button to move between answer fields. (Areas outside the answer fields are locked to prevent changes.) Please save your work frequently to ensure your answers are recorded.

What should we do when we have completed the survey?

Please complete the survey within three weeks after receiving it. When you have completed the survey, please save the file, encrypt it according to the instructions provided, and email it to the address provided.

How will survey data be used?

Information gathered through this survey will be treated in a confidential manner. Only members of the research team will have access to survey responses. We will use the data to develop estimates of the annual and per-participant costs for home visiting programs, and to examine cost variation among agencies. In reports, the names of participating agencies will not be identified in association with specific cost estimates.

Thank you for your participation in this important study. If you have questions about how to complete the survey, please contact the Chapin Hall staff member who sent you the survey. If you have questions about the study purpose or methods, please contact Andrew Burwick at aburwick@mathematica-mpr.com.

This survey was prepared by Mathematica Policy Research with support from the Doris Duke Charitable Foundation and in partnership with Casey Family Programs. Some elements are adapted from: French, Michael T. *Brief Drug Abuse Treatment Cost Analysis Program (Program Version)*. Sixth Edition. Coral Gables, FL: University of Miami, 2003.

SECTION A: YOUR AGENCY

This section requests basic information about your agency and the time period for cost information you provide. Please scroll down to answer all questions (1 - 8).

1) **What is the official name of your agency?**

2) **Please provide contact information for the person primarily responsible for completing this survey.**

| | |
|----------------|--|
| Name | <input type="text" value="[Click here and start typing]"/> |
| Position/Title | <input type="text" value="[Click here and start typing]"/> |
| Email | <input type="text" value="[Click here and start typing]"/> |
| Telephone | <input type="text" value="[Click here and start typing]"/> |
| Address | <input type="text" value="[Click here and start typing]"/> |

3) **How would you describe the geographic location of your agency? Please use the drop-down list to select an answer (RURAL, SUBURBAN, or URBAN).**

4) **What type of organization is your agency? Please use the drop-down list to select an answer (PRIVATE NONPROFIT, GOVERNMENT AGENCY, HOSPITAL/MEDICAL CENTER, UNIVERSITY, OTHER).**

5) **What is the approximate total budget for your agency (including the home visiting program and other programs)? Please select a range from the list below.**

6) **Approximately what percentage of your agency's total budget is allocated to the home visiting program? Please select a range from the list below.**

**Please report costs incurred by your agency during the 12 months of July 2011 through June 2012 when completing this survey.
→If you do not have information available for the period of July 2011 through June 2012, please use information from the most recent fiscal year completed before July 2012.**

7) Are you reporting costs during the 12 months of July 2011 through June 2012 for this survey? Please use the drop-down list to select YES or NO.

[Click here and select from list]

7a) If you are not able to report on costs during the 12 months from July 2011 through June 2012, what is the 12-month period for which you are reporting costs (the "reporting period")?

[Enter month] [Enter Year] TO [Enter Month] [Enter Year]

8) If any unusual circumstances may have affected costs during the reporting period you indicated (for example, unusually high staff turnover or major changes in agency operations), please use the space below to describe them.

[Click here and start typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

1b) **If you made additions or changes to the pre-filled staff listing, please describe them in the space below.**

[Click here and start typing.]

2) **Please indicate which payroll taxes and benefits are included in the figures reported in Table 2A. Indicate YES or NO for each type of tax or benefit.**

| | |
|------------------------|-----------------------------------|
| Social Security (FICA) | [Click here and select from list] |
| Unemployment insurance | [Click here and select from list] |
| Health insurance | [Click here and select from list] |
| Pension/retirement | [Click here and select from list] |
| Workers compensation | [Click here and select from list] |
| Disability | [Click here and select from list] |
| Other benefits | [Click here and select from list] |

3a) **Did your home visiting program incur any costs for overtime during the reporting period? (Please select YES or NO from the drop-down list.)**

[Click here and select from list]

3b) **If you answered YES to question 3a, please enter the total cost of overtime during the reporting year.**

[Enter dollar amount here.]

4 **Please use the space below to enter any explanatory notes for the information provided in this section.**

[Click here and start typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

SECTION C: DONATED LABOR

This section asks about the value of any labor donated to the home visiting program (volunteers) during the reporting year. Please scroll down to answer all questions (1-3).

1) **Did your agency's home visiting program use any donated labor/volunteers during the reporting period? Please select YES or NO from the drop-down list.**

[Click here and select from list]

2a) **If you answered YES to question 1, please use the table below to estimate the value of donated labor.** For each volunteer, please enter the:

- position or job description
- number of hours worked per month
- number of months worked during the year
- estimated hourly wage for a paid employee in that position

| Position or Job Description | Number of Hours Worked Per Month | Number of Months Worked Per Year | Estimated Hourly Wage for Paid Employee (Dollars) |
|-----------------------------|----------------------------------|----------------------------------|---|
| | | | |
| | | | |
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| | | | |
| | | | |

2b) **Please describe the source of your estimates for hourly wages.**

[Click here and start typing.]

3) **Please use the space below to enter any explanatory notes on the information provided in this section.**

[Click here and start typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

SECTION D: SUPPLIES AND MATERIALS

This section asks questions about the cost or value of supplies and materials used by the home visiting program during the reporting year. Please scroll down to answer all questions (1-3).

- 1) **Using the table below, please indicate the cost of supplies and materials used by the home visiting program during the reporting year. (For the purposes of this survey, supplies and materials are items used and replenished regularly, not capital assets such as computers.) If a listed supply or material was not used enter 0. Use blank rows to specify materials or supplies not listed.**

| Type of Supply or Material | Cost During the Reporting Year |
|--|--------------------------------|
| Office supplies | |
| Computer software | |
| Postage | |
| Educational materials | |
| Client support materials (items purchased for clients) | |
| Medical supplies | |
| Cellular phones (including service fees) | |
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4a) **Did your home visiting program calculate a total depreciation cost for the reporting period? Please use the drop-down list to select YES or NO.**

[Click here and select from list]

4b) **If you answered YES to question 4a, please enter the total depreciation cost in the space below.**

Total depreciation cost during the reporting year:

5) **Please use the space below to provide information on calculations and data sources or other explanatory notes for this section.**

[Click here and start typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

SECTION G: BUILDINGS AND FACILITIES

This section asks questions about cost of office space or other facilities used by your home visiting program during the reporting year (July 2011 through June 2012 or the most recent fiscal year completed before July 2012). Please scroll down to answer all questions (1-4).

1) **Please use the table below to list all buildings or other facilities regularly used by your home visiting program during the reporting year, including office space and offsite facilities.** For each building or facility, please indicate:

- Building or facility name
- Type of building or facility (office, hospital, school, etc.)
- Address of the building or facility
- Approximate size of space used by the home visiting program (in square feet)
- Approximate percentage of total building or facility space used by the home visiting program
- Days per year the space is used by the home visiting program

| | Building or Facility Name | Type of Building or Facility | Address | Approximate Size of Space Used by Home Visiting Program (square feet) | Approximate Percentage of Total Building Space Used by Home Visiting Program | Days Per Year Space Is Used by Home Visiting Program |
|------------|---------------------------|------------------------------|---------|---|--|--|
| Building 1 | | | | | | |
| Building 2 | | | | | | |
| Building 3 | | | | | | |
| Building 4 | | | | | | |
| Building 5 | | | | | | |
| Building 6 | | | | | | |

2a) **Please use the table below to enter the total amount paid during the reporting year for each building or facility used by your home visiting program. (Please enter building or facility names matching those in the table for Question 1 above.) If the agency does not pay to use the building or facility, please enter 0. Use the drop-down list to indicate whether the payments reported represent the cost for the entire building or only the portion of the building used by the home visiting program. Please answer TOTAL COST or HV PROGRAM PORTION for each building listed. Use the drop-down lists to indicate whether the payments represent the fair market value of the building or facility space (i.e., whether the space is leased or rented at below market rates). Please answer YES or NO for each building listed.**

| | Building or Facility Name (match name listed in question 1) | Amount Paid to Use Building During the Reporting Year (Dollars) | Does Amount Paid Represent Total Building Cost or Home Visiting Program Portion? | Does Amount Paid Represent Fair Market Value? |
|------------|--|---|--|--|
| Building 1 | | | [Click here and select from list] | [Click here and select from list] |
| Building 2 | | | [Click here and select from list] | [Click here and select from list] |
| Building 3 | | | [Click here and select from list] | [Click here and select from list] |
| Building 4 | | | [Click here and select from list] | [Click here and select from list] |
| Building 5 | | | [Click here and select from list] | [Click here and select from list] |
| Building 6 | | | [Click here and select from list] | [Click here and select from list] |

- 3) If your home visiting program uses any building or facility free of charge or for below market rates, please use the table below to provide an estimate of the annual cost of leasing or renting the space in each building or facility based on fair market value. (If you cannot provide an estimate, the research team will use information on average local rental rates to create one.)

| | Name of Building or Facility Used Free of Charge or for Below Market Rates (match name listed in question 1) | Estimated Annual Cost of Space Based on Fair Market Value (Dollars) |
|------------|--|---|
| Building 1 | | |
| Building 2 | | |
| Building 3 | | |
| Building 4 | | |
| Building 5 | | |
| Building 6 | | |

- 4) Please use the space below to provide information on calculations and data sources or other explanatory notes for this section.

[Click here and start typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

SECTION H: MISCELLANEOUS/OTHER RESOURCES

This section asks questions about miscellaneous items and services used by your home visiting program during the reporting year (July 2011 through June 2012 or the most recent fiscal year completed before July 2012). Please scroll down to answer all questions (1-3).

- 1) **Using the table below, please enter the cost of miscellaneous items and services purchased by the home visiting program during the reporting year and not reported elsewhere in the survey. If your program did not use a listed item or service, enter 0. Use the blank lines to enter additional items or services if necessary.**

| Type of Item or Service Purchased for the Home Visiting Program | Cost (Dollars) |
|---|----------------|
| Building utilities (e.g., electric, gas, Internet) | |
| Insurance (e.g., liability insurance) | |
| Taxes (federal, state, local) | |
| Fees paid to home visiting model developers | |
| Transportation/mileage reimbursement related to client services | |
| Staff travel for purposes other than client services | |
| Staff training or professional development (not including travel costs) | |
| Photocopying/printing | |
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| | |

- 2) Using the table below, please enter the estimated value of any miscellaneous items and services donated to the home visiting program during the reporting year and not reported elsewhere in the survey. (Donated items and services are those the program used free of charge or for below market prices).

| Type of Item or Service Donated | Estimated Value (Dollars) |
|---------------------------------|---------------------------|
| | |
| | |
| | |
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| | |
| | |
| | |
| | |

- 3) Please use the space below to provide details on calculations and data sources or other explanatory notes for this section.

[Click here and begin typing.]

PLEASE SAVE AND CONTINUE TO THE NEXT SECTION.

SECTION I: INDIRECT COSTS

This section asks questions about indirect costs during the reporting year (July 2011 through June 2012 or the most recent fiscal year completed before July 2012).

Indirect costs (sometimes called "overhead") are costs for shared agency functions, such as accounting, human resources, and marketing. These functions may benefit multiple programs or departments. Costs for these shared functions are often allocated through an indirect cost rate or a total charge for indirect expenses. Agencies differ in the way that they calculate and allocate indirect costs.

Please scroll down to answer all questions (1-7).

- 1) **Does your agency calculate indirect costs for the home visiting program using an established indirect cost rate (for example, a federally negotiated indirect cost rate)? Please select YES or NO from the drop-down list.**

[Click here and select from list]

- 2a) **If you answered YES to question 1, please enter the established indirect cost rate your agency used during the reporting period.**

Agency indirect cost rate (percentage):

- 2b) **To what expenses is the established indirect cost rate applied? Please use the drop-down list to select an answer (SALARIES ONLY, SALARIES AND FRINGE BENEFITS, or SALARIES AND FRINGE BENEFITS AND OTHER DIRECT COSTS).**

[Click here and select from list]

- 3a) **Does your agency calculate indirect costs for the home visiting program without using an established indirect cost rate? Please select YES or NO from the drop-down list.**

[Click here and select from list]

- 3b) **If your agency calculates indirect costs for the home visiting program but does not use an established indirect cost rate, please describe the method your agency uses below. Please also provide an estimated total for indirect costs during the reporting period.**

Method for calculating indirect costs:

[Click here and start typing.]

- 4) **If your agency calculated total indirect costs for the home visiting program during the reporting period, please enter that amount below.**

Total calculated indirect costs for the home visiting program during the reporting period (dollar amount):

- 5) **Do any indirect costs charged to the home visiting program cover costs you have reported in other sections of this survey? Please use the drop-down list to answer YES, NO, or NOT APPLICABLE.**

[Click here and select from list]

- 6) **Please itemize below the resources covered under indirect costs charged to the home visiting program (e.g., accounting functions, building maintenance) , including any resources reported in other sections of the survey.**

[Click here and start typing.]

- 7) **Please use the space below to enter any explanatory notes on the information provided in this section.**

[Click here and start typing.]

END OF SURVEY. THANK YOU FOR YOUR PARTICIPATION.

PLEASE SAVE THIS FILE AND RETURN IT TO THE EMAIL ADDRESS PROVIDED.

APPENDIX C

IMPLEMENTING AGENCY STAFF TIME-USE SURVEY

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The Implementing Agency Staff Time-Use Survey gathered data from staff at participating implementing agencies regarding the allocation of their work hours across a set of defined program components. Respondents were asked to report their job positions or titles, how many hours they worked for the home visiting program during a typical or average week in the past month, whether they worked any hours in excess of their scheduled hours, and how all hours worked were allocated across the set of program components.

We used the information to estimate the allocation of annual costs across the program components. In this appendix, we describe how we designed and pretested the questionnaire, identified staff at implementing agencies for participation in the survey, and collected the data.

A. Questionnaire Design

During cost study planning, the Mathematica-Chapin Hall team worked with the EBHV subcontractors to identify and define a comprehensive set of program components or activities that were relevant to the home visiting models adopted by subcontractors. With reference to the components, Mathematica developed a draft questionnaire, presented it to representatives of the EBHV subcontractors, and solicited input on question clarity. The final questionnaire was programmed into a web-based survey instrument for administration.

B. Pretest

In January 2012, Mathematica conducted a pretest of the time-use survey with six respondents from two implementing agencies (IAs) participating in the cost study. After responding to the web survey, pretest respondents rated the clarity of the survey instructions and definitions and commented on the length of the survey and ease of navigating the instrument.

Following the pretest, we made modest revisions to the survey. No items were deleted or added based on respondent feedback. Pretest respondents were asked to re-complete the survey during the actual period of data collection to ensure that their responses reflected the same time period as other respondents.

C. Sample Accrual

We identified respondents for the time-use survey in January 2012. First, Mathematica sent an email to each EBHV subcontractor informing it of the upcoming time-use data collection and requesting permission to contact and collect respondent information from affiliated IAs.²⁷ All contacted subcontractors gave permission for their affiliated IAs to participate in the survey and provided contact information for an agency representative. Next, we emailed an information request to the identified contact person at each IA. The information form asked the contact person to (1) identify a liaison for the cost study and (2) provide the names, job titles, and contact information of all staff members in the agency who spent time working on the home visiting program, including all direct service providers, managers, administrators, and other agency personnel. Responses to the request formed the time-use survey sample.

²⁷ In some cases, the subcontractor was an IA.

D. Data Collection

The staff time-use survey began on February 23, 2012. To keep the survey data collection on schedule and to allow some agencies additional time to provide the requested information about staff, we released the sample in three waves. Data collection continued for seven weeks, closing on April 13, 2012, with a 92 percent overall response rate.

Each respondent received an advance email, the survey instrument email, and three reminder emails, with reminders sent approximately weekly. Once the final email reminder was sent, we contacted the cost study liaison at the agency to request assistance in increasing the response rate.

The final sample size totaled 347 staff across 32 participating IAs. (The number of IAs participating in the time-use survey was greater than the number in the cost study sample because not all IAs in the time-use sample provided cost data.) Two staff members were removed from the sample because they no longer worked in positions related to the home visiting program. Twenty-two IAs participated with 100 percent response across all staff members. All IAs in the cost study analysis of program component costs achieved response rates of 85 percent or better.

**Supporting Evidence-Based Home
Visiting to Prevent Child Maltreatment**

Implementing Agency Staff Time Use Survey

February 20, 2011

INTRODUCTION

The Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment cross-site evaluation, funded by the U.S. Department of Health and Human Services, Administration for Children and Families (ACF) and the Health Resources and Services Administration (HRSA) is building knowledge about implementing and sustaining evidence-based home visiting program models as a strategy to prevent child maltreatment. ACF has contracted with Mathematica Policy Research and Chapin Hall at the University of Chicago to complete the cross-site evaluation.

As part of the evaluation, we are conducting this survey to learn how staff members in agencies that provide home visiting services spend their time working on the home visiting program. This information will be used to gain a better understanding of the costs of specific home visiting program activities.

Who Should Complete the Survey. All staff members that spend any time delivering or managing and administering the [MODEL] home visiting program should complete this survey, including direct service providers, supervisors/managers, administrators, or other agency personnel.

How to Complete the Survey. Most questions in Section A can be answered by simply placing a check mark or entering a number in the appropriate box. For some questions you will be asked to write in a brief response. In Section B, you will be asked to enter the number of hours you spent on specific activities in an average or typical week during the past month.

For questions that require a numeric response, you may enter numbers including decimal points, up to one place after the decimal (for example, 1.5).

If you are unsure of how to answer a question, please give the best answer you can rather than leaving it blank.

Voluntary Participation. Your participation in this survey is important and will help us understand the resources needed to implement home visiting programs. You may refuse to answer any question. Information you provide will be treated in a confidential manner, and the evaluation will not identify individuals in any of its reports.

Please complete this questionnaire within the next 5 days. It will take approximately 20 minutes to complete. If you have any questions, please contact Heather Zaveri at Mathematica Policy Research at hzaveri@mathematica-mpr.com or (202) 264-3441.

Thank you for your cooperation in completing this questionnaire.

Please answer the following question and then you will begin the survey.

- I have read the introduction and agree that the information I provide in this survey may be used for the national cross-site evaluation of the Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment project**
 - Yes1
 - No.....0 END SURVEY

SECTION A: YOUR POSITION AND WORKING HOURS

A1. What is the name of the agency where you work?

AGENCY NAME

NO RESPONSE M

A2. What is the job title of your current staff position? (If you have more than one job title, please indicate the titles for all positions you currently hold.)

JOB TITLE

NO RESPONSE M

A3. How would you describe your primary responsibilities for the [MODEL] home visiting program?

SELECT ONE ONLY

My primary responsibilities relate to direct service delivery..... 1

My primary responsibilities relate to management and administration.....2

My primary responsibilities are divided between direct service delivery and management and administration.....3

NO RESPONSE M

A4. What is your current employment status?

SELECT ONE ONLY

- Permanent full-time 1
- Permanent part-time 2
- Temporary full-time 3
- Temporary part-time..... 4
- On call 5
- NO RESPONSE M

A5. How many hours are you scheduled to work at your agency in a typical or average week?

HOURS PER WEEK

- NO RESPONSE M

A6. At [TEXTFILL from A1], do you work only for the [MODEL] home visiting program or do you divide your time between the [MODEL] home visiting program and other programs?

SELECT ONE ONLY

- I work only for the home visiting program 1 GO TO A8
- I divide my time between the [MODEL] home visiting program and other programs 2
- NO RESPONSE M

A7. How many hours per week are you scheduled to work or do you usually work for the [MODEL] home visiting program in a typical or average week?

HOURS PER WEEK

- NO RESPONSE M

A8. Sometimes program staff members spend more time working than they are scheduled or paid to work. In a typical or average week in the past month, did you spend more hours working for the [MODEL] home visiting program than you were scheduled or paid to work?

- Yes 1
- No..... 0 GO TO SECTION B
- NO RESPONSE M

A9. In a typical or average week in the past month, how many more hours did you spend working for the [MODEL] home visiting program than you were scheduled or paid to work?

MORE HOURS PER WEEK THAN SCHEDULED OR PAID

NO RESPONSE M

SECTION B: TIME ALLOCATION

The table below lists 17 activities commonly performed when working in a home visiting program. The activities are divided into two groups: (1) direct services to enrolled clients and (2) management and administration.

Please follow these instructions to respond to questions B2a through B2q.

1. Review the activities and definitions listed in the table. (You may need to scroll down to view all activities.)
2. Think about how you used your time working on the [MODEL] home visiting program during a **typical or average week in the past month**.
3. Enter in the table the number of hours per week you estimate that you spent on each activity.

If you did not spend time on an activity during a **typical or average week** in the past month, enter 0. Not all activities are applicable to all staff roles.

If you spent time on an activity in some weeks but not others during the past month, please enter your best estimate of the average amount of time spent per week.

4. Check that the total number of hours you entered equals the number of hours you spent working for the [MODEL] home visiting program in a **typical or average week**.

FILL: IF A6 = 1, B1NUMFILL = SUM A5 + A9

IF A6 = 2, B1NUMFILL = SUM A7 + A9

B3NUMFILL = SUM B2a B2q

| | HOURS PER WEEK |
|---|----------------|
| B1. Total hours worked in a typical week (Reported in Section A) | INUMFILL1 |

DIRECT SERVICES TO ENROLLED CLIENTS

- | | |
|--|---|
| B2a. Initial Screening and Assessment: Assessing clients' needs, analyzing family situations, and collecting information needed to develop service delivery plans (includes any initial screening and assessment conducted in the client's home). | <input style="width: 100%; height: 20px;" type="text"/> |
| B2b. Travel/Transportation: Traveling to clients' homes or other locations to provide services. Transporting clients to locations outside their home. Documenting travel, as needed. | <input style="width: 100%; height: 20px;" type="text"/> |
| B2c. Home Visit Preparation and Delivery: Preparing for future home visits, including developing service delivery plans and communicating with clients to schedule visits. Delivery of services to families and children through home visits, including providing counseling and support, demonstrating or modeling skills, conducting periodic screenings and assessments, and other activities during visits. | <input style="width: 100%; height: 20px;" type="text"/> |
| B2d. Case Management and Service Linkage: Arranging and coordinating services on behalf of a family or child, including advocacy on behalf of the client, consultations with other staff and providers, and identifying appropriate resources. | <input style="width: 100%; height: 20px;" type="text"/> |
| B2e. Services/Activities Other Than Home Visits: Providing or participating in program services other than home visits, such as parent group meetings or meetings with clients outside their homes. | <input style="width: 100%; height: 20px;" type="text"/> |
| B2f. Case Documentation: Completing case notes and recording data to document services provided to clients in your caseload and client status. | <input style="width: 100%; height: 20px;" type="text"/> |

MANAGEMENT AND ADMINISTRATION ACTIVITIES

HOURS PER WEEK

- B2g. **Outreach and Recruitment:** Communication with other agencies/groups/providers and people (such as potential participants) to inform them about services available through the EBHV program in order to promote referrals or applications to the program.
- B2h. **Eligibility Determination and Referral:** Determining eligibility for the program (including conducting screenings and assessments related to eligibility determination) and enrolling clients. Referring clients who cannot be served to other agencies.
- B2i. **Staff Recruitment:** Recruiting and hiring program staff.
- B2j. **Providing or Attending Training:** Providing or attending trainings on topics related to delivery of services or program operations.
- B2k. **Providing or Receiving Supervision and Consultation:** Providing or receiving feedback and supervision, individually or in groups, related to delivery of services or program operations. Participating in staff consultations related to service delivery.
- B2l. **Fundraising:** Grantwriting, fundraising, researching funding sources, and leveraging funding to support direct services.
- B2m. **Planning and Collaboration:** Strategic planning and decision making, participating in professional/ organizational/ community committees that support program operations, and developing relationships and working through existing relationships to align goals and strategies with partners.
- B2n. **External Communication and Building Awareness:** Communicating information about evidence-based home visiting, including lessons learned and research findings to partners, stakeholders, or the public. Building awareness or support for evidence-based home visiting programs and policies within the community and among policymakers.
- B2o. **Continuous Quality Improvement:** Analyzing data to monitor program implementation and assess fidelity to the EBHV program model. Using data to support program improvement.
- B2p. **General Management and Administration:** Budgeting and financial reporting, managing or negotiating contracts, completing paperwork not specific to individual clients, and other management or administrative activities that do not fall into other categories provided.
- B2q. **Evaluation:** Planning program evaluation activities, such as those conducted for the EBHV local or cross-site evaluation or as required by other funders, providing or collecting data required for program evaluation, or traveling for evaluation-related purposes.

B3. **Total Hours Entered (The survey automatically calculates this total.)**

The next two questions ask about time you spent attending professional training or workshops during the past year.

B4. Please think about professional development trainings or workshops you may have attended, including initial or refresher training for the [MODEL] home visiting program, during the past year.

Did you attend professional development trainings or workshops during the past year?

- Yes.....1
- No.....0 GO TO END
- NO RESPONSEM

B5. How many hours do you estimate you spent attending initial or refresher training for the [MODEL] home visiting program, during the past year?

HOURS SPENT IN INITIAL OR REFRESHER TRAINING FOR YOUR HOME VISITING MODEL DURING THE PAST YEAR

NO RESPONSEM

B6. How many hours do you estimate you spent attending other types of professional development trainings or workshops during the past year?

HOURS SPENT IN PROFESSIONAL DEVELOPMENT TRAININGS OR WORKSHOPS DURING THE PAST YEAR

(RANGE 1-99)

NO RESPONSEM

END. You have completed the survey. Thank you.

APPENDIX D

**VARIABLES CREATED FOR ANALYSES OF COSTS PER FAMILY
AND HOME VISIT**

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Using fidelity data collected during the EBHV cross-site evaluation, we created variables on program participation and service receipt for the 25 implementing agencies in the cost study. The variables supported analysis of costs per family and home visit. In Table D.1, we summarize the variables.

Table D.1. Variables Created for Analyses of Costs per Family and Home Visit

| Variable | Definition |
|--|---|
| Number of families served during the cost period | Total number of families that received a visit at any time during the cost period (July 1, 2011, to June 30, 2012). |
| Number of families exiting during the cost period | Total number of families that exited the program at any point during the cost period. Families that had not received a visit in the past 90 days were classified as exiters. |
| Number of home visits completed during the cost period | Total number of home visits completed during the cost period among all families served. |
| Number of home visits received per family exiting during the cost period | Number of home visits delivered to families that exited during the cost period. This variable includes all families that left the program during the cost period (whether or not the enrollment date occurs during the cost period and whether or not the participant completed the program). The variable includes all visits provided to each family (whether or not the visits occurred during the cost period), so that the variable represents the number of home visits received by a family for the duration of its participation. |
| Duration of participation for families exiting during the cost period | Duration of participation (in weeks) for families that left the program during the cost period, whether or not the family completed the program. The calculation includes a family's full period of participation, including time before the cost period for those families that enrolled before July 1, 2011. |
| Total number of "participant weeks" during the cost period | Total number of weeks that a family was enrolled in the home visiting program during the cost period summed across all families served during the cost period. All weeks are counted for each family enrolled, whether or not the family received a home visit during that week. |

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