



Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment

Documenting Current Costs: Understanding Return on Investment

Presentation to the 26th Annual San Diego International Conference on Child and Family Maltreatment

January 25, 2012

Debra A. Strong, Andrew Burwick, Heather Zaveri

Mathematica Policy Research



Assessing the Costs of Interventions

- Like any intervention, evidence-based programs may be desirable but unaffordable
- Despite having evidence of effectiveness, costs, even if modest, may still exceed benefits
- In the ‘real world,’ factors besides program and cost effectiveness influence the choice of models
 - But if we ignore costs and benefits, we remain unaware of tradeoffs we may be making



Economic Analysis has Lagged for Early Childhood Interventions

- **Clear guidelines and principles have yet to be established and applied reliably (Karoly 2010)**
 - For example, studies differ in the types of costs they include
 - They also differ in the time horizons used to estimate benefits
- **Few analyses of family development and child maltreatment programs have been completed (Corso & Filene 2009)**



Measuring Costs for EBHV

- **EBHV asked, “How much does the delivery and support of each home visiting program [selected by grantees] cost?”**
- **Grantees were required to conduct economic evaluations**
- **The cross-site evaluation includes a cost analysis**



Focus of Today's Presentation

- **What is a cost analysis, and how is it useful?**
- **What is the approach for the EBHV cost analysis?**
- **What is the timeline for the study?**
- **What can this study contribute?**



What is a Cost Analysis?

- **“The systematic collection, categorization, and analysis of program or intervention costs” (Corso & Lutzger 2009)**
- **Benefits policymakers and program administrators by enumerating necessary resources and describing how costs vary**
- **Provides the foundation for cost effectiveness and cost benefit estimates**
 - Cost effectiveness: cost per unit of effectiveness
 - Cost benefit: relationship between value of resources used and benefits received



Estimates Are Available for Some EBHV-Selected Models

Home Visiting Model	Cost Range Per Family	Yr. of Dollar Denomination	Annual or Duration	Source
Healthy Families America	\$1,950-\$5,768	2004	Annual	Survey of programs in 15 states
	\$2,465-\$6,463	2000	Annual	Evaluation of HFA in NY
Nurse-Family Partnership	\$2,914-\$6,463	2008	Annual	NFP National Program Office
	\$6,162-\$9,140	2002	Duration (2.5 yrs.)	Evaluation of NFP in CO
	\$3,227	1980	Duration (2.5 yrs.)	Evaluation in Elmira NY
Parents as Teachers	\$2,621	2009	Annual	Sample budget
	\$1,450	2004	Duration (2.5 yrs.)	Parents as Teachers national center
	\$5,125	1996	Duration (30.1 mos.)	Cost study in CA
SafeCare	\$2,275	Nd	Duration (18-20 wks.)	National SafeCare Training and Research Center

Source: Burwick, Strong, and Zaveri, forthcoming



Cost Analysis Research Questions

- **The EBHV cross-site evaluation asks:**
 - What are the overall annual costs of the home visiting programs to implementing agencies (IAs)?
 - What are the annual costs of individual program components?
 - What are the costs per participating family?
 - How do costs vary by program features and context?



Costs: From Whose Perspective?

- **Funding agency**
 - Explicit expenditures on program, from financial records
- **Implementing agency**
 - Resources used to deliver the program
- **Participants**
 - Adds out of pocket expenses and time to participate
- **Society**
 - Captures all resources, including costs to community at large (such as increased use of other services)
- **What costs: Accounting? Replacement?**



EBHV Perspectives

- **Funding agency**
 - Explicit expenditures on program, from financial records
- **Implementing agency**
 - Resources used to deliver the program
- **Participants**
 - Adds out of pocket expenses and time to participate
- **Society**
 - Captures all resources, including costs to community at large (such as referrals to other programs)
- **What costs: Accounting + Replacement**



Scope of the Cost Analysis

- **The EBHV cross-site cost analysis will**
 - Assess costs of direct provision of home visiting, plus costs to IAs of building infrastructure to support evidence-based home visiting
 - Estimate accounting and replacement costs during 12 months of “steady-state” operations
 - July 2011 through June 2012
 - Should be after early implementation for all IAs
 - Allocate costs across program components
 - Include 25+ IAs providing participant-level data as part of the cross-site fidelity evaluation



EBHV Infrastructure Capacities

Category	Types of Activities
Planning	Strategic and tactical planning, decision making
Operations	Outreach, intake, screening, assessment, and referrals
Workforce Development	Hiring, training, coaching, supervision, and retaining staff
Funding	Fiscal partnering, fundraising, researching funding sources, leveraging dollars to support direct services
Collaboration	Leadership, development of relationships, alignment of goals and relationships
Communication	Information sharing, marketing, public awareness
Community and Political Support	Building community and political buy-in and support
Evaluation	Data collection, storage, retrieval, and analysis for quality improvement or evaluation

Source: Hargreaves and Paulsell 2009



The Approach

- **Define program components**
- **Collect data on staff time use across components**
- **Collect accounting and other data to estimate aggregate costs and allocate across components**
- **Use participant-level data to estimate costs per family**
- **Explore variation, such as by model, service intensity, target population**



EBHV Program Components

- **Direct services to enrolled clients**
 - Initial screening and assessment
 - Home visit preparation and delivery
 - Case management and service linkage
 - Services/activities other than home visits
 - Case documentation
 - Travel/transportation



Program Components, Ct'd.

- **Management and administration**
 - Outreach and recruitment
 - Eligibility determination and referral
 - Staff recruitment
 - Training
 - Staff supervision and consultation
 - Fundraising
 - Planning and collaboration
 - External communication
 - Continuous quality improvement
 - General management and administration



Collecting Data on Staff Time Use: Sample Questions

Please think about how you use your time on the job during a typical week. For the following activities, enter the number of hours per week you estimate you spend on each activity.

Activity	Hours
Case documentation: Completing case notes and recording data to document services provided and client status	
Staff recruitment: Recruiting and hiring program staff	
Fundraising: Grant writing, fundraising, researching funding sources, and leveraging funding to support direct services	



Estimating Aggregate Costs

- **Identify individual resources used in providing EBHV programs**
 - Include resources not in “accounting costs”
- **Estimate cost of each resource**
- **Sum costs of all resources**



Resources Used in Providing EBHV Programs

- **Personnel**
- **Space and utilities**
- **Materials and supplies**
- **Durable equipment (such as computers)**
- **Travel**
- **Other direct costs (such as payments to model developers)**
- **Other indirect (shared) costs (such as insurance, accounting services)**
- **Volunteer time or other donated resources**



Collecting Data on Aggregate Costs: Sample Question

Please provide information on program staff, the number of full-time equivalents, and average annual full-time salaries using the grid below.

Staff Position or Title	Number of Full-Time Equivalents	Average Annual Full-Time Salary	Total Program Salary
Director			
Supervisors			
Home Visitors			
Social Workers			



Estimating Costs Per Family

- **Several possible approaches**
 - Calculate annual cost per family served
 - Calculate cost for a family with an average duration of participation
 - Calculate cost for a family receiving an average number of home visits
- **Requires participant-level fidelity data**
 - We will examine fidelity data to determine which approach is feasible



Assessing Variation in Program Costs

- **Identify subgroups, such as by**
 - Family characteristics
 - Program characteristics
 - Community characteristics
- **Compare per-family costs**
- **Compare proportion of costs allocated to program components**



Anticipated Timeline

Summer 2011	Define program components
Fall 2011	Finalize time use survey
Winter/Spring 2012	Pre-test and field time use survey
May-June 2012	Finalize program cost survey
Summer/Fall 2012	Field program cost survey, analyze time use data
Fall 2012/Winter 2013	Analysis and reporting



Limitations

- **The most important limitation of any cost study is the lack of benefit measures**
 - Requires information from impact studies
 - Yet it can be difficult for individual grantees to conduct rigorous outcome evaluations due to small samples and limited resources
- **Interpreting cost data will require care**
 - Home visiting models differ by design in ways that influence their relative costs
 - Local contexts, target populations, and other factors also influence cost



What will the Study Contribute?

- **Time use and aggregate cost estimates for participating grantees**
 - For use in their economic evaluations
 - For program management and CQI
- **Estimates of the costs of home visiting programs**
 - Across multiple program models and target groups
 - Including all program replacement costs
 - Using consistent methodology and time period
- **Data collection instruments**



Conclusions

- **More studies are needed estimating costs and benefits of early childhood and maltreatment, programs**
- **Fortunately, some funders are now giving economic evaluations higher priority**
- **Funders, providers, and practitioners must also increase the ability to measure outcomes, to make benefit information available**
- **Once we estimate “return on investment,” the hard work of allocating resources across needs, programs, and populations begins**



References

- Burwick A, Strong DA, and Zaveri H. “Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment: Cross-Site Evaluation Cost Study Background and Design Update.” Children’s Bureau, Administration for Children and Families, U.S. Department of Health and Human Services. Contract No. GS-10F-0050L/HHSP2332008000065W. Forthcoming
- Corso P and Filene J. “Programmatic Cost Analysis of the Family Connections Program.” *Protecting Children* 24 (3) 78-88
- Corso P and Lutzger J. “The Need for Economic Analysis in Research on Child Maltreatment.” *Child Abuse & Neglect* 30, 2006, 727-738
- Karoly L. “Principles and Standards for Cost Benefit Analysis of Early Childhood Interventions.” Unpublished working paper. Arlington, VA: RAND, December 2010
- Hargreaves M and Paulsell D. “Evaluating Systems Change Efforts to Support Evidence-Based Home Visiting: Concepts and Methods.” Children’s Bureau, Administration for Children and Families, U.S. Department of Health and Human Services. Contract No. GS-10F-0050L/HHSP2332008000065W. Available from Mathematica Policy Research, Princeton, NJ, 2009



For More Information:

- **Debra Strong**

- dstrong@mathematica-mpr.com

- **Andrew Burwick**

- aburwick@mathematica-mpr.com

- **Melissa Lim Brodowski**

- melissa.brodowski@acf.hhs.gov

- **Publications:**

<http://www.mathematica-mpr.com/EarlyChildhood/evidencebasedhomevisiting.asp>

<http://www.supportingebhv.org/crossite>