Policy makers are recognizing the value of early childhood interventions and their effect on children and families. Evidence is also emerging that the benefits of some interventions can be sustained as children mature into productive adults, thus achieving substantial savings that outweigh the initial costs. But the methods for identifying and calculating the benefit-cost analysis for early childhood interventions are multifaceted and complex. A March 2009 workshop sponsored by the John D. and Catherine T. MacArthur Foundation examined strategies for strengthening the methodology associated with these types of analyses. The following highlights are drawn from the summary of the workshop, which was chaired by Barbara L. Wolfe from the University of Wisconsin–Madison.

**METHODOLOGICAL CHALLENGES IN DESIGNING EVALUATIONS**

Benefit-cost analysis aims to identify interventions or programs that are most effective or likely to improve the well-being of young children at a reasonable expense. It offers an objective basis for comparing the advantages of investing in early childhood interventions with the benefits of other types of public expenditures. This type of analysis is difficult in the context of early childhood interventions because of issues and challenges related to program evaluation, assessment of true cost, and assessment of outcomes. Lynn Karoly of the RAND Corporation indicated that policy makers are interested in analysis that can show that a dollar invested in a certain area will generate multiple dollars in savings and other benefits. Jens Ludwig of the University of Chicago explained how randomized experiments can provide evidence of causal relationships. Because such experiments are not always feasible, Ludwig described alternative approaches, suggesting opportunities to modify experimental designs that would be valuable. David Deming of Harvard University outlined strategies for accurately identifying individual and subgroup effects in analyses that include multiple outcomes and groups, noting the importance of selection criteria for identifying studies to include in combined analyses.
ANALYZING COSTS

Assessment of the true cost of programs can be challenging when conducting benefit-cost analyses, especially when significant costs are involved that are not identified as expenditures in a program budget. Henry Levin of Columbia University explained why studies of early childhood education rarely measure associated costs comprehensively, and he offered ways to improve the measurement of such costs. Clive Belfield of City University of New York used a cost analysis of the New Jersey Preschool Program to demonstrate challenges and questions that researchers may encounter when conducting an evaluation as well as estimating costs. Belfield suggested several future research areas, including the importance of knowing more about economies of scale and simplifying cost estimates.

ASSESSING OUTCOMES

Several presenters observed that multiple outcomes may be affected by early childhood interventions, many of which are not easily identified or captured in benefit-cost studies. W. Steven Barnett of Rutgers, the State University of New Jersey, described assessments of well-known early childhood programs and observed that researchers have made significant progress since the early 1960s. Barnett indicated that multidisciplinary research teams are especially useful in ensuring that the study design acquires the most important information. Jeanne Brooks-Gunn of Columbia University emphasized that early childhood education is a fundamental strategy to improve outcomes for disadvantaged children, and she identified access and quality as two key outcomes that warrant particular attention in evaluating the effectiveness of early childhood education programs. Identifying and measuring long-term outcomes after the intervention is completed are another challenge in the context of early childhood. Katherine Magnuson of the University of Wisconsin–Madison described several methods to develop rigorous estimates of long-term outcomes and considered the complications of applying such methods to early childhood interventions. Janet Currie of Columbia University described strategies and approaches for using existing data, such as using retrospective data or merging new data with existing data sets. Currie stated, and many participants agreed, that valuable information is available in administrative data sets that are not currently accessible, and enhanced use of this information could be a cost-effective way to address important research and policy questions.

INTERVENTIONS IN OTHER CONTEXTS AND GENERALIZABILITY

The workshop participants explored the experience with benefit-cost methods in other contexts that offer important lessons for the field of early childhood interventions. David Weimer of the University of Wisconsin–Madison described shadow prices and their relevance to the early childhood context. Myrick Freeman of Bowdoin College, Philip Cook of Duke University, and Donald Kenkel of Cornell University provided examples from the environmental economic, criminal justice, and health economic sectors, respectively.

Mark Lipsey of Vanderbilt University discussed the potential value of meta-analysis for generalizing findings from small data samples as well as the challenges and implications of using this research design. Howard Bloom of MDRC highlighted key issues that occur when researchers try to generalize from observed variation in intervention effects, and he provided guidance in interpreting these effects, such as the importance of offering a theory of change; specifying subgroups of interest in advance on the basis of theory, empirical evidence, or policy relevance; and considering both statistical and substantive significance. Participants showed strong interest in identifying a set of core measures for critical outcomes and variables for common use to facilitate the work of meta-analysis.

FOR MORE INFORMATION...

This brief is based on the workshop summary Strengthening Benefit-Cost Analysis for Early Childhood Interventions (National Academies Press, 2009). The responsibility for the published workshop summary rests solely with the workshop rapporteur and the institution. Copies of this summary are available from the National Academies Press, 500 Fifth Street, NW, Washington, DC 20001; (800) 624-6242; www.nap.edu. Permission is granted to reproduce this brief in its entirety, with no additions or alterations.

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