

Completed Research Projects With CDC-EHDI Funding

Cost – Utah Department of Health and Utah State University, the EI Research Institute and National Center for Hearing Assessment and Management

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Background: Analysis of the cost-effectiveness of Early Hearing Detection and Intervention (EHDI) programs requires the collection of accurate, representative, complete data on costs. Several cost studies of hospital-based universal newborn hearing screening (UNHS) have been published. However, these studies were based on convenience samples rather than random samples of hospitals with UNHS programs. Small, rural hospitals were excluded from all previous studies. Further, the cost data have generally been based on estimates rather than prospective data collection. In addition, UNHS cost studies have not collected information from families on their costs.

Purpose: The purposes of this study were to (1) determine the actual costs of screening, follow-up, and diagnosis of the EHDI programs in Utah; (2) assess families' experiences with newborn hearing screening programs; and (3) assess the effect of false positive screens.

Methods: This study had two data collection components. The first was the collection of screening data from a random sample of eight birthing hospitals, stratified by annual numbers of births. Labor costs, the major component, were collected prospectively through time diaries. Administrative costs were collected through interviews with hospital management. The second component consisted of surveys of families from between 3 months to 8 months after a child's birth, with three subsamples: children with false-positive inpatient screens, children with false-positive outpatient rescreens, and children diagnosed with hearing loss. Families were interviewed regarding their experiences with screening, evaluation, and intervention; their use of services; and the time and travel costs associated with bringing children to sessions related to the children's suspected or confirmed hearing loss.

Summary of Results: Data collection is complete and analysis is ongoing. Findings have been presented at several conferences in the United States, as well as at the international Newborn Hearing Screening meeting in Italy. Some of the presented findings include: (1) many families experienced negative feelings as a result of the screening process, despite families whose children failed the initial hearing screening having a high level of satisfaction with newborn hearing screening; (2) some parents of children with hearing loss received early intervention, while some did not; and (3) costs across hospitals varied widely, with some of the highest costs found in rural hospitals or those that contracted out to an audiology service. (*Updated 10/2006*)