Identification of Existing Exposure Measures and Databases

Warren Galke, PhD, MSPH[1], John Billy, PhD[2], Rebecca Ramsing, MPH[2], Holly Carmichael, BA[2], Bradley Skarpness, PhD[3], Robert Black, MPH[3], Maureen Wooten, MS[4], Jennifer Zewatsky, MEn[4], Social Environment Working Group

[1] Program Office, National Children's Study, NICHD, Bethesda, MD, [2] Battelle Memorial Institute, Arlington, VA, [3] Battelle Memorial Institute, Atlanta, GA, [4] Battelle Memorial Institute, Columbus, OH

White Paper

Review of Extant Databases for the National Children's Study

Rationale

The breadth of exposures that a child experiences in his/her life mandates that the data collection efforts for the National Children's Study be very broad. Factors of interest include information regarding individuals that are difficult to collect from the individual her/himself as well as factors that influence the child at a higher level of organization.

For the purposes of this project, the first type of factors is identified as administrative data while the second type is referred to as aggregate level factors.

Purpose

The purpose of this project was to identify available sources of collected data covering both administrative and aggregate level factors for potential use in the National Children's Study.

Method

Battelle assembled a team of experts in the use of routinely collected data to identify information sources of potential use in studies of children's health and development. All members of the team were asked to nominate datasets from their perspective that could be useful. Team members familiar with a particular dataset were asked to complete an abstracting form to provide information characterizing the data set for entry into a database.

Aggregate level datasets were categorized into contextual dimensions (e.g., Economic; Employment; Programs/Services. Dimensions adapted from Hillemeier et al. 2003).

Battelle has developed:

- A Microsoft Access database containing the identified available datasets along with key information about each dataset.
- A Users Guide for the database containing information describing the development of the data, how to use the database, and background information regarding the project.

Workshop

Addressing Rural Children in the National Children's Study

(March 1–2, 2004)

Background

- Rural populations comprise 1/5 of the nation's population
- Rural children face unique challenges:
  - Poverty
  - Spatial and social isolation
  - Inadequate health, educational, social service infrastructure

Recommendations and Insights

- Rurality concerns
  - Rural environments pose unique exposure situations
  - Rural areas are diverse
  - Important to distinguish between rural and suburban populations and include both

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- Considerations for Exposure Measurements
  - Identified key aspects of rural environments relevant to children's health and development that should be considered
  - Family health can be a cultural/behavioral exposure for children
  - Family interactions can be risk factors as well as protective factors
  - Care needed in designing data collection instruments to ensure comparability of data from rural and other areas

Report available: www.nationalchildrensstudy.gov

White Paper

Literature Search on Measurement of Housing and Neighborhood Quality Related to Child Health and Development

Purpose

Identify key attributes of the physical characteristics and conditions of housing and its neighborhood related to children's health and development that should be considered in the National Children's Study.

Review and summarize research on existing methodologies for measuring relevant aspects of housing and neighborhood physical characteristics and conditions related to child health and development.

Approach

A thorough search and review of the Housing and Neighborhood Health Effects literature was conducted focusing on the past 5 years.

Findings

Relatively few papers have attempted to validate less-costly less burdensome methods to assess the above risk factors against ideal measures.

Even those few validated measures tend only to be able to categorize an individual as exposed or not and not yield a quantitative estimate of exposure.

Risk Factors Identified	
Extensive Study Strong Evidence	**Weaker Evidence**
Lead	Urea Formaldehyde Foam
Radon	Dampness/Mold
Asbestos	Carbon Monoxide Detectors
House Dust Mites	Volatile Organic Compounds
Cockroaches	Building Type
Home Safety/Stairs	Floor Level of Dwelling in Structure
Heating System	High-Rise Structure
Environmental Tobacco Smoke	Housing Satisfaction
Cold and Heat	Neighborhood Characteristics

Implementing the National Children's Study: Scientific Progress, Challenges, and Opportunities

Study Assembly Meeting

November 29–30, 2005 • Washington, DC

THE NATIONAL CHILDREN'S STUDY

HEALTH GROWTH ENVIRONMENT