



In the Literature

ISSUES IN MEASURING CHILD HEALTH

Marie C. McCormick, M.D., Sc.D.

Ambulatory Pediatrics
March–April 2008
8(2):77–84

An abstract is available at:
[http://www.ambulatorypediatrics.org/article/S1530-1567\(07\)00281-X/abstract](http://www.ambulatorypediatrics.org/article/S1530-1567(07)00281-X/abstract)

For more information about this study, contact:

Marie C. McCormick, M.D., Sc.D.
Department of Society, Human Development, and Health
Harvard School of Public Health
mmccormi@hsph.harvard.edu
or

Mary Mahon
Senior Public Information Officer
The Commonwealth Fund
212-606-3853
mm@cmwf.org

This summary was prepared by Betsy Rubiner and Deborah Lorber.

Commonwealth Fund Pub. 1170
August 2008

In the Literature presents brief summaries of Commonwealth Fund-supported research recently published in professional journals.

THE COMMONWEALTH FUND
ONE EAST 75TH STREET
NEW YORK, NY 10021-2692
TEL 212.606.3800
FAX 212.606.3500
E-MAIL info@cmwf.org
www.commonwealthfund.org

The ability to assess children's health is critical to health, educational, and social programs, as well as to clinical research and practice. Noting that there is little agreement about the most important domains or measures of child health, a Commonwealth Fund-supported paper urges "generalist academic pediatricians" to develop a better child health definition and improved measures. The paper recommends capitalizing on advances in how child health is conceptualized, including the dynamic nature of the interplay of child health and development over time.

"The lack of an integrated and useful definition of child health in a developmental context has implications for research in child health and for planning for interventions to improve health," writes Marie C. McCormick, M.D., Sc.D., of the Harvard School of Public Health, in "[Issues in Measuring Child Health](#)" (*Ambulatory Pediatrics*, March–April 2008). "Although there appears to be a wealth of indicators of child health, many, if not most, are not well suited to many activities of general pediatricians."

The Need for Measures

Child health measures are needed to monitor population trends in well-being and to identify changes that require new interventions. Clinically, they are also important for helping to determine the severity of a child's health problem and to monitor the effectiveness of treatment. But the author argues, "we not only do not have a clear

concept of health but we also lack a conceptual framework linking biological and environmental factors in a way that would help us understand...the effects of many elements of general pediatric care."

Currently, many routine child health statistics address child health in the community or population but may have little relevance to an individual child's health, the paper states. Often, the statistics reflect the prevalence of a condition or problem but don't convey a "life-course approach." Often they focus on "the absence of health or negative states" and do not provide a sense of how conditions or problems are interrelated, even in individual children. "Although such indicators provide important benchmarks for accountability for community health, they are of limited use to pediatric researchers and educators," the author writes.

Importance to General Pediatrics

The paper illustrates the need for enhanced child health measures by looking at three aspects of pediatric care—well-child care, acute illness care, and the management of children with special health care needs—that could benefit from improved measures. The goal of well-child care, for example, has been to ensure adequate child physical and psychosocial development, disease prevention, and early detection of problems. Current strategies of measuring well-child care focus on detecting deviations from a population mean. "What might be different if the goal of well-child

care were to achieve ‘well-being’ or some measure of ‘optimal health?’” the author asks.

In another example, the author notes that a “non-categorical approach” is used with children who have special health care needs because these children and their families share common experiences, problems, and needs. But the author argues that this approach masks “substantial definitional and measurement issues for individual children” and “may not adequately capture family dynamics and positive adaptation to ongoing childhood illnesses.”

A New Way

To create improved measures, the first step is to develop a conceptual framework of the relevant domains of child health, align this framework with existing measures, and identify measurement gaps, the paper recommends. Another step is to identify potential factors influencing health—such as demographic or health services factors—that can help develop a more comprehensive definition of child health. The author also notes “the considerable methodologic challenges” involved in developing strong child health measures.

The paper highlights three conceptual models of health that have “attractive features for approaching

the measurement of child health”—the World Health Organization (WHO) Definition of Health; the WHO’s International Classification of Functioning, Disability, and Health; and the National Academy of Science conceptualization. They combine many “desirable elements” the author writes, including “multidimensionality, a life-course approach emphasizing the interaction among different dimensions of health and development, the minimization and amelioration of disability that results from health conditions, and the desirability of having a single metric ranging from perfect health to death.” But the author notes that “significant issues” arise when trying to develop useful measurements for individuals and communities from these models.

“Measures of child health that reflect the activities of the majority of pediatricians and their health promotion activities would be useful in informing educational programs and developing quality improvement strategies,” the author writes. The task of developing improved measures should be assumed by “generalist academic pediatricians, both as researchers in child health broadly and as educators,” the author recommends. “If generalist academicians are to further their research and educational mission, they must engage, and urgently, in the development and measurement of child health.”