

**Title:**

Trends in and Determinants of Race/Ethnic Health Disparities among U.S. Children: Contemporary Evidence from the 1997-2009 National Health Interview Survey

**Authors:** Neil K. Mehta, Hedwig Lee and Kelly Ylitalo

**Short Abstract**

We investigate contemporary trends in race/ethnic disparities in U.S. child health using the 1997-2009 National Health Interview Survey. Recent demographic trends highlight the increasing racial and ethnic diversity within the U.S., and these demographic shifts have produced more varied and complex identities among children. Prior studies on U.S. children have largely ignored foreign-born status and multi-racial identities and have tended to evaluate specific illnesses. While attention to specific health conditions has important relevancies for targeted public health interventions, it is also important to assess multiple indicators of child health status to understand how the overall health of children is changing over time and to examine race/ethnic disparities across multiple domains of health. We describe recent trends in race/ethnic disparities, investigate patterns by the nativity status of parents and children, and examine possible determinants of child health disparities, focusing on the socioeconomic and demographic characteristics of parents and families.

## Extended Abstract

### *Introduction*

Although a large body of research has examined trends in and causes of race/ethnic disparities in infant and adult health, relatively less research has focused on children, especially in the United States. One potential reason for this gap in research is that there are few datasets available to investigate disparities in child health. We use the 1997-2009 surveys of the National Health Interview Survey (NHIS) to provide a comprehensive and contemporary portrait of recent trends in child health disparities across race/ethnicity and nativity, and also examine the role of socioeconomic (SES) and other parental characteristics in contributing to these disparities.

Recent demographic trends highlight the increasing race/ethnic diversity of U.S. children. The proportion of all children who are from racial/ethnic minority backgrounds increased by 16% between 2000 and 2008-- a growth of 4.8 million children (Johnson and Lichter 2010). In addition, an increasing share of children are born to parents of dissimilar races. Finally, there have been substantial increases in the proportion of children who have foreign-born parents or who, themselves, were born outside the United States (Johnson and Lichter 2010). These demographic shifts have produced more varied and complex identities and social contexts among U.S. children and may have profound implications on the health profiles of these children. However, studies focused on race/ethnic disparities in child health have generally ignored foreign-born status and multi-racial identities, particularly when investigating trends in health. Hence, an important goal of this research is to investigate child disparities across multiple race/ethnic and nativity subgroups.

At the same time, the focus of many prior papers on child health disparities has been on specific illnesses or a subset of child diseases. While attention to specific illnesses (e.g., asthma) has important relevancies for targeted public health and clinical interventions, it is also important to assess *multiple* indicators of child health status in a comparative perspective. A comparative perspective will enable researchers to understand how the overall health of children is changing over time and whether there are variations in race/ethnic disparities across different dimensions of child health. The few prior studies that have taken this approach have relied on data from the 1990s or earlier (Bauman, Silver, and Stein 2006; Chen, Martin, and Matthews 2006a; Waldman and Perlman 2003) and our study will provide more contemporary estimates.

We also examine how attributes of parents and families contribute to race/ethnic differences in child health. Parental education, for example, has been shown to have large impact on the welfare of children. Children of highly educated parents achieve better schooling outcomes, are less likely to engage in risky behaviors, and are healthier compared to children of less educated parents (Bradley and Corwyn 2002). Over and

above parental education, family income has been shown to be associated with child health through a variety of mechanisms (Case, Lubotsky, and Paxson 2002). Recent research has also shown the importance of family structure and instability on child health outcomes (Bzostek and Beck, Forthcoming). Large differences in income, education and family structure by race/ethnicity in the U.S. are well documented and are perhaps a potentially important explanation for race/ethnic differences in child health (LaVesit 2005). Net of SES, race/ethnic disparities in parental health and lifestyle factors may also be important. For example, poor parental health may reduce the amount of resources parents can devote to ensuring that their children receive recommended medical care (Hardie and Landale 2011). Parental lifestyle factors such as smoking may be proximate determinants of child health and have been shown to vary across demographic subgroups (Cook and Strachan 1999). Factors which we will also consider in these analyses.

### *Data & Methods*

Data come from both public- and restricted-use files of the 1997-2009 waves of the NHIS. We focus on children aged 5-17 and specific age subgroups within this range. Our total sample size is approximately 150,000 children aged 5-17. These children are from the sample child file and have detailed information on health and socio-demographics allowing us to assess less prevalent indicators of child health as well as trends within smaller subgroups.

We investigate four categories of child health and well-being. Our first category is a measure overall health and well-being, using parental reports of child health status. For our second category, we utilize measures of that are considered chronic in nature (e.g., asthma, obesity, hearing problems, blindness, digestive disorders, epilepsy, circulatory conditions). Third, we assess mental health and behavioral-related conditions (e.g., ADHD, autism, mental retardation). Finally, we measure indicators that capture the social dimensions of illness including activity limitations, missed school days, bed days, and hospitalization days. These measures capture the negative consequences of serious chronic illness and reflect both how parents with differing resources can mitigate these negative consequences of poor health for their sick children, as well as possible mechanisms that might lead to less academic success for children who are sick (Joe, Joe and Rowley 2009).

Parental reports of their child's race and Hispanic origin are used to create the following race/ethnic groupings: non-Hispanic white, non-Hispanic black, Hispanic, Asian, non-Hispanic other, and multi-race. Nativity of children and their parents are coded from relevant questions on place of birth. We additionally investigate specific countries of birth for sending countries that are highly represented in the U.S. immigrant population and specific parental racial combinations among multi-racial children.

A first set of analyses will investigate descriptive trends in race/ethnic disparities in child health between 1997 and 2009. We estimate the prevalence of various indicators across individual years and groups of years. A second set of analyses focuses on individual- and family-level explanations for child health differentials. Here, we estimate a set of multivariate logistic regression models predicting various dimensions of child health. These analyses will be conducted on the pooled 1997-2009 NHIS surveys to increase sample size. We start by estimating a minimally adjusted model that includes race/ethnicity, age of child, and sex as covariates. Next, we introduce nativity, SES, and parental characteristics (e.g., health status, smoking) to examine how each set influences race/ethnic differences. Since education and other measures of SES may operate differently across race/ethnic groups (Chen, Martin, and Matthews 2006a, 2006b), we also include interactions between race/ethnicity and the SES measures. These interactions also enable us to investigate the magnitude of race/ethnic differences at different levels of SES. Sex-stratified models and separate analyses on foreign-born children and children of foreign-born parents and multi-racial children will also be conducted. All analyses will be weighted.

### *Discussion*

Race/ethnic differences in child health remain an understudied but critical area to sociological, public and population health research. Understanding the nature and persistence of race/ethnic health disparities among recent cohorts of children provides an important barometer of national well-being, as well as an indicator/predictor of future patterns in adult health disparities. We will discuss our findings in the context of the broader literature on race/ethnic differences in health and the social determinants of health and highlight the need to consider child health as a unique and important aspect of U.S. population health research

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