

## Introduction to the Volume on Articles From the National Survey of Children's Health

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AT THE BEGINNING of the 21st century, researchers, policymakers and advocates had surprisingly few sources of analytic data concerning key issues in the healthy development and well-being of children and their families in the United States. Moreover, there was often no information about the health of children in individual states beyond the perinatal period. The Health Resources and Services Administration's Maternal and Child Health Bureau (MCHB), which is charged with promoting and improving the health of the nation's mothers and children, implemented a set of new data initiatives to address those gaps. In 2001, the MCHB, in collaboration with the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS), conducted the National Survey of Children With Special Health Care Needs, a random-digit-dial survey of almost 40 000 children considered to have special needs. The survey was designed to provide both national- and state-level estimates for this population.<sup>1</sup>

From January 2003 through July 2004, the MCHB conducted the National Survey of Children's Health (NSCH). The NSCH was created to serve a number of purposes. Its primary purpose was to provide estimates at the both the national- and state-level for a variety of physical, emotional, and behavioral child health indicators. These data were designed to help guide policymakers, advocates, and researchers on child health. Another purpose was to provide baseline estimates for a number of federal and state programs, such as the Title V maternal and child health performance measures, Healthy People 2010, and each state's 5-year Title V needs assessment.

The NSCH was conducted through random-digit dialing. Interviews were conducted in either English or Spanish; 5.9% of interviews were conducted in Spanish.

To increase efficiency and lower costs, the NSCH shared the sampling frame of the National Immunization Survey. All interviews used computer-assisted telephone interviewing. The survey was conducted in all 50 states and the District of Columbia. Households were screened to identify the presence of children under 18 years old. In eligible households, 1 child under 18 was selected randomly to be the subject of the interview. The respondent was the most knowledgeable adult about the child. Seventy-nine percent of interviews were conducted with the child's mother, the father was the respondent 17% of the time, and 3% of the time it was a grandparent.<sup>2</sup>

The NSCH was a unique survey for a number of reasons. First, it was one of the largest surveys ever conducted on the health of America's children: interviews were conducted with the parents or guardians of >102 353 children from birth to age 18 years. The large sample size allowed for the examination of relatively uncommon conditions or circumstances. Second, the survey was designed to provide both national- and state-level estimates. It was the first survey of the overall child health population in the United States that allowed anal-

**Key Words:** family issues, access to health care, ADHD, adolescence, breastfeeding

**Abbreviations:** MCHB, Maternal and Child Health Bureau; NCHS, National Center for Health Statistics; NSCH, National Survey of Children's Health

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yses at the state level. Third, although there was a “core” set of questions asked of all children, there were also separate, age-specific modules, for children ages 0 to 5, 6 to 11, and 12 to 17 years. Fourth, the survey was designed to take a broader approach to examining the lives of children; there were questions not only on the health conditions of the child, but also questions about their families and their neighborhoods. In addition, there was a focus on factors that promote resilience and well-being in children.

The 15 articles in this special issue highlight each of the unique aspects of the NSCH. The article by Bramlett et al (p S54) on the health and well-being of adopted children took advantage of the large sample size to compare adopted and biological children on various indicators of health. They found that adopted children were often in poorer health, but more likely to receive needed health care. Schieve et al (p S114) examined the relatively rare outcome of autism, focusing on the relationship between autism and parenting stress. They compared the responses from parents of children identified as having autism with parents of: (a) children who had special health care needs who had emotional, developmental, or behavioral problems other than autism, (b) children with special health care needs who did not have emotional, developmental, or behavioral problems, and (c) children without special health care needs on the Aggravation in Parenting scale. Their findings indicated that parents of children with autism were most likely to score high on this scale, and within the autism group, parents whose child recently needed special services were at even higher risk. Altarac and Saroha (p S77) assessed the lifetime prevalence of learning disabilities and its association with the presence of special health care needs. They found learning disabilities to be an important comorbidity among children with special health care needs, especially among those with multiple special needs.

The large sample size enabled Moore et al (p S68) to use measures of urbanicity in their article on the prevalence of violent disagreements in US families and the effects of race-ethnicity, residence, and parental stress. They found that more than 10% of US children lived in homes with reported violent disagreements. Moreover, they reported that violent disagreements varied by race-ethnicity and urbanicity, with parents in rural areas less likely to report violent disagreements than parents in urban areas. Their findings could help pediatricians understand which families may be at higher risk for violent disagreements. Level of urbanicity was also a key factor in the analysis by Liu et al (p S12). They linked the NSCH to the Area Resource File in a study on disparities in dental insurance coverage and dental care among US children. Among their more prominent findings, Liu et al found that rural children were less likely to have dental insurance, and that poor and minority children

were less likely to receive preventive dental care, even after accounting for insurance status. Visser et al (p S99) studied medication usage among children with reported attention-deficit/hyperactivity disorder, with an emphasis on gender-specific factors associated with medication usage. They found that having health care coverage and higher incomes were significantly associated with medication use for boys but not girls.

One of the primary motivations for this survey was the relative dearth of information on child health that was available at the state level. Three articles in this issue feature state-level analyses. Kim et al (p S22) drew on earlier work in Rhode Island indicating there were inadequate resources for children’s mental health to examine the association between children’s mental health and family functioning in that state. They found that almost 20% of Rhode Island children were reported to have a mental health problem, and that the parents of children with mental health problems were ~4 times as likely to consider themselves highly stressed as parents of children without mental health issues. Mulvihill et al (p S107) focused on the comparisons between children with and without a special health care need with regard to access to a medical home in Alabama. They found that although children with special health care needs were more likely to have the basic services, they were also more likely to experience problems with accessing specialty care, equipment, or services. Zeni et al (p S61) set out to examine factors associated with not having a personal health care provider for children in Florida after preliminary analyses indicated that Florida had a lower rate of children with a personal doctor or nurse compared with all US children. They found that lack of health care provider is driven less by a child’s health status and more by larger community issues, such as lack of health insurance or higher levels of poverty.

Some articles in this issue focused exclusively on specific age groups. Smaldone et al (p S29) identified characteristics associated with inadequate sleep among elementary school-aged children and adolescents. They found that parents reporting that their children had inadequate sleep were also more likely to report the child displayed depressive symptomatology, have concerns about the child’s safety, and report more heated family disagreements. The authors stressed the point that pediatricians should routinely identify and address inadequate sleep and its associated health, school, and family factors. Dee et al (p S92) addressed the association between breastfeeding practices and language and motor skill development among children 10 to 71 months old. Their analyses revealed that mothers who initiated breastfeeding were less likely than mothers of never breastfed children to be concerned a lot about their children’s language development. Moreover, there seemed to be an association between level of concern and length of breastfeeding, with the longer a mother

breastfed, the less likely she was to express concerns about language. Singh et al (p S38) examined the association between nativity/immigrant status, race/ethnicity, and socioeconomic determinants and breastfeeding initiation and duration. They found that for all 12 of the ethnic-immigrant groups studied, immigrant women had higher breastfeeding initiation and longer duration rates than native women. Allred et al (p S4) looked at the association of continuous care in the medical home and health insurance on up-to-date vaccination coverage by using merged data from the NSCH and the National Immunization Survey among children 19 to 35 months old. Their findings indicated that in bivariate analyses, children were more likely to be vaccinated if they had continuous coverage in the medical home and health insurance coverage. However, in multivariate analyses, only marital status was significant, with those children from never-married mothers being less likely to be vaccinated.

The article by McKay et al (p S84) on the associations between economic and social context, stage of adolescence, and physical activity and BMI is a good example of the multilevel analyses that can be drawn from this study. They found that both state-level mutual aid and social trust were significantly related to the odds of an adolescent not meeting current physical activity recommendations. For BMI, state-level mutual aid, social trust, and state-level poverty were all associated with having a higher-than-normal BMI.

The article by Youngblade et al (p S47) is an excellent study on the factors associated with positive development in adolescents. They assessed a contextual model derived from positive youth development theory by examining the association of family, school, and community risk and promotive factors with several outcome indices of both positive and negative adolescent development. Their results support the proposition that healthy adolescent development has roots in multiple contexts.

Youth who were involved in contexts that provided positive resources from important others (ie, parents, schools, and communities) not only were less likely to exhibit negative outcomes but also were more likely to show evidence of positive development. These findings provide important implications for intervention and prevention efforts and, more generally, for the promotion of positive, competent, and healthy youth development.

The final commentary by van Dyck (p S122) focuses not only on where we need to concentrate our efforts to improve children's health but also touches on the plans for future rounds of this survey.

This collection of articles provides a sense of both the breadth and depth of information available in the NSCH, as well as its analytical potential. We expect that the survey will be widely used in the years to come by policymakers, researchers, and advocates concerned with improving the health and well-being of children and their families. Microdata from the survey are available at no cost from the NCHS Web site ([www.cdc.gov/nchs/slits.htm](http://www.cdc.gov/nchs/slits.htm)) or the MCHB Web site ([www.mchb.hrsa.gov/programs/dataepi](http://www.mchb.hrsa.gov/programs/dataepi)). Interested users can also access the data interactively at the MCHB-funded Data Resource Center ([www.nschdata.org](http://www.nschdata.org)). In addition, a series of MCHB-supported chart books on children's health and well-being, oral health, obesity, and rural health are available in electronic (<http://mchb.hrsa.gov>) and paper form.

## REFERENCES

1. Blumberg SJ, Olson L, Frankel M, et al. Design and operation of the National Survey of Children With Special Health Care Needs, 2001. National Center for Health Statistics. *Vital Health Stat 1*. 2003;(41):1-136
2. Blumberg SJ, Olson L, Frankel M, Osborn L, Srinath KP, Giambo P. Design and operation of the National Survey of Children's Health, 2003. National Center for Health Statistics. *Vital Health Stat 1*. 2005;(43):1-124