



March 2008

Chronic Developmental Conditions Among Hispanic Children in the United States, 2003 and 2005-2006

by Rosa M. Avila, M.S.P.H., and Stephen J. Blumberg, Ph.D., Division of Health Interview Statistics

Page Content

[Methods](#) [Results](#) [Discussion](#) [Data Sources](#) [References](#) [Tables](#)

Data from two national surveys are used to describe the prevalence of selected chronic developmental conditions and the risk of developmental, behavioral, or social delay among Hispanic or Latino children. These data are also used to compare these estimates with those from non-Hispanic children. Comparisons are further made by the primary language spoken in the household for Hispanic children.

Methods

Data were drawn from two cross-sectional random-digit-dial telephone surveys conducted by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics: the 2005-2006 National Survey of Children with Special Health Care Needs (NS-CSHCN) and the 2003 National Survey of Children's Health (NSCH). Both surveys are part of the State and Local Area Integrated Telephone Survey program and were conducted in collaboration with their sponsor, the Health Resources and Services Administration's Maternal and Child Health Bureau.

As part of NS-CSHCN, parents of children 0-17 years of age completed a standardized screening questionnaire (1) to identify whether any of their children ($n = 364,841$) had special health care needs. Parents of children with special health care needs (CSHCN) ($n = 40,840$) were asked whether, to the best of their knowledge, the children had any of 16 specific health conditions. These conditions included Down syndrome, mental retardation or developmental delay, and cerebral palsy. Parental report may not be consistent with a diagnosis by a health care provider. Information about health conditions was not obtained for children without special health care needs.

As part of NSCH, parents of all children 3-17 years of age ($n = 102,353$) were asked whether "a doctor, health professional, teacher, or school official ever told you that the child has a learning disability" and whether "a doctor or health professional ever told you

that the child has autism." Children identified as having ever been diagnosed with these conditions included children who no longer had the condition at the time of interview. In addition, questions on NSCH permitted an assessment of risk for developmental, behavioral, or social delay for children 1-5 years of age. The Parents' Evaluation of Developmental Status (PEDS) is a standardized parent-reported screening instrument for identifying young children at risk for delay. Health care providers often use a clinical version of PEDS to assess or make decisions about the developmental status for individual children; a nonclinical version was included in NSCH.

In both surveys, Hispanic children were identified by asking the parent, "Is the child of Hispanic or Latino origin?" Hispanic and non-Hispanic children could be of any race. English-speaking and Spanish-speaking households were identified by asking the parent, "What is the primary language spoken in your home?" Both surveys were conducted in English and Spanish.

Point estimates and standard errors were calculated using SUDAAN version 9 (2) to account for the complex sample designs of NS-CSHCN and NSCH. Differences between percentages were evaluated using two-sided significance tests at the 0.05 level.

Results

[Table 1](#) presents the prevalence of special health care needs and the prevalence of selected developmental conditions with special health care needs among children generally (with and without special health care needs). The prevalence of special health care needs was significantly lower for Hispanic children than for non-Hispanic children. Similarly, the prevalence of mental retardation or developmental delay with special health care needs was significantly lower for Hispanic children than for non-Hispanic children. Furthermore, Hispanic children in English-speaking households had significantly higher rates than children in Spanish-speaking households. The prevalence of cerebral palsy with special health care needs was also significantly higher among non-Hispanic children than among Hispanic children, but disparities by primary language in the households were not statistically significant. No significant differences were found in prevalence of Down syndrome with special health care needs between Hispanic and non-Hispanic children or between the primary language subgroups within the Hispanic population.

As shown in [Table 2](#), the prevalence of children with autism is significantly higher among non-Hispanic children than among Hispanic children, a disparity that has been previously identified by CDC in a report based on the same data (3). Within the Hispanic population, the prevalence of autism is significantly higher for children from English-speaking households than for children from Spanish-speaking households. The prevalence of learning disability was also significantly higher for Hispanic children in English-speaking households compared with Hispanic children in Spanish-speaking households, but no difference existed in the prevalence of learning disability between Hispanic children and non-Hispanic children.

Approximately 24% of children aged 1-5 years had a moderate to high risk of developmental, behavioral, or social delay. No significant differences were found between Hispanic and non-Hispanic children or between Hispanic children in English-speaking households and Hispanic children in Spanish-speaking households.

Discussion

Parent report of health conditions is somewhat dependent on access to appropriate health or educational services for diagnosis as well as communication of that diagnosis to the parent. Hispanic children are more likely than non-Hispanic white children to lack access to health care services and specialized doctors (4), be uninsured, and lack a usual place for medical care (5). As a result, developmental problems may be more likely to go undiagnosed among Hispanic children. This may explain why the prevalence of certain developmental conditions (autism, mental retardation, and cerebral palsy) is lower for Hispanic children, but the risk of developmental, behavioral, or social delay was equivalent for Hispanic children and non-Hispanic children. One should note that parents of Hispanic children (especially parents from Spanish-speaking households) may be less likely to report health problems for their children because of reluctance to share such personal details in a telephone survey (6). This may also explain why Hispanic children (and especially Hispanic children from Spanish-speaking households) are less likely to have parent-reported special health care needs. More research is needed to examine the reasons why the prevalence of certain chronic developmental conditions is lower for Hispanic children.

Data Sources

The objective of NS-CSHCN is to produce national and state-specific prevalence estimates of CSHCN, describe the types of services they need and use, and assess aspects of the system of care for CSHCN (7). CSHCN are defined as those children who have or are at an increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally (8). From 192,083 households, a total of 364,841 children aged 0-17 years were screened for special health care needs using a standardized screening questionnaire (1). Detailed interviews were conducted if a child with special health care needs lived in the household. If two or more CSHCN lived in a household, one was randomly selected to be the subject of the interview. Detailed interviews were conducted by telephone with parents or guardians of 40,840 CSHCN. Additional details about the methodology are available elsewhere (7).

The objective of NSCH is to produce national and state-specific prevalence estimates for a variety of physical, emotional, and behavioral health indicators and for measures of children's experiences with the health care system (9). From January 2003 through July 2004, detailed telephone interviews were completed with parents or guardians of 102,353 children aged 0-17 years. One child was randomly selected from each household with children. Additional details about the methodology are available elsewhere (9).

References

1. Bethell CD, Read D, Stein RE, et al. Identifying children with special health care needs: Development and evaluation of a short screening tool. *Ambul Pediatr* 2(1):38-48. 2002.
2. SUDAAN [computer program]. Release 9.0.1. Research Triangle Park, NC: Research Triangle Institute. 2005.
3. CDC. Mental health in the United States: Parental report of diagnosed autism in children aged 4-17 years—"United States, 2003-2004. *MMWR* 55(17):481-6. 2006.
4. Kuhlthau K, Nyman RM, Ferris TG, Beal AC, Perrin JM. Correlates of use of specialty care. *Pediatrics* 113 (3 Pt 1):e249-55. 2004.
5. Flores G, Olson L, Tomany-Korman SC. Racial and ethnic disparities in early childhood health and health care. *Pediatrics* 115 (2):e183-93. 2005.
6. Read D, Bethell C, Blumberg SJ, Abreu M, Molina C. An evaluation of the linguistic and cultural validity of the Spanish language version of the Children with Special Health Care Needs Screener. *Matern Child Health J* 11:568-85. 2007.
7. Blumberg SJ, Welch EM, Chowdhury SR, Upchurch HL, Parker EK, Skalland BJ. Design and operation of the National Survey of Children with Special Health Care Needs, 2005-2006. National Center for Health Statistics. *Vital Health Stat* 1. Forthcoming.
8. McPherson M, Arango P, Fox H, et al. A new definition of children with special health care needs. *Pediatrics* 102:137-40. 1998.
9. Blumberg SJ, Olson L, Frankel MR, Osborn L, Srinath KP, Giambo P. Design and operation of the National Survey of Children's Health. National Center for Health Statistics 2005. *Vital Health Stat* 1(43). 2003.

Suggested citation

Avila RM, Blumberg SJ. Chronic developmental conditions among Hispanic children in the United States. *Health E-Stats*. National Center for Health Statistics. March 2008.

Tables

Table 1. Percentage of children aged 0-17 years with selected developmental conditions and special health care needs, by ethnicity and primary language spoken in the household: National Survey of Children with Special Health Care Needs, 2005-2006

Developmental conditions	Non-Hispanic	Hispanic	Hispanic, English ¹	Hispanic, Spanish ²
Children with special health care needs	15.27 (†0.12)	8.41 (†0.23)	13.19 (‡0.42)	4.82 (‡0.24)
Children with parent-reported Down syndrome and special health care needs	0.13 (0.01)	0.13 (0.03)	0.15 (0.04)	0.12 (0.04)
Children with parent-reported mental retardation or developmental delay and special health care needs	1.66 (†0.05)	1.25 (†0.09)	1.60 (‡0.15)	1.00 (‡0.12)
Children with parent-reported cerebral palsy and special health care needs	0.28 (†0.02)	0.17 (†0.04)	0.23 (0.06)	0.14 (*0.05)

† Estimates for non-Hispanic and Hispanic children significantly differ at the 0.05 level

‡ Estimates for Hispanic children in English-speaking households and Hispanic children in Spanish-speaking households significantly differ at the 0.05 level.

*Figure does not meet standards of reliability or precision; the relative standard error is greater than or equal to 30%.

¹Hispanic children in English (as their primary language) households.

²Hispanic children in Spanish (as their primary language) households.

Table 2. Percentage of children ever diagnosed with selected developmental conditions and percentage of children at risk of developmental delay, by ethnicity and primary language spoken in the household: National Survey of Children's Health, 2003

Developmental conditions or risk of delay	Non-Hispanic	Hispanic	Hispanic, English ¹	Hispanic, Spanish ²
Ever diagnosed with autism (aged 3-17 years)	0.57 (†0.05)	0.31 (*†0.11)	0.64 (*‡0.26)	0.09 (*‡0.04)
Ever diagnosed with learning disability (aged 3-17 years)	9.71 (0.19)	9.83 (0.53)	11.16 (‡0.83)	8.85 (‡0.68)
Has moderate or high risk of developmental, behavioral, or social delay (aged 1-5 years)	24.56 (0.50)	24.19 (1.94)	24.12 (1.71)	24.38 (1.62)

† Estimates for non-Hispanic and Hispanic children significantly differ at the 0.05 level.

*Figure does not meet standards of reliability or precision; the relative standard error is greater than or equal to 30%.

‡Estimates for Hispanic children in English-speaking households and Hispanic children in Spanish-speaking households significantly differ at the 0.05 level.

¹Hispanic children in English (as their primary language) households.

²Hispanic children in Spanish (as their primary language) households.