

Running the Numbers

*A Periodic Feature to Inform North Carolina Health Care Professionals
about Current Topics in Health Statistics*

*From the State Center for Health Statistics, North Carolina Department of Health and Human Services
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Children with Special Health Care Needs in North Carolina

As defined by the federal Maternal and Child Health Bureau (MCHB), children with special health care needs (CSHCN) are those children ages 0-17 years that are at elevated risks for chronic developmental, physical, emotional, or behavioral conditions that generally need health and related services beyond those required by children in general.¹ This definition includes children with birth defects, asthma, autism, attention deficit disorder, developmental disabilities, and other chronic conditions. More than 10.2 million children in the US are affected by these conditions, with prevalence rates ranging from 10%-22%.^{1,2} The prevalence can vary according to multiple factors, including the child's age, gender, race/ethnicity, and residential location, as well as the specific criteria used to define CSHCN by different surveys.²

In North Carolina, the Child Health Assessment and Monitoring Program (CHAMP) survey provides ongoing state-specific information on various aspects of the health of children ages 0-17, including CSHCN. The CHAMP survey was initiated in the fall of 2004 and has been implemented annually since January 2005. Conducted in both English and Spanish, the CHAMP surveys are revised each year to meet the evolving child health surveillance needs of North Carolina.

Eligible children for the CHAMP survey are drawn at random each month from the North Carolina Behavioral Risk Factor Surveillance System (NC BRFSS) telephone survey of adults ages 18 and older. All adult respondents with children living in their households are invited to participate in the CHAMP survey. One child is randomly selected from the household, and the adult most knowledgeable about the health of the selected child is interviewed in a follow-up survey.

Questions on the CHAMP survey cover a variety of health related topics, including early childhood development, access to health care, oral health, mental health, physical health, nutrition, physical activity, family involvement, and parent opinion on topics such as tobacco and childhood obesity. In general, these domains are comparable to the ones found in the National Survey on Children's Health (NSCH). Data on these health issues are broken down by various demographic and risk groups, including CSHCN. Prior to 2008, the definition of CSHCN in the CHAMP survey included children in need of prescription medications. However, in the 2008 survey, use of prescription medications was dropped as a criterion for CSHCN, therefore the CHAMP results prior to 2008 are not comparable to those presented here.

Table 1 shows selected characteristics of special needs children as reported in the CHAMP survey. An estimated 9.8% of North Carolina children were considered to be special needs children according to the 2008 survey. Males were more likely than females to be classified as CSHCN as were white children compared to African American and other minority children. Children ages 14-17 were about twice as likely to be classified as special needs compared to children under age five. The majority of CSHCN currently had health insurance coverage through Medicaid, NC Health Choice, or private providers. Only a small number of respondents indicated that their child had no current health insurance coverage.

As expected, CSHCN were more likely to experience various chronic health and medical conditions compared to their non-CSHCN counterparts. They were more than seven times as likely to have their general health status rated as "fair" or "poor" by their parents, were more likely to weigh either below the 5th percentile or above the 95th percentile for children of a similar age, and were more likely to have dental problems (see Figure 1, page 572).

Table 1.
Demographic Characteristics of Children with Special Health Care Needs,
North Carolina Child Health Assessment and Monitoring Program (CHAMP), 2008

	Number^a	Percent^b	95% CI^c
Total	297	9.8	8.6-11.2
Gender			
Male	172	11.4	9.5-13.5
Female	125	8.2	6.6-10.1
Age (years)			
< 5	43	6.0	4.2-8.5
5-10	102	11.1	8.9-13.8
11-13	51	10.8	7.8-14.8
14-17	101	12.1	9.6-15.3
Race			
White	226	11.5	9.9-13.4
African American	32	7.7	5.3-11.3
Other	39	6.6	4.4-9.8
Parent's Education			
< High School	11	4.4	2.1-9.1
High School	57	11.4	8.3-15.3
Some College	94	12.8	10.0-16.2
College Graduate	135	8.9	7.3-10.8
Child's School Grade			
Not in School	44	6.5	4.6-9.1
K-5	106	10.2	8.1-12.6
6-8	56	12.2	8.9-16.4
9 and Above	91	11.9	9.3-15.1
Current Health Insurance Status^d			
State Health Plan	11	5.3	2.7-10.1
Private	123	7.2	5.8-9.0
NC Health Choice	26	16.1	10.3-24.3
Medicaid	101	15.7	12.6-19.5
Other Insurance	25	11.4	7.3-17.4
No Health Insurance	10	6.0	3.0-11.7

a Total number of respondents to survey=2,959.

b The percentages shown are weighted percentages, designed to reflect the entire population of North Carolina children ages 0-17.

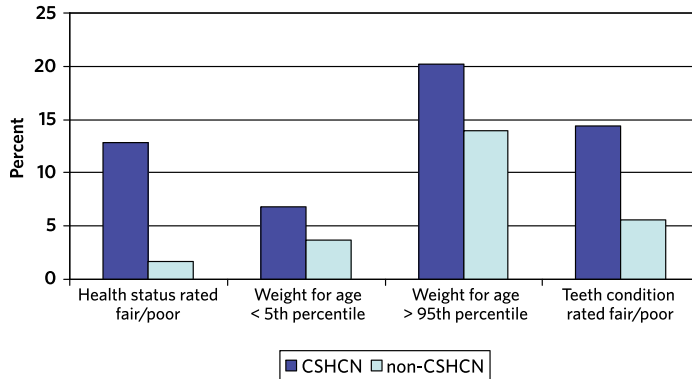
c 95% CI=95% confidence interval.

d First column totals 296 instead of 297 due to one invalid response.

School performance issues are also reported to be more common among CSHCN than non-CSHCN (see Figure 2, page 572). Special needs children were more than twice as likely to miss two or more weeks of school and to have repeated a grade. CSHCN were also less likely than non-CSHCN to make A's and B's and were more likely to have made mostly C's or lower during the past year.

Based on the 2008 CHAMP survey data, CSHCN do not appear to have problems with either access to or use of health and medical care compared to their non-CSHCN counterparts (see Figure 3, page 573). CSHCN were only about one-half as likely as non-CSHCN to have no health insurance currently or within

Figure 1.
Selected Health Indicators for CSHCN* and non-CSHCN,
Ages 0-17, NC CHAMP Survey, 2008



* CSHCN: Children with special health care needs.

the last year. They were also less likely to have no personal doctor/nurse and to have no regular dentist or dental clinic compared to non-CSHCN. About 13% of CSHCN did not receive well-child care during the past 12 months, compared to about 15% for non-CSHCN.

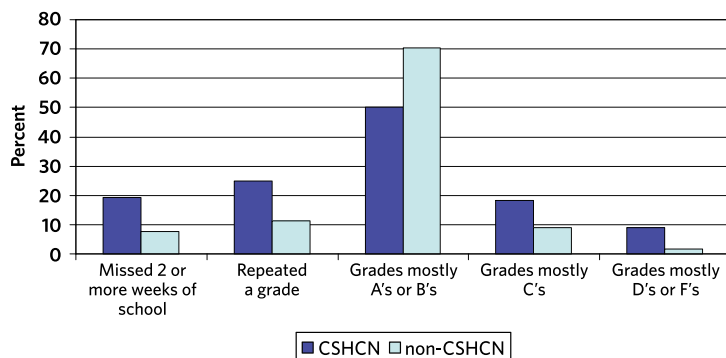
The overall prevalence of CSHCN in the 2008 CHAMP survey is lower than the estimated percentage of 15.4% for the state, based on the 2005-2006 National Survey of Children with Special Health Care Needs.³ However, the prevalence of

CSHCN from CHAMP is very similar to the prevalence from the National Survey of Children's Health (9.6%), based on the single criterion of increased need for services. Beginning in 2010 the CHAMP survey will use a definition of CSHCN that is more similar to that of the National Survey of Children with Special Health Care Needs, so the two surveys should yield more comparable results.

The 2008 CHAMP results for health care access and insurance coverage are in line with those of the National Survey of Children's Health. Although the percentage of children having health insurance does not differ greatly between CSHCN and non-CSHCN, the type of insurance coverage does. CSHCN are more likely than non-CSHCN to use government-funded services such as Medicaid or NC Health Choice. Furthermore, earlier findings from CHAMP suggest that even though CSHCN and non-CSHCN had similar rates of insurance coverage, the amount of coverage for CSHCN was often inadequate. For example, parents of CSHCN were more likely to say that their child did not receive all of the medical care needed in the past year and, for instance, did not get a prescription filled due to cost. This suggests that although these families have coverage, it is inadequate. These questions were not included in the 2008 survey, so it is not clear whether these issues persist.

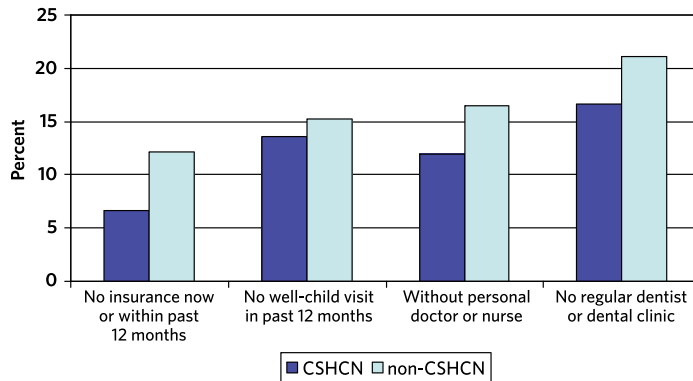
The results from the 2008 CHAMP data are contradictory to other studies on CSHCN, including results for North Carolina from the National Survey of Children with Special Health Care Needs. Several of these studies have demonstrated that health and medical service use and costs for CSHCN vary considerably across different chronic conditions and service use categories such as inpatient, physician, and outpatient services.^{4,5} Studies have also demonstrated that

Figure 2.
School Performance for CSHCN* and non-CSHCN,
Ages 4-17, NC CHAMP Survey, 2008



* CSHCN: Children with special health care needs.

Figure 3.
Health Care Access and Utilization for CSHCN* and non-CSHCN, Ages 0-17, NC CHAMP Survey, 2008



* CSHCN: Children with special health care needs.

minority children with special needs have greater difficulty in accessing health care and have poorer health status than white CSHCN.^{6,7} They also experience differences in insurance coverage and health service use.^{6,7}

Several reasons exist for the discrepancies of results in the 2008 CHAMP data and previous studies on CSHCN. These include the wording of the survey questions with regards to special needs and sample size. The CHAMP results also need to be interpreted with caution due to the wide confidence

intervals, resulting from the small sample size. Additional years of data will improve the precision of the sample estimates. Despite this limitation, the CHAMP data provide more specific state-level information than the National Survey of Children with Special Health Care Needs.

Improving access to services and resources for CSHCN is an important public health goal that is necessary for improving the health and quality of life of children and individuals with special needs. Health care providers, health insurance companies, and health departments should work collaboratively with families and existing health care systems to provide adequate coverage for needed services for CSHCN. Future reform in health care should consider accessibility of services for families with children with special needs and the various mechanisms available for adequate coverage of services. Improving social networks of families of CSHCN may help alleviate the stress many families experience by connecting them with local support groups and other community resources. Additional training and continuing education for health professionals would help them better serve families of children with special needs.

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