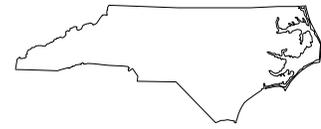


Statistical Brief



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Estimates of Children with Special Needs in North Carolina

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Introduction

In North Carolina, as in much of the country, services for children with special needs are provided through a network of programs in health, education, and social services. Effective program planning is dependent on accurate data that reflect the prevalence of children with special needs. The purpose of this report is to compare estimates of the number of children 3-17 years of age identified as having special needs in North Carolina, the South, and the United States. Enrollment in special education services in the United States is also reported.

Methods

Data for this study came from the 1994 National Health Interview Survey, Disability Supplement (NHIS-D), Phase 1. The 1994 NHIS-D is the first large-scale survey of disability for United States community-dwelling persons of all ages. It provides for the first time, national population-based data for children with special needs. Excluded from the survey are children who are institutionalized, United States nationals living abroad, and the dependents of military personnel. North Carolina is one of several states assisting the National Center for Health Statistics in pilot testing a method for producing state-level estimates from the NHIS-D.

For this analysis, a broad definition of children with special needs used by the federal Maternal and Child Health Bureau is applied to children 3-17 years of age

in North Carolina, the South, and the United States (see categories in Table 1). Population estimates were calculated for children grouped according to five classifications: (1) chronic conditions; (2) functional limitations; (3) developmental delay; (4) dependence on compensatory means; or (5) service needs or use beyond those typical for the child's age. Table 1 shows the operational definitions for each of these classifications.

Table 1: Description of special needs classifications

Classification	Description
Chronic conditions	autism, cerebral palsy, cystic fibrosis, Down syndrome, hydrocephalus, learning disability, mental retardation, muscular dystrophy, Spina bifida
Functional limitations	difficulties in seeing, hearing, communicating, attending, understanding, with activities of daily living, problems with behavior
Developmental delay	difficulty achieving developmental milestones or reported by a health professional as having delays in speech or language, cognitive or mental, emotional or behavioral development
Compensatory means	use of medical equipment, adaptive devices, or physical assistance to compensate for loss of sight, hearing, respiratory or physical function, or require medications or special diet
Service use	need for services (physician, hospital, counselor, specialized therapies or other procedures) over and above the usual

Defined by the Maternal and Child Health Bureau, United States Department of Health and Human Services



Statistical Brief No. 18
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Data are presented for the following geographic regions: (1) North Carolina; (2) federal Region 4, excluding North Carolina (i.e. Alabama, Florida, Georgia, Kentucky, Mississippi, South Carolina, Tennessee); and (3) the United States, excluding North Carolina and other Region 4 states. Due to suppressed data (for confidentiality reasons) on the file provided by the National Center for Health Statistics, the SUDAAN software could not be used to generate the standard errors of the survey estimates. Therefore, for the computation of confidence intervals, the usual estimates of standard errors were increased by 30 percent to account for the effects of the complex sampling design of the NHIS-D.

Results

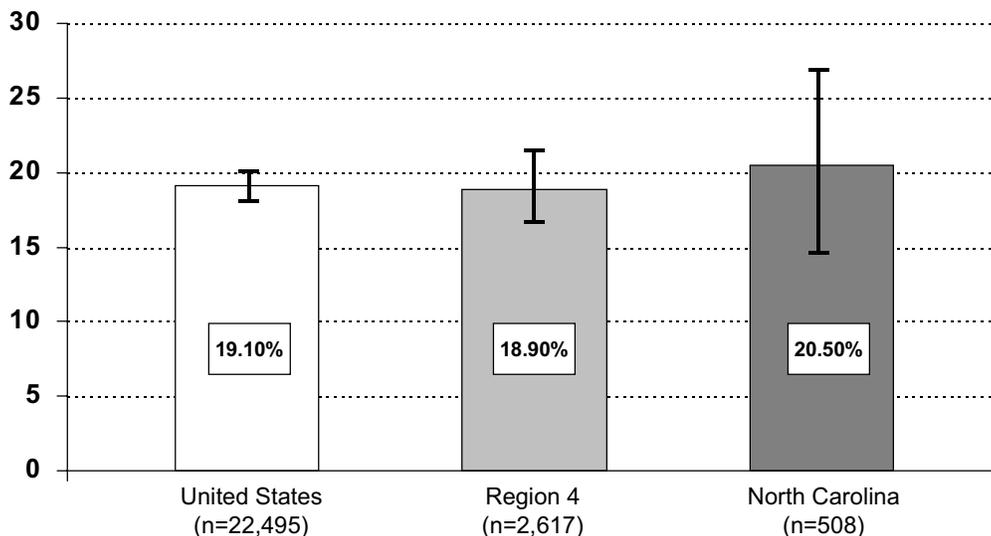
Using the broad definition proposed by the Maternal and Child Health Bureau, an estimated 20.5% of North Carolina’s children have one or more special needs (see Figure 1). Percentages for the South and the United States are similar to North Carolina. Table 2 presents the numbers and percentages of children with special needs by classification. The percentage of children from North Carolina meeting each classification is again similar to that of children in Region 4 and the United States. The smallest estimates of children with special needs are based on chronic conditions (3.4% for North Carolina). The highest estimates are based on functional limitations (with 11.9% of North Carolina’s children identified).

Table 2: Estimated numbers and percentages of children ages 3-17 classified as having special needs by geographic area (with 95% confidence intervals), National Health Interview Survey, Disability Supplement, 1994

Classification	Number*	%	95% CI
Chronic conditions			
North Carolina	45,000	3.4	(0.9, 5.9)
Region 4 ^a	316,600	4.0	(3.1, 4.9)
United States ^b	2,107,800	4.1	(3.7, 4.4)
Functional limitations			
North Carolina	158,200	11.9	(7.2, 16.6)
Region 4	837,700	10.6	(9.2, 12.0)
United States	5,170,000	10.0	(9.4, 10.5)
Developmental Delay			
North Carolina	114,500	8.6	(4.6, 12.6)
Region 4	641,200	8.1	(6.9, 9.3)
United States	4,153,100	8.0	(7.5, 8.5)
Compensatory Means			
North Carolina	69,600	5.2	(2.1, 8.3)
Region 4	398,200	5.0	(4.1, 6.0)
United States	2,965,900	5.7	(5.3, 6.1)
Service Use			
North Carolina	59,400	4.5	(1.6, 7.3)
Region 4	567,600	7.2	(6.0, 8.3)
United States	3,944,600	7.6	(7.1, 8.1)

^a Maternal and Child Health Bureau Region 4 excluding North Carolina (i.e. Alabama, Florida, Georgia, Kentucky, Mississippi, South Carolina, Tennessee)
^b excluding Region 4 and North Carolina
 *These numbers are weighted sample frequencies, providing estimates of the total numbers of children in North Carolina, Region 4, and the United States in each category. **The same child may be classified in more than one category.**

Figure 1: Estimated percentage of children ages 3-17 with one or more special needs by geographic area (with 95% confidence interval), National Health Interview Survey, Disability Supplement, 1994



Note: The numbers in parentheses (n) are the total sample sizes (ages 3-17) for each geographic area in the National Health Interview Survey, Disability Supplement, 1994

Table 3 provides the numbers and percentages of children in the United States having chronic conditions, functional limitations, or developmental delays who were enrolled in special education. Only United States data are presented here since there were relatively small numbers of children in the North Carolina sample with chronic conditions (17), functional limitations (57), and developmental delays (39). Children with chronic conditions were most likely to be enrolled in special education (63.2%), followed by those with developmental delay (45.7%), and those with functional limitation (33.6%). Of children meeting all three classifications, 74.3% were reported to be enrolled in special education.

Table 3: Estimated numbers and percentages of classified United States children ages 3-17 enrolled in special education (with 95% confidence interval), National Health Interview Survey, Disability Supplement, 1994

Classification	Number*	% Enrolled	95% CI
Chronic conditions	1,331,700	63.2	(59.1, 67.2)
Functional limitations	1,737,200	33.6	(31.1, 36.1)
Developmental Delay	1,898,400	45.7	(42.7, 48.7)
All Three	1,051,800	74.3	(69.9, 78.8)

* Weighted sample frequencies

Discussion

The state, regional, and national data for children with special needs were limited to community-dwelling children 3-17 years of age. The NHIS-D provides little information on the special needs of infants and toddlers. Institutionalized children were not included in the survey. While small in number, the latter population is likely to have a large percentage of children with special needs. Thus, the estimates presented here are likely to be somewhat conservative. It is not possible to confirm the accuracy of the estimates in this study. The NHIS-D is dependent on an interview with an adult member of the household to assess diagnoses, conditions, functional limitations, and use of school services. We do not know how well information provided by caregivers would be corroborated by professional assessment, service records, or direct response by older children.

The consequence-based approach to classification used in this study may produce different estimates of the number of children with special needs than a more traditional approach based on a list of selected diagnoses. The approach used here is more congruent with how public programs serving children define eligibility. This study provides evidence of the relationship between classifications of children with special health needs and their use of school services. It also demonstrates that the NHIS-D can be used to estimate the prevalence of children with special needs at the state level, at least for a larger state such as North Carolina.

Statistical Brief No. 18

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