# WARNING

#### FEDERAL RESTRICTED-USE DATA

# UNAUTHORIZED ACCESS TO LICENSED INDIVIDUALLY IDENTIFIABLE INFORMATION IS A VIOLATION OF FEDERAL LAW AND WILL RESULT IN PROSECUTION.

# **NLTS2 Database Overview**

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## NLTS2 Sampling, Data Collection, and Analysis Procedures

The National Longitudinal Transition Study-2 (NLTS2), commissioned by the U.S. Department of Education, Office of Special Education Programs (OSEP), is a follow-up of the original National Longitudinal Transition Study (NLTS). The original NLTS was designed and conducted by SRI for USDE from 1984 through 1993. NLTS2 includes more than 11,000 youth nationwide who were ages 13 through 16 on December 1, 2000. Information collected over a period of 10 years from parents, youth, and schools will provide a national picture of the experiences and achievements of young people as they transition into early adulthood. The NLTS2 database includes data collected from different sources and from the same sources at different points in time. The study will:

- Describe the characteristics of secondary school students in special education and their households.
- Describe the secondary school experiences of students in special education, including their schools, school programs, related services, and extracurricular activities.
- Describe the experiences of students once they leave secondary school, including adult programs and services, social activities, etc.
- Measure the secondary school and postschool outcomes of students in the education, employment, social, and residential domains.

This manual describes several aspects of the NLTS2 methodology relevant to Wave 1 through Wave 5, including:

- Sampling of local education agencies (LEAs) and students
- Data sources and response rates
- Weighting of the data
- Estimation and use of standard errors
- Treatment of disability categorization issues.

## **NLTS2 Sample Overview**

The NLTS2 sample was constructed in two stages. A stratified random sample of 3,630 LEAs was selected from the universe of approximately 12,000 LEAs that serve students receiving special education in at least one grade from 7th through 12th grades. These LEAs and 80 state-supported special schools that serve primarily students with hearing and vision impairments and multiple disabilities were invited to participate in the study, with the intention of recruiting 500 LEAs and as many special schools as possible from which to select the target sample of about 12,000 students. The target LEA sample was reached; 500 LEAs and 40 special schools agreed to participate and provided rosters of students receiving special education in the designated age range.

The roster of all students in the NLTS2 age range who were receiving special education from each LEA<sup>1</sup> and special school was stratified by disability category. Then, students were selected randomly from each disability category. Sampling fractions were calculated that would produce enough students in each category so that, in the final study year, findings would generalize to most categories individually with an acceptable level of precision, accounting for attrition and for response rates to the parent/youth interview. A total of 11,270 students were selected and eligible to participate in NLTS2.

Details of the LEA and student samples are provided below.

## The NLTS2 LEA Sample

## Defining the Universe of LEAs

The NLTS2 sample includes only LEAs that have teachers, students, administrators, and operating schools—that is, "operating LEAs." It excludes such units as supervisory unions; Bureau of Indian Affairs schools; public and private agencies (e.g., correctional facilities); LEAs in U.S. territories; and LEAs with 10 or fewer students in the NLTS2 age range, which would be unlikely to have students with disabilities.

The public school universe data file maintained by Quality Education Data (QED 2000) was used to construct the sampling frame because it had more recent information than the alternative list maintained by the National Center for Education Statistics. Correcting for errors and duplications resulted in a master list of 12,440 LEAs that met the selection criteria. These LEAs comprise the NLTS2 LEA sampling frame.

#### Stratification

The NLTS2 LEA sample was stratified to increase the precision of estimates, to ensure that low-frequency types of LEAs (e.g., large urban districts) were adequately represented in the sample, to improve comparisons with the findings of other research, and to make NLTS2 responsive to concerns voiced in policy debate (e.g., differential effects of federal policies in particular regions, LEAs of different sizes). Three stratifying variables were used: region, LEA size, and LEA/community wealth.

**Region.** This variable captures essential political differences, as well as subtle differences in the organization of schools, the economic conditions under which they operate, and the character of public concerns. The regional classification variable selected was used by the U.S. Department of Commerce, the U.S. Bureau of Economic Analysis, and the National Assessment of Educational Progress. (The categories are Northeast, Southeast, Midwest, and West.)

**LEA size (student enrollment).** LEAs vary considerably by size, the most useful available measure of which is student enrollment. Numerous organizational and contextual variables are associated with size, and they exert considerable potential influence over the operations and effects of special education and related programs. In addition, total enrollment serves as an initial

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LEAs were instructed to include on the roster any student for whom they were administratively responsible, even if the student was not educated within the LEA (e.g., attended a school sponsored by an education cooperative or was sent by the LEA to a private school). Despite these instructions, some LEAs may have underreported students served outside the LEA.

proxy for the number of students receiving special education served by an LEA. The QED database provided enrollment data, from which LEAs were sorted into four categories serving approximately equal numbers of students:

- **Very large** (estimated<sup>2</sup> enrollment greater than 14,930 in grades 7 through 12)
- Large (estimated enrollment from 4,660 to 14,930 in grades 7 through 12)
- **Medium** (estimated enrollment from 1,620 to 4,660 in grades 7 through 12)
- **Small** (estimated enrollment from 10 to 1,620 in grades 7 through 12).

**LEA/community wealth.** As a measure of district wealth, the Orshansky index (the proportion of the student population living below the federal definition of poverty; Fisher 1992) is a well-accepted measure. The distribution of Orshansky index scores was organized into four categories of LEA/community wealth, each containing approximately 25 percent of the student population in grades 7 through 12:

- **High** (0 percent to 13 percent Orshansky)
- **Medium** (14 percent to 24 percent Orshansky)
- **Low** (25 percent to 43 percent Orshansky)
- **Very low** (more than 43 percent Orshansky).

The three variables generate a 64-cell grid into which the universe of LEAs was arrayed.

# **LEA Sample Size**

On the basis of an analysis of LEAs' estimated enrollment across LEA size and estimated sampling fractions for each disability category, 500 LEAs and as many state-sponsored special schools as would participate were considered sufficient to generate the student sample. Taking into account the rate at which LEAs were expected to refuse to participate, a sample of 3,640 LEAs was invited to participate, from which 500 participating LEAs might be recruited. A total of 500 LEAs actually provided students for the sample, 101 percent of the target number needed and 14 percent of those invited. Analyses of the region, size, and wealth of the LEA sample, both weighted and unweighted, confirmed that the weighted LEA sample closely resembled the LEA universe with respect to those variables (Javitz and Wagner 2003).

In addition to ensuring that the LEA sample matched the universe of LEAs on variables used in sampling, it was important to ascertain whether the stratified random sampling approach resulted in skewed distributions on relevant variables not included in the stratification scheme. Several analyses were conducted.

First, three variables from the QED database were chosen to compare the "fit" between the first-stage sample and the population: the LEA's racial/ethnic distribution of students, the proportion who attended college, and the urban/rural status of the LEA. This analysis revealed that the sample of LEAs somewhat underrepresented African-American students and collegebound students and overrepresented Hispanic students and LEAs in rural areas. Thus, in addition

<sup>&</sup>lt;sup>2</sup> Enrollment in grades 7 through 12 was estimated by dividing the total enrollment in all grade levels served by an LEA by the number of grade levels to estimate an enrollment per grade level; that level was multiplied by 6 to estimate the enrollment in grades 7 through 12.

to accounting for stratification variables, LEA weights were calculated to achieve a distribution on the urbanicity and racial/ethnic distributions of students that matched the universe (Javitz and Wagner 2003).

To determine whether the resulting weights, when applied to the participating NLTS2 LEAs, accurately represented the universe of LEAs serving the specified grade levels, data collected from the universe of LEAs by the U.S. Department of Education's Office of Civil Rights (OCR) and additional items from QED were compared for the weighted NLTS2 LEA sample and the universe. Finally, the NLTS2 participating LEAs and a sample of 1,000 LEAs that represented the universe of LEAs were surveyed to assess a variety of policies and practices known to vary among LEAs and to be relevant to secondary-school-age youth with disabilities. Analyses of both the extant databases and the LEA survey data confirmed that the weighted NLTS2 LEA sample accurately represented the universe of LEAs (Javitz and Wagner 2003).

# The NLTS2 Student Sample

Determining the size of the NLTS2 student sample took into account the duration of the study, desired levels of precision, and assumptions regarding attrition and response rates. Analyses determined that approximately three students would need to be sampled for each student who would have a parent/youth interview in Wave 5 of NLTS2 data collection.

The NLTS2 sample design called for findings to be generalizable to students receiving special education as a whole and for the 12 special education disability categories currently in use in the NLTS2 age range and reported in this document. Standard errors were to be no more than 3.6 percent, except for the low-incidence categories of traumatic brain injury and deafblindness. Thus, by sampling 1,250 students per disability category (with the two exceptions noted) 400 students per category were expected to have a parent or youth interview in year 9. Assuming a 50 percent sampling efficiency (which is likely to be exceeded for most disability categories), 400 students would result in a standard error of estimate of slightly less than 3.6 percent. All students with traumatic brain injury or with deaf-blindness in participating LEAs and special schools were selected. Students were disproportionately sampled by age to assure that there would be an adequate number of students who were age 24 or older at the conclusion of the study. Among the eligible students, 40.2 percent will be 24 or older as of the final interview.

LEAs and special schools were contacted to obtain their agreement to participate in the study and request rosters of students receiving special education who were ages 13 through 16 on December 1, 2000, and in at least seventh grade.<sup>3</sup> Requests for rosters specified that they contain the names and addresses of students receiving special education under the jurisdiction of the LEA, the disability category of each student, and the students' birthdates or ages. Some LEAs provided only identification numbers for students, along with the corresponding birthdates and disability categories. When students were sampled in these LEAs, identification numbers of selected students were provided to the LEA, along with materials to mail to their parents/guardians (without revealing their identity).

After estimating the number of students receiving special education in the NLTS2 age range, the appropriate fraction of students in each category was selected randomly from each

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<sup>&</sup>lt;sup>3</sup> Students who were designated as being in ungraded programs also were sampled if they met the age criteria.

LEA and special school. In cases in which more than one child in a family was included on a roster, only one child was eligible to be selected. LEAs and special schools were notified of the students selected and contact information for their parents/guardians was requested.

#### **Data Sources**

Data were collected from multiple sources and through a variety of methods. Wave 1 and Wave 2 sources included parents, youth, and school staff whereas in Wave 3, Wave 4, and Wave 5 data were collected from parents and youth only (table 1). Data were collected from fewer sources in Wave 3 and later waves.

Table 1. NLTS2 data collection sources

	Telephone Interview	Mail Survey	Student Assessment <sup>a</sup>
Wave 1			_
Parent/Guardian	X	X	
Youth			X
School staff		X	
Wave 2			
Parent/Guardian	X		
Youth	X	$X^{b}$	X
School staff		X	
Wave 3			
Parent/Guardian	X		
Youth	X	$X^{b}$	
School staff			
Wave 4			
Parent/Guardian	X	X	
Youth	X	$X^{b}$	
School staff			
Wave 5			
Parent/Guardian	X	X	
Youth	X	$X^b$	
School staff			

<sup>&</sup>lt;sup>a</sup> Only youth 16 years old or older.

#### Parent and Youth Interview/Questionnaire

The NLTS2 conceptual framework suggests that a youth's nonschool experiences (e.g., extracurricular activities and friendships), historical information (e.g., age when disability was first identified), and household characteristics (e.g., socioeconomic status), and a family's level and type of involvement in school-related areas are crucial to student outcomes. Parents/guardians are the most knowledgeable about these aspects of students' lives. They also are important sources of information on outcomes across domains. In Wave 1, parents/guardians of NLTS2 sample members were interviewed by telephone or surveyed by mail in 2001. The youth's point of view is another important aspect in providing the youth's personal experience

<sup>&</sup>lt;sup>b</sup> Only if able to complete mail survey and unable to complete telephone interview.

regarding social and extracurricular activities, health, school and work experiences, risk behaviors, and expectations for the future. Thus, parents/guardians and youths were interviewed by telephone or surveyed by mail in 2003, 2005, 2007, and 2009 as part of Waves 2, 3, 4, and 5 data collection.

**Wave 1.** Matches of names, addresses, and telephone numbers of NLTS2 parents with existing national locator databases were conducted to maximize the completeness and accuracy of contact information and subsequent response rates. A sample member was required to have a working telephone number and an accurate address to be eligible for the parent interview sample.

Starting in May 2001, letters were sent to parents to notify them that their child had been selected for NLTS2 and that an interviewer would attempt to contact them by telephone. The letter included a toll-free telephone number for parents to call to be interviewed if they did not have a telephone number where they could be reached reliably or if they wanted to make an appointment for the interview at a specific time.

Computer-assisted telephone interviewing (CATI) was used for parent interviews, which were conducted between mid-May and late September 2001. Ninety-five percent of interviews were conducted in English and 5 percent in Spanish.

All parents who could not be reached by telephone were mailed a self-administered questionnaire in a survey period that extended from September through December 2001. The questionnaire contained a subset of key items from the telephone interview. A total of 9,230 telephone or mail surveys were completed.

**Wave 2.** In Wave 2, both the parent/guardian and youth were interviewed. This was the first round of telephone interviews in which the youth perspective was taken into account. Similar procedures used to contact sample members were used in Wave 2 as in Wave 1. Matches of names, addresses, and telephone numbers of NLTS2 parents with existing national locator databases were conducted to maximize the completeness and accuracy of contact information and subsequent response rates. A sample member was required to have a working telephone number and an accurate address to be eligible for the parent/youth interview sample.

Starting in late April 2003, letters were sent to parents/youth and to individuals who completed Wave 1 (if different from parent) to notify them that an interviewer would attempt to contact them by telephone. The letter included a toll-free telephone number for parents and youth to call to be interviewed if they did not have a telephone number where they could be reached reliably or if they wanted to make an appointment for the interview at a specific time.

In an effort to increase response rates, a second letter was mailed to families in late July. One letter was sent to pending and final refusal cases, whereas another one was sent to other unresolved cases. Additional efforts were made in early September with more focused time spent on attempting to locate hard-to-reach sample members through intensive tracing. Also, in September, as a last attempt to increase the response rate, a \$20 incentive was put into place for individuals who completed an interview.

All parents received Part 1 of the parent interview, which focused on youth and family characteristics, family involvement and expectations, school experiences, and services. At the end of Part 1, parents were asked whether the sample youth could answer questions similar to those asked of the parents in the telephone interview. If a youth was able to complete a telephone

interview, a youth interview was completed. All youth who could not complete a telephone interview but were able to complete a written version were mailed a self-administered questionnaire. The youth questionnaire contained a subset of key items from the youth telephone interview. If the youth was unable to complete a telephone interview or questionnaire, the parents continued with Part 2 of the parent interview, which focused on extracurricular activities and behavior, postsecondary education, and work experience.

Computer-assisted telephone interviewing (CATI) was used for parent and youth interviews, which were conducted between early May and early December 2003. Ninety-seven percent of interviews were conducted in English and 3 percent in Spanish.

At the end of Wave 2 data collection, 6,710 Part 1 and 2,980 Part 2 parent interviews were completed. A total of 2,920 youth interviews and 440 youth questionnaires were completed, for a total of 3,360 youth providing responses.

Ninety-four percent of the parent/guardian interviews were conducted in English and 6 percent conducted in Spanish. Of youth who were interviewed, 99 percent were interviewed in English and 1 percent in Spanish.

**Wave 3.** Wave 3 data collection was conducted in much the same way as in Wave 2, the primary difference being that incentives were offered to all respondents. In the initial letter sent to parents/youth, parent/guardians were offered \$20 to complete an interview and youth were offered an additional \$20 to complete a telephone interview or a mail questionnaire. Letters were sent to families in February 2005 and details about the incentives were included, as well as a toll-free number to schedule an interview. The survey period was March 2005 through November 2005.

If youth were over age 18 and had been interviewed in a prior wave, we attempted to contact both the youth and the parent/guardian concurrently. Consequently, it is possible to have a youth interview without a corresponding parent/guardian interview in Wave 3 if we were able to contact the youth and were unable to reach the parent/guardian. At the close of data collection, there was a total of 5,560 Parent Part 1, 1,870 Parent Part 2, 2,850 Youth interviews, and 490 youth questionnaires; 100 youth interviews have no corresponding Parent Part 1 interview. All youth who completed a mailed questionnaire have a corresponding Parent Part 1 interview; the questionnaire booklets were assembled based on key parent responses. Parents were asked about youth activities such as school attendance and employment and youth survey questions were customized based on the key responses.

Ninety-five percent of the parent/guardian interviews were conducted in English and 5 percent conducted in Spanish. Of youth who were interviewed, 96 percent were interviewed in English and 4 percent in Spanish.

**Wave 4.** In Wave 4 incentives were offered to all respondents as in Wave 3. In the initial letter sent to parents/youth, parent/guardians were offered \$20 to complete an interview and youth were offered an additional \$20 to complete a telephone interview or a mail questionnaire. Letters were sent to families in February 2007 and details about the incentives were included, as well as a toll-free number to schedule an interview. Later in the interview process to improve response rates, parents were given the option of completing a mail questionnaire containing a subset of questions asked in the interview for a \$15 incentive or completing an abbreviated form

of the interview for \$20. The interview period was March 2007 through November 2007 and the mail survey period began in August 2007 and extended into April of 2008.

As in Wave 3, if youth were over age 18 and had been interviewed in a prior wave, we attempted to contact both the youth and the parent/guardian concurrently. Consequently, it is possible to have a youth interview without a corresponding parent/guardian interview or mail survey in Waves 3 and 4. At the close of the interview period, there were a total of 4,910 Parent Part 1 interviews including 240 abbreviated versions of the interview, 1,590 Parent Part 2, and 2,500 Youth interviews. At the close of the mail survey data collection period, there were 450 youth questionnaires and 500 parent questionnaires. Of those responding to either the youth interview or youth mail survey, 60 youth have no corresponding Parent Part 1 interview or questionnaires. Most youth who completed a mailed questionnaire have a corresponding Parent Part 1 interview; the questionnaire booklets were assembled based on key parent responses. Parents were asked about youth activities such as school attendance and employment and youth survey questions were customized based on the key responses. A small number of parents did not complete an interview or the mail questionnaire but returned a postcard indicating that they would like to have a questionnaire sent directly to the youth. For those questionnaires, a set of questions were added in the youth's questionnaire to fill in the missing parent responses.

Ninety-five percent of the parent/guardian interviews were conducted in English and 5 percent conducted in Spanish. Of youth who were interviewed, 96 percent were interviewed in English and 4 percent in Spanish.

**Wave 5.** In Wave 5 incentives were offered to all respondents as in earlier waves. In the initial letter sent to parents/youth, parent/guardians were offered \$20 to complete an interview and youth were offered an additional \$20 to complete a telephone interview or a mail questionnaire. Letters were sent to families in March 2009 and details about the incentives were included, as well as a toll-free number to schedule an interview. Later in the interview process to improve response rates, parents were given the option of completing a mail questionnaire containing a subset of questions asked in the interview for a \$15 incentive or completing an abbreviated form of the interview for \$20. The interview period was April 2009 through October 2009 and the mail survey period began in May 2009 and extended into January of 2010.

If youth were over age 18 and had been interviewed in a prior wave, we attempted to contact both the youth and the parent/guardian concurrently. Consequently, it is possible to have a youth interview without a corresponding parent/guardian interview or mail survey in Waves 3, 4, and 5. At the close of the interview period, there was a total of 4,540 Parent Part 1 interviews including 70 abbreviated versions of the interview, 1,590 Parent Part 2, and 2,410 Youth interviews. At the close of the mail survey data collection period, there were 790 youth questionnaires and 580 parent questionnaires. Of those responding to either the youth interview or youth mail survey, 200 youth have no corresponding Parent Part 1 interview or questionnaires. The questionnaire booklets were assembled based on key parent responses for those with a Parent Part 1 if the parent requested a mail questionnaire for the young adult. Parents were asked about youth activities such as school attendance and employment and youth survey questions were customized based on the key responses. Some parents did not complete an interview or the mail questionnaire but returned a postcard indicating that they would like to have a questionnaire sent directly to the youth. In July of 2009 all potential youth interview non-respondents were sent a questionnaire to optionally complete in place of an interview. For those questionnaires that did

not have the parent responses when the questionnaire was mailed, a set of questions were added in the youth's questionnaire to fill in the missing parent responses.

Ninety-five percent of the parent/guardian interviews were conducted in English and 5 percent conducted in Spanish. Of youth who were interviewed, 97 percent were interviewed in English and 3 percent in Spanish.

### **Student Assessment**

The NLTS2 student assessment provides a picture of secondary-school performance, as well as other elements related to postsecondary school success. Sources for this type of data include (a) a direct assessment/interview or (b) an alternate assessment. The direct assessment/interview is a one-time face-to-face assessment and interview of youth with disabilities ages 16 to 18. The assessment measures achievement in reading, math, science, and social studies. The interview collects information about students' self-determination skills, self-concept, and attitudes toward school and learning. Assessments were conducted in 2002 and 2004 with youth who were 16 to 18 years old.

The first step in the assessment process was the hiring of field assessors in districts attended by the designated age-eligible NLTS2 youth during the 2001-02 or 2003-04 school year. In the fall, approximately 1,000 field assessors were trained and prepared to assess youth throughout the country. Assessments began in March in 2002 and in January 2004. Field assessors contacted schools to arrange and set up times for assessments. Considerable effort was invested by assessors in locating youth who had moved or changed schools. A screening questionnaire was used as a first point of contact to determine whether a student should receive a direct assessment or an alternate assessment. An alternate assessment was used when a student was not cognitively or behaviorally able to complete a direct assessment. The alternate assessment is a rating scale that is completed by either the student's classroom teacher or another knowledgeable person.

In Wave 1, 2,580 direct and 580 alternate assessments were completed. In Wave 2, 2,650 direct and 480 alternate assessments were completed, for a combined total of 5,220 direct and 1,050 alternate assessments.

#### **School Data Collection**

The NLTS2 conceptual framework holds that classroom context, curriculum, instruction, accommodations, and assessment are crucial to student outcomes. Further, students' school experiences extend beyond the classroom, so that related services, IEP goals, and participation in district/state assessments all have a place in students' experiences and can relate to student progress. These data are best provided by school staff who are most knowledgeable about the student's classroom experiences and school programs. Sources for this type of data include (a) a mail survey of teachers of general education academic classes—if students took such a class—and (b) a mail survey of school staff who were most knowledgeable about students' overall programs and school characteristics. Mail surveys collected information about the overall programs and performance of students' with disabilities as well as aspects of their classroom experiences in general education academic classes and in vocational education and special education settings.

The first step in the school data collection process was to identify the schools attended by NLTS2 students during the 2001-02 school year. School attendance data had been collected as part of the parent interview during the summer and fall of 2001. Parent responses relating to schools were coded (e.g., address, phone) using the QED database. For identified schools not in the QED database or for students for whom there was no parent interview, school district records collected for sampling were used to identify students' schools. Names of students thought to attend each school were sent to schools for verification using the School Enrollment Form. In addition to verification of enrollment, the school enrollment form requested that schools provide the name of a school staff member (i.e., school coordinator) who would be willing to oversee the distribution of school surveys for NLTS2 students attending each school. Participation agreements were signed by coordinators, who received reimbursement for their efforts at varying levels, depending on the number of NLTS2 students in the school.

In March 2002, packets were sent to coordinators, and to school principals in schools that did not name a coordinator, which included a general education academic teacher questionnaire for each sample member (with instructions to return the questionnaire if a student did not have such a class), a school program questionnaire for each sample member, and a single school characteristics survey for the school.<sup>4</sup> In the initial mailing, both the teacher questionnaire and school program questionnaire had a \$5 bill attached as an incentive for the teacher to complete the questionnaire. A second packet was sent in April 2002. Additional mailings were conducted to individual teachers in May 2002. Because response to the questionnaires was initially low, additional packets were mailed in September and November 2002 to school coordinators and principals. A total of 5,640 school program surveys and 2,590 general education academic teacher surveys were completed.

In Wave 2, the first step in the school data collection process was to identify whether NLTS2 students were attending school during the 2003-04 school year, since some students had graduated, aged out, or dropped out of high school and were working or pursuing postsecondary education. School attendance data had been collected as part of the parent interview during the summer and fall of 2003. Parent responses relating to schools were coded (e.g., address, phone) using the QED database. For identified schools not in the QED database or for students for whom there was no current parent interview, the last known school was used. A last known school could be a school identified during the previous school data collection, previous parent interview, or even school district records collected during sampling.

In August 2003, a list of schools and the number of study students attending those schools was sent to special education directors at school districts where students were sampled. They were asked to identify a staff member (i.e., school coordinator) to oversee the distribution of school surveys for NLTS2 students attending each school.

In October 2003, names of students thought to attend each school were sent to the identified school coordinators or the school principal for verification using the School Enrollment Form. For schools that had not identified a school coordinator, the school enrollment form requested that schools identify a school coordinator. In addition, the School Enrollment Form asked the staff member to indicate whether the student would have a general education academic class in the spring semester. Participation agreements were signed by coordinators, who received

<sup>&</sup>lt;sup>4</sup> School characteristics survey data not for public release.

reimbursement for their efforts at varying levels, depending on the number of NLTS2 students in the school.

In February 2004, packets were sent to coordinators, and to school principals in schools that did not name a coordinator. Packets included a general education academic teacher questionnaire, excluding sample members who were known not to have such classes; a school program questionnaire for each sample member; and a single school characteristics survey for any school that had not previously completed one. In the initial mailing, both the teacher questionnaire and school program questionnaire had a \$5 bill attached as an incentive for the teacher to complete the questionnaire. Reminder postcards and additional packets were sent in March, April, and May 2004. In the fall of 2004, certain schools and students were targeted for follow-up and these schools were mailed additional packets in October. A total of 4,280 school program surveys and 1,860 general education academic teacher surveys were completed.

The first request to schools for transcript data was sent in 2002. Between March 2002 and September 2009, eight waves of requests were sent to all NLTS2 schools and district offices attended by NLTS2 participants. Each request mailed to a school or district office contained a letter describing the study and a cover page to be returned with each student's transcript. The cover page requested that the registrar or other school or district staff member indicate the following information, if not already included on the transcript,: enrollment or exit status, grade level, special education courses, course content, vocational courses, and absentee information.

Returned requests that included the student's transcript and indicated that the student had graduated, aged out, or dropped out were considered to be complete transcripts and no further requests for that student's information were made. Returns indicating that a student was still attending the school or that the transcript was incomplete were considered to be partial transcripts and an updated transcript was requested again at a later date. If returned forms indicated that the student had moved to another school, transcript request material was sent to the new school, using school contact information provided by parents and youth during interviews and mail surveys and/or information provided by the prior school. At the close of transcript data collection processing in 2009, requests had been made for 11,270 students' transcripts; 9,500 records with at least partial transcript information were returned and 1,770 individual transcript requests were not returned.

Course data for 8,210 of the returned transcripts were coded; the remaining 1,300 responses did not have data that could be coded, including 870 students who were in programs where they did not receive a transcript.

Duplicate data entry was conducted on 1,000 of the 8,210 coded transcripts (12%) to help train and monitor the reliability of members of the coding team.

# **Response Rates**

In evaluating the quality of a survey sample, there are two primary considerations: statistical precision and the potential for bias. The survey response rate is pertinent to both in that an unexpectedly low response rate can leave a study with insufficient statistical precision and it might, although does not necessarily, produce a biased sample—i.e., one that does not accurately

<sup>&</sup>lt;sup>5</sup> School characteristics survey data not for public release.

represent the universe from which the sample was selected. Two approaches to calculating the response rates for the different data collection instruments are presented (Javitz and Wagner 2005).

NLTS2 has defined an eligible sample appropriate to each data collection source and has used that eligible sample as the denominator in calculating and reporting response rates. Eligible samples generally have been defined to include (1) all living youth for whom the data collection is applicable (e.g., only youth still in school are eligible for a school survey; only youth taking a general education academic class are eligible for the General Education Academic Teacher Survey, etc.), (2) all youth other than those whose parents have actively denied consent for their participation or who have asked to be permanently withdrawn from the study, and (3) all youth for whom there is location information that makes contact with a respondent possible (e.g., an accurate address and/or phone number for a parent, the name of the school a youth attends). Using these definitions of eligible samples, response rates for telephone interviews with parents have exceeded 80 percent, student assessment rates have exceeded 70 percent, and school survey rates have reached about 60 percent. This sample is referred to as the "practical" eligible sample.

In response to a request from the Office of Management and Budget, calculations were made that impose a much broader notion of eligible sample—i.e., including youth as eligible even if they could not be reached for an interview or survey because no location information is available. This definition, of course, results in much lower response rates than have been calculated and reported thus far and is referred to as the "maximum" eligible sample.

Table 2 specifies the number of respondents for each data collection in Waves 1, 2, 3, 4, and 5 of NLTS2 and the associated response rates, calculated by using both the maximum and practical eligible samples, as indicated in the exhibit notes. Note that the sample obtained for each data collection source was weighted so that it accurately represents the universe of students, defined by age and disability category, from which the NLTS2 sample was selected, regardless of response rate.

Table 2. Response rates for Wave 1 through Wave 5 NLTS2 data collection

	Maximum Eligible Sample	Practical Eligible Sample	Number with Completed Instrument	Response Rate for Maximum Sample <sup>a</sup>	Response Rate for Practical Sample
Wave 1				•	
Parent interviews/mail survey	11,250 <sup>a</sup>	11,250	9,230	82.1%	82.1%
Student's School Program Survey	11,130 <sup>b</sup>	10,520	5,590	50.2%	53.1%
General Education Academic					
Teacher Survey	7,650 <sup>c</sup>	7,110	2,580	33.7%	36.2%
School Characteristics Survey	11,130 <sup>d</sup>	10,520	5,960	53.5%	56.6%
Student Assessment	5,960 <sup>e</sup>	5,070	3,190	53.6%	63.0%
Wave 2					
Parent/youth interviews/youth survey	11,230 <sup>f</sup>	11,230	6,860	61.1%	61.1%
Student's School Program Survey	8,480 <sup>g</sup>	7,820	4,080	48.1%	52.2%
General Education Academic					
Teacher Survey	5,470 <sup>h</sup>	4,870	1,980	36.3%	40.8%
Student Assessment	5,240 <sup>i</sup>	4,340	3,140	59.8%	72.2%

See notes at end of table.

Table 2. Response rates for Wave 1 through Wave 5 NLTS2 data collection—continued

Wave 3					
Parent/youth interviews/youth survey	11,230 <sup>j</sup>	11,230	5,660	50.4%	50.4%
Wave 4					
Parent/youth interviews and surveys	11,130 <sup>k</sup>	11,130	5,570	50.1%	50.1%
Wave 5					
Parent/youth interviews and surveys	11,080 <sup>l</sup>	11,080	5,320	48.0%	48.0%
Student Transcripts	11,270	11,270	9,070	80.5%	80.5%

<sup>&</sup>lt;sup>a</sup> 30 deceased youth were eliminated from the pool of eligible sample members, reducing that pool from 11,270 originally selected members to 11,250.

<sup>&</sup>lt;sup>b</sup> Only youth who were in school in the 2001-02 school year (i.e., not known to have left school) were eligible for this school-based survey, producing an eligible sample of 11,130 (11,270-120). However, 610 sample members who were otherwise eligible had actively refused consent for school surveys or had asked to be withdrawn from the study, so no attempt was made to secure a completed questionnaire for them.

<sup>&</sup>lt;sup>c</sup> Only youth who were in school in the 2001-02 school year (i.e., not known to have left school) and who were thought to be taking a general education academic class (i.e., were not known not to be taking such a class) were eligible for this class-specific survey, producing an eligible sample of 7,650 (11,270-(120+3,480)). The resulting response rate is an underestimate of the true response rate because an unknown number of those in the eligible pool for whom a questionnaire was not returned had no data because there the student took no relevant class. Further, 540 sample members who were otherwise eligible had actively refused consent for school surveys or had asked to be withdrawn from the study, so no attempt was made to secure a completed questionnaire for them.

<sup>&</sup>lt;sup>d</sup> Only youth who were in school in the 2001-02 school year (i.e., not known to have left school) were eligible for this school-based survey, producing an eligible sample of 11,130 (11,270-120). However, 610 sample members who were otherwise eligible had actively refused consent for school surveys or had asked to be withdrawn from the study, so no attempt was made to secure a completed questionnaire for them.

<sup>&</sup>lt;sup>e</sup> Only youth who were at least 16 or older were eligible for the assessment, producing an eligible pool of 5,960 (11,240-5,290). However, 890 sample members who were otherwise eligible had refused consent for the assessment or had asked to be withdrawn from the study, so no attempt was made to complete an assessment for them.

<sup>&</sup>lt;sup>f</sup> 44 deceased youth were eliminated from the pool of eligible sample members in Wave 2, reducing that pool from 11,270 originally selected members to 11,230.

<sup>&</sup>lt;sup>9</sup> Only youth who were in school in the 2003-04 school year (i.e., not known to have left school) were eligible for this school-based survey, producing an eligible sample of 8,480 (11,230-2,750). However, 670 sample members who were otherwise eligible had actively refused consent for school surveys or had asked to be withdrawn from the study, so no attempt was made to secure a completed questionnaire for them.

<sup>&</sup>lt;sup>h</sup> Only youth who were in school in the 2003-04 school year (i.e., not known to have left school) and who were thought to be taking a general education academic class (i.e., were not known not to be taking such a class) were eligible for this class-specific survey, producing an eligible sample of 5,470 (11,230-(2,750+3,010)). The resulting response rate is an underestimate of the true response rate because an unknown number of those in the eligible pool for whom a questionnaire was not returned had no data because the student took no relevant class. Further, 600 sample members who were otherwise eligible had actively refused consent for school surveys or had asked to be withdrawn from the study, so no attempt was made to secure a completed questionnaire for them.

<sup>&</sup>lt;sup>i</sup> Only youth who were ages 16 or older were eligible for the assessment, producing an eligible pool for Wave 2 of 5,240 (11,240-6,000). However, 900 youth who were otherwise eligible had refused consent for the assessment or had asked to be withdrawn from the study, so no attempt was made to complete an assessment for them.

<sup>&</sup>lt;sup>j</sup> 50 deceased youth were eliminated from the pool of eligible sample members in Wave 3, reducing that pool from 11,270 originally selected members to 11,230.

<sup>&</sup>lt;sup>k</sup> 140 deceased youth were eliminated from the pool of eligible sample members in Wave 4, reducing that pool from 11,270 originally selected members to 11,130.

<sup>&</sup>lt;sup>1</sup>190 deceased youth were eliminated from the pool of eligible sample members in Wave 5, reducing that pool from 11,270 originally selected members to 11,080.

## **Weighting Data**

The percentages and means reported in the data are estimates of the true values for the population of youth with disabilities in the NLTS2 age range. The estimates are calculated from responses for each of the data collection instruments. The response for each sample member is weighted to represent the number of youth in his or her disability category in the kind of LEA (i.e., region, size, and wealth) or special school from which he or she was selected.

Table 3 illustrates the concept of sample weighting and its effect on percentages or means that are calculated for students with disabilities as a group. In this example, 10 students are included in a sample, 1 from each of 10 disability groups, and each has a hypothetical value regarding whether that student participated in organized group activities outside of school (1 for yes, 0 for no). Six students participate in such activities, which results in an unweighted value of 60 percent participating. However, that percentage does not accurately represent the national population of students with disabilities because many more students are classified as having a learning disability than orthopedic or other health impairments, for example. Therefore, in calculating a population estimate, weights in the example are applied that correspond to the proportion of students in the population that are from each disability category (actual NLTS2 weights account for disability category and several aspects of the districts from which they were chosen). The sample weights for this example appear in column C. Using these weights, the weighted population estimate is 87 percent. The percentages in all NLTS2 tables are similarly weighted population estimates, whereas the sample sizes are the actual numbers of cases on which the weighted estimates are based (similar to the 10 cases in table 3).

Table 3. Example of a weighted percentage calculation

	A	В	С	D
Disability Category	Number in Sample	Participated in Group Activities	Example Weight for Category	Weighted Value for Category
Learning disability	1	1	5.5	5.5
Speech/language impairment	1	1	2.2	2.2
Mental retardation	1	1	1.1	1.1
Emotional disturbance	1	0	.9	0
Hearing impairment	1	1	.2	.2
Visual impairment	1	1	.1	.1
Orthopedic impairment	1	0	.1	0
Other health impairment	1	1	.6	.6
Autism	1	0	.2	0
Multiple disabilities	1	0	.1	0
Total	10	6	10	8.7
	Unweighted sample percentage = 60 percent (Column B total divided by Column A total)		Weighted popula 87 percent (Colum divided by Colum	mn D total

The students in LEAs and state schools with data for each instrument were weighted to represent the universe of students in LEAs and state schools by using the following process:

• For each of the 64 LEA sampling cells, an LEA student sampling weight was computed. This weight is the ratio of the number of students in all LEAs in that cell in the universe

of LEAs divided by the number of students in participating LEAs in that cell. The weight represents the number of students in the universe who are represented by each student in the participating LEAs. For example, if participating LEAs in a particular cell served 4,000 students and the universe of LEAs in the cell served 400,000 students, the LEA student sampling weight would be 100.

- For each of the 64 LEA cells, the number of students in each disability category was estimated by multiplying the number of students with that disability on the rosters of participating LEAs in a cell by the adjusted LEA student sampling weight for that cell. For example, if 350 students with learning disabilities were served by LEAs in a cell and if the LEA student sampling weight for that cell was 100 (i.e., each student in the sample of participating LEAs in that cell represented 100 students in the universe), that cell in the universe would have an estimated 35,000 students with learning disabilities.
- For the state schools, the number of students in each disability category was estimated by multiplying the number of students with that disability on the rosters by the inverse of the proportion of state schools that submitted rosters.
- The initial student sampling weights were adjusted by disability category so that the sum of the weights (i.e., the initial student sampling weights multiplied by the number of students with completed interviews) was equal to the number of students in the geographic and wealth cells of each size stratum. The adjustments typically were small and essentially served as a nonresponse adjustment. However, the adjustments could become substantial when respondents were relatively few (as occurred in the small and medium strata for the lowest-incidence disabilities); in those cases, some cells might not include any respondents, and it was necessary to adjust the weights of other respondents to compensate. Two constraints were imposed on the adjustments: (1) within each size stratum, the cells' weights could not vary from the average weight by more than a factor of 2, and (2) the average weight within each size stratum could not be larger than 4 times the overall average weight. These constraints substantially increased the efficiency of the sample at the cost of introducing a small amount of weighting bias (discussed below).
- In a final step, the weights were adjusted so that they summed to the number of students in each disability category, as reported to OSEP by the states for the 2000-01 school year (Office of Special Education Programs 2001).

The imposition of constraints on the adjusted weights increased sampling efficiency at the cost of introducing a small amount of bias. The average efficiency increased from 51.7 percent to 67.4 percent; the largest increases in sampling efficiency occurred for youth with emotional disturbances (from 44.4 percent to 81.0 percent) and for those with multiple disabilities (from 32.1 percent to 56.8 percent). Biases introduced by the imposition of constraints on the student weights generally were very small. The largest bias in size distribution was for youth with visual impairments (decreasing from 17.1 percent in the smallest size stratum to 11.6 percent) and those with autism (decreasing from 21.3 percent in the smallest size stratum to 17.5 percent). All other changes in the size distribution were 1.5 percent or less, and the average absolute change was only 0.4 percent. The largest bias in wealth distribution was for those with multiple disabilities (from 22.2 percent in wealth stratum 3 percent to 16.6 percent, and from 18.3 percent in wealth stratum 4 percent to 22.0 percent). All other changes were 2.1 percent or less, and the average

absolute change was only 0.6 percent. All biases in regional distribution were 2.1 percent or less, and the average absolute change was only 0.5 percent. Considering the increase in sampling efficiency, these biases are considered acceptable.

The reason for the reduction in the proportion of students represented in the cells mentioned above is that those cells had relatively few students with interview/survey/assessment data. For example, small LEAs had only 20 students with visual impairments with data, requiring that they represent an estimated 1,700 students with visual impairments from small LEAs. The weighting program determined that the average weight required (i.e., 81.0) violated the constraints and therefore reduced these weights to a more reasonable value (i.e., 56.2).

# **Estimating Standard Errors**

Each estimate reported in the data tables is accompanied by a standard error. A standard error acknowledges that any population estimate that is calculated from a sample will only approximate the true value for the population. The true population value will fall within the range demarcated by the estimate, plus or minus the standard error, 95 percent of the time. For example, if the estimate for youth's having transition planning is 88.8 percent with a standard error of 1.4, one can be 95 percent confident that the true percentage of receipt of transition planning for the population is between 87.4 percent and 90.2 percent.

Because the NLTS2 sample is both stratified and clustered, calculating standard errors by formula is not straightforward. Standard errors for means and proportions were estimated by using pseudo-replication, a procedure that is widely used by the U.S. Census Bureau and other federal agencies involved in fielding complex surveys. To that end, a set of weights was developed for each of 32 balanced half-replicate subsamples. Each half-replicate involved selecting half of the total set of LEAs that provided contact information by using a partial factorial balanced design (resulting in about half of the LEAs being selected within each stratum) and then weighting that half to represent the entire universe. The half-replicates were used to estimate the variance of a sample mean by: (1) calculating the mean of the variable of interest on the full sample and each half-sample with the appropriate weights; (2) calculating the squares of the deviations of the half-sample estimate from the full-sample estimate; and (3) adding the squared deviations and dividing by (n-1), where n is the number of half-replicates.

Although the procedure of pseudo-replication is less unwieldy than developing formulas for calculating standard errors, it is not easily implemented in the Statistical Analysis System (SAS), the analysis program used for NLTS2, and it is computationally expensive.

When respondents are independent and identically distributed, the effective sample size for a weighted sample of N respondents can be approximated as

$$N_{eff} = N \begin{pmatrix} E^{2}[W] / \\ E^{2}[W] + V[W] \end{pmatrix}$$

where  $N_{eff}$  is the effective sample size,  $E^2[W]$  is the square of the arithmetic average of the weights, and V[W] is the variance of the weights. For a variable X, the standard error of estimate can typically be approximated by  $\sqrt{V[X]/N_{eff}}$ , where V[X] is the weighted variance of X.

NLTS2 respondents are not independent of each other because they are clustered in LEAs, and the intracluster correlation is not zero. However, because the intracluster correlation

traditionally has been quite small, the formula for the effective sample size shown above has worked well. To be conservative, however, the initial estimate was multiplied by a "safety factor" that assured that the standard error of estimate was not underestimated.

To determine the adequacy of fit of the variance estimate on the basis of the effective sample size and to estimate the required safety factor, 24 questions with 95 categorical and 2 continuous responses were selected. Standard errors of estimates were calculated for each response category and the mean response to each question for each disability group, using both pseudo-replication and the formula involving effective sample size. A safety factor of 1.25 resulted in the effective sample size standard error estimate underestimating the pseudo-replicate standard error estimate for 92 percent of the categorical responses and 89 percent of the mean responses. Because the pseudo-replicate estimates of standard error are themselves estimates of the true standard error and are therefore subject to sampling variability, this was considered an adequate margin of safety. All standard errors in Wave 1 were 3.0 percent or less, except for categories of deaf-blindness, traumatic brain injury, and visual impairments, where sample sizes were small. For these disability categories, the standard errors were at most 4.9 percent, 4.9 percent, and 3.5 percent, respectively, for dichotomous variables.

# **Treatment of Disability Categorization Issues**

It is important to understand several points about the categorization of students by primary disability. Information about the nature of students' disabilities came from rosters of all students in the NLTS2 age range receiving special education services in the 2000-01 school year under the auspices of participating LEAs and state-supported special schools. Students are assigned to a disability category on the basis of the primary disability designated by the student's school or district. Although there are federal guidelines in making category assignments (table 4), criteria and methods for assigning students to categories vary from state to state and even among districts within states. Thus, substantial variation in the nature and severity of disabilities included in categories is possible (e.g., see MacMillan and Siperstein 2002) and NLTS2 data should not be interpreted as describing students who truly had a particular disability, but rather as describing students who were categorized as having that primary disability by their school or district. Therefore, it is appropriate to conclude that these descriptive data are nationally generalizable to youth in the NLTS2 age range who were classified as having a particular primary disability in the 2000-01 school year.

Table 4. Definitions of disabilities<sup>1</sup>

**Autism.** A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age 3, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child's educational performance is adversely affected primarily because the child has a serious emotional disturbance as defined below. As with traumatic brain injury, autism was added as a separate category of disability in 1990 under P.L. 101-476.

**Deaf/blindness.** A combination of hearing and visual impairments causing such severe communication, developmental, and educational problems that the child cannot be accommodated either in a program specifically for the deaf or in a program specifically for the blind.

See notes at end of table.

#### Table 4. Definitions of disabilities—Continued

**Emotional disturbance.**<sup>2</sup> A condition exhibiting one or more of the following characteristics, displayed over a long period and to a marked degree, that adversely affect a child's educational performance:

- An inability to learn that cannot be explained by intellectual, sensory, or health factors
- An inability to build or maintain satisfactory interpersonal relationships with peers or teachers
- Inappropriate types of behavior or feelings under normal circumstances
- A general pervasive mood of unhappiness or depression
- A tendency to develop physical symptoms or fears associated with personal or school problems.

This term includes schizophrenia, but does not include students who are socially maladjusted, unless they have a serious emotional disturbance.

**Hearing impairment, including deafness.** An impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance. Deafness is a hearing impairment so severe that the child cannot understand what is being said even with a hearing aid.

**Mental retardation.** Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects a child's educational performance.

**Multiple disabilities.** A combination of impairments (e.g., mental retardation-blindness, mental retardation-physical disabilities) that causes such severe educational problems that the child cannot be accommodated in a special education program solely for one of the impairments. The term does not include deaf-blindness.

**Orthopedic impairment.** A severe orthopedic impairment that adversely affects educational performance. The term includes impairments such as amputation, absence of a limb, cerebral palsy, poliomyelitis, and bone tuberculosis.

**Other health impairment.** Having limited strength, vitality, or alertness due to chronic or acute health problems such as a heart condition, rheumatic fever, asthma, hemophilia, and leukemia, which adversely affect educational performance.

**Specific learning disability.** A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or perform mathematical calculations. This term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This term does not include children who have learning problems that are primarily the result of visual, hearing, or motor disabilities; mental retardation; or environmental, cultural, or economic disadvantage.

**Speech or language impairment.** A communication disorder such as stuttering, impaired articulation, language impairment, or a voice impairment that adversely affects a child's educational performance.

**Traumatic brain injury.** An acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma. As with autism, traumatic brain injury was added as a separate category of disability in 1990 under P.L. 101-476.

**Visual impairment, including blindness.** An impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

<sup>&</sup>lt;sup>1</sup> From Knoblauch and Sorenson (1998).

<sup>&</sup>lt;sup>2</sup> P.L. 105-17, the Individuals with Disabilities Education Act Amendments of 1997, changed "serious emotional disturbance" to "emotional disturbance." The change has no substantive or legal significance. It is intended strictly to eliminate any negative connotation of the term "serious."

<sup>&</sup>lt;sup>3</sup> OSEP guidelines indicate that "children with ADD, where ADD is a chronic or acute health problem resulting in limited alertness, may be considered disabled under Part B solely on the basis of this disorder under the 'other health impaired' category in situations where special education and related services are needed because of the ADD" (Davila 1991). See also Federal regulation 300.7 (c) (9).

The exception to reliance on school or district category assignment involves students with deaf-blindness. District variations in assigning students with both hearing and visual impairments to the category of deaf-blindness result in many students with those dual disabilities being assigned to other primary disability categories, most often hearing impairment, visual impairment, and multiple disabilities. Because of these classification differences, national estimates suggest that there were 3,200 students with deaf-blindness who were ages 12 to 17 in 1999 (National Technical Assistance Center 1999), whereas the federal child count indicated that 680 were classified with deaf-blindness as their primary disability (Office of Special Education Programs 2001).

To describe the characteristics and experiences of the larger body of youth with deaf-blindness more accurately and precisely, students whose parents, schools, or school districts<sup>6</sup> reported them as having both a hearing and a visual impairment were assigned to the deaf-blindness category for purposes of NLTS2 reporting, regardless of the primary disability category assigned by the school or school district. This practice increased the number of youth with deafblindness for whom parent data were collected from 20 who were categorized by their school or district as having deafblindness as a primary disability to 170. Table 5 indicates the number of students reassigned to the deaf-blindness category and their original designations of primary disability.

Table 5.	Original primary disability category of youth assigned to deaf- blindness category for NLTS2 reporting purposes

Original primary disability category	Number
Deaf-blindness	20
Visual impairment	50
Hearing impairment	40
Multiple disabilities	30
Orthopedic impairment	10
Mental retardation	10
Traumatic brain injury	<10
Other health impairment	<10
Speech/language impairment	<10
Autism	<10
Total	170

#### **NLTS2 Data Tables**

Researchers are encouraged to view the NLTS2 data tables available on the NLTS2 Web site. NLTS2 data are weighted estimates for students receiving special education that generalize to the national population. Each variable from the parent/youth telephone interview is cross-tabulated by disability, age, gender, youth's family household income, and race/ethnicity. In addition, school survey data variables are cross-tabulated by grade and urbanicity of the school. Student assessment variables are cross-tabulated by disability, gender, race/ethnicity, and student's family household income, as well as the age and grade of students at the time they were assessed in 2002 or 2004. Users can view and download the data in cross-tabular format by selecting "Data Tables" at http://www.nlts2.org/gindex.html or http://www.nlts2.org/nlts2 textonly/tindex.html.

<sup>&</sup>lt;sup>6</sup> Some special schools and school districts reported secondary disabilities for students. For example, a student with visual impairment as his or her primary disability category also could have been reported as having a hearing impairment as a secondary disability.

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