

November 2004



NATIONAL LONGITUDINAL
TRANSITION STUDY 2

TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES

**A Special Topic Report of Findings from the National
Longitudinal Transition Study-2 (NLTS2)**

Prepared for:
Office of Special Education Programs
U.S. Department of Education

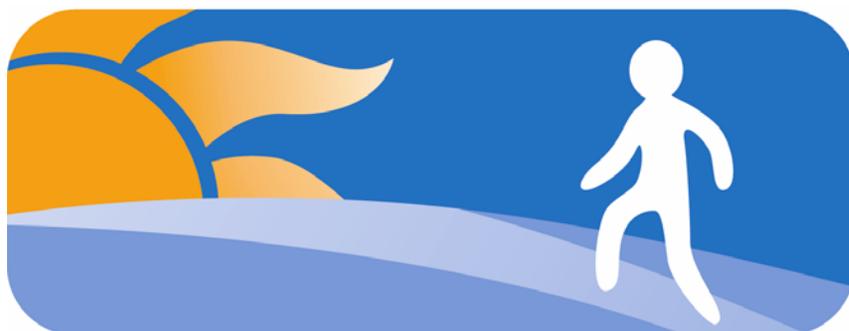
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SRI International
333 Ravenswood Avenue Menlo Park, CA 94025



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Prepared for:
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Prepared by:
Renée Cameto, Phyllis Levine, and Mary Wagner

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EXECUTIVE SUMMARY

In its 1997 reauthorization, the Individuals with Disabilities Education Act (IDEA '97) acknowledged that a primary purpose of the free appropriate public education guaranteed to children and youth with disabilities is to “prepare them for employment and independent living” [IDEA '97 Final Regulations, Section 300.1(a)]. Requirements were added in IDEA '97 to include transition planning in the individualized education programs (IEPs) of all secondary school students with disabilities beginning at age 14 (or earlier, if appropriate) in an effort to prepare them for the challenges of adulthood. The Office of Special Education Programs (OSEP) of the U.S. Department of Education is working to provide the information needed to improve the transition and postschool outcomes of secondary school students with disabilities, in part through the National Longitudinal Transition Study-2 (NLTS2). The findings of this 10-year study generalize to youth with disabilities nationally and to youth in each of the 12 federal special education disability categories in use for students in the NLTS2 age range.

This report examines efforts to prepare youth with disabilities for the transition from secondary school to adulthood. It highlights the transition planning process undertaken during high school with and for youth with disabilities as they prepare for life after school, specifically addressing the following topics:

- Age of students at initiation of transition planning
- Students' transition goals
- Participants in transition planning
- Planned courses of study and instruction in transition planning
- Identification of needed postschool services
- Schools' contacts with agencies and organizations on behalf of transitioning students
- Postschool service information provided to parents
- Perceptions of parents and teachers regarding the suitability and usefulness of the transition planning process.

These topics are addressed by using data from two important sources:

- Parents or guardians of NLTS2 study members provided input in telephone interviews and mail surveys conducted in spring and summer of 2001. They provided information about their participation and satisfaction with the transition planning process.
- School staff best able to describe students' overall programs were surveyed by mail in spring of the 2001-02 school year. They described the transition planning process.

From these data, NLTS2 provides a national picture of transition planning, including variations in that planning for students who differ in disability and other characteristics. Four main themes about the transition planning process emerge from this national picture:

- The extent to which parents' and students' expectations for the transition planning process are being met varies among secondary-school-age students with disabilities.

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- Transition planning evolves as students progress through their high school years.
- Transition planning reflects the diversity of students' needs and abilities.
- The transition planning process differs for students with different household incomes and racial/ethnic backgrounds.

A Mixed Picture of Transition Planning

NLTS2 findings demonstrate that the basic requirement for transition planning is being met for many students with disabilities. Almost 90% of secondary school students receiving special education services have transition planning under way on their behalf, with about two-thirds having begun the process by age 14 as required by IDEA '97. Furthermore, school staff report that about three-fourths of students, regardless of age, have a course of study identified that is intended to help them achieve their transition goals.

Participants in transition planning. The vast majority of students and their parents participate in transition planning.

- Among the 85% of parents participating in the transition planning process, two-thirds report being satisfied with their level of participation.
- School staff report that about 70% of students with transition plans participate actively in the planning by providing input (58%) or taking a leadership role (12%). Yet about 6% of secondary school students with disabilities reportedly do not attend IEP or transition planning meetings, and 15% have parents who do not attend.

About one-third of participating parents report that the IEP and transition planning processes for their children do not provide as much opportunity for their involvement in decisions as they would like. Further, although the partnership between families and schools in setting goals for students is a reality for about one-third of students, parents report that the school mostly decides students' goals for almost half of students, and mostly parents and youth set goals for one in five students. Despite the intention that families, schools, and other organizations collaborate in the process, according to school personnel, transition planning involves primarily families and school staff; representatives of outside organizations participate actively in students' transition planning only infrequently. Overall 14% of students have the participation of a Vocational Rehabilitation (VR) counselor and 17% have the involvement of a representative from any other outside organization in their transition planning.

Students' goals. Students' transition goals heavily emphasize employment and postsecondary education, and the transition planning process appropriately reflects these emphases. According to school staff:

- Postsecondary education accommodations are identified as postschool service needs for about half of youth, and vocational training or employment services are needs identified for more than one-third.
- Contacts with outside organizations as part of the transition planning process are made primarily with postsecondary education institutions and employers or vocational training programs.

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Supports for transition. Regardless of who participates in the transition planning process and the contacts made on students' behalf, the process will be effective only if students' school programs help them achieve their transition goals. According to school staff:

- Approximately three-fourths of students have IEPs that specify a course of study that is intended to help them meet their transition goals, and about 80% have programs that are at least fairly well suited to meet their transition goals.
- However, nearly 20% of secondary school students with disabilities have programs that are only somewhat well suited or not at all well suited to meet their transition goals.

Providing information about postschool service options to parents is an important part of the school's role in bridging the gap between school and adult services for students with disabilities. NLTS2 found that school staff report providing information about postschool services and programs to parents of three-fourths of students who are 17 and 18 years old, leaving one in four parents of youth this age without this information.

The Transition Planning Process Develops over Time

Transition planning is not a uniform experience for students as they age; indeed, several aspects of the process are different for older students. Some of the differences, such as the role youth take in the process, may occur because of the increased maturity that comes with age. Other differences may reflect an increasing sense of urgency on everyone's part as high school exit approaches.

Initial transition planning. The mean age for the initiation of transition planning is 14.4 years. Three-fourths of 14-year-olds have had transition planning started, and the process is increasingly likely to occur for older students. By the time students are 17 or 18 years old, 96% have had transition planning, reflecting a 20-percentage-point increase over 14-year-olds.

Participants in transition planning. Older students appear to exhibit greater responsibility for postschool goals relative to younger students, which may partly explain their greater likelihood of participating actively in transition planning. School staff reported on the types of participants taking part in the transition planning process.

- One-third of 14-year-old students with disabilities are present for transition planning but do not participate—a passive role taken by only one-fifth of 17- and 18-year-olds.
- Providing active input into planning increases for older students, with more than 60% of 17- and 18-year-olds providing input, compared with 45% of younger students.
- Student leadership of the transition planning process also is more likely among older students; more than 15% of 17- and 18-year olds take this role.

Although the participation of parents (85%), special education teachers (97%), and general education teachers (59%) varies little for students across the age range, the participation of a general education vocational teacher in transition planning is greater for older students; this difference reflects the increased likelihood of older students' taking vocational education courses and the approach of students' transition to postsecondary vocational training and employment. About 40% of 17- and 18-year-old students have a general education vocational teacher involved in their transition planning, twice as many as among 14-year-olds.

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Consistent with the increasing emphasis on vocational goals and services for older students, the participation of a state vocational rehabilitation counselor is more common for these students. One in four 17- and 18-year-old students have such an individual involved in their transition planning, compared with one in ten 14-year-olds. Similarly, the active participation of representatives from a variety of other outside organizations increases as early adulthood approaches from one in ten 15-year-olds to one in five 17- and 18-year-old students.

Supports for transition. Instruction focused specifically on transition planning (e.g., a specialized curriculum designed to help students assess options and develop strategies for leaving secondary school and transitioning to adult life) is one way to help students reach their goals. According to school staff, 64% of students have received such instruction, older students (76% for 17- and 18-year-olds) are more likely than younger students (48% for 14-year-olds) to have had it.

Generally, more post-high-school service needs are identified as part of transition planning as students approach the transition to adult service systems, according to school staff report. Most notably, vocational training and employment service needs are more commonly identified for older students than for younger students. Parents of older students are more likely to receive information from the schools about adult services, and school contacts with many kinds of outside organizations on behalf of students with disabilities intensify as school exit nears.

Transition Planning Reflects a Diversity of Needs and Abilities

The goals and needs specified in students' transition plans, the participants in the planning process, and many transition-related activities differ markedly across the disability categories. School staff provided information on the following aspects of students' transition plans.

Students' goals. Students with disabilities have multiple goals that reflect their future plans. That the various transition goals are shared by some students in all disability categories masks a large range across categories in the percentages of students who have each goal. For example:

- Although about half of students with disabilities overall plan to go to college, that plan varies from 10% of students with mental retardation to more than 70% of students with visual impairments.
- Postsecondary vocational training is planned for about 40% of students with disabilities overall; however, almost 60% of students with other health impairments have this goal, compared with about 20% of students with visual impairments.
- Supported employment is the transition goal for fewer than 10% of students with disabilities overall, but it is the goal of almost 40% of students with autism.

Supports for transition. The percentages of students for whom a variety of supports are in place (i.e., a course of study students should pursue to meet their transition goals, instruction focused on transition planning skills, and a list of postschool service needs consistent with students' goals) vary with students' disability category.

- Specification of the students' course of study in the IEP relative to transition goals varies from 65% of students with hearing impairments to 75% of students with learning disabilities.

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- Instruction for transition planning designed to assist students in assessing their options and developing strategies for transition is received by 55% to 70% of students across categories. Students with autism or multiple disabilities are the most likely to receive this type of instruction; students with other health impairments are the least likely to do so.

Students' transition plans also identify a wide range of service and program needs for the post-high-school period.

- The transition plans for students with learning disabilities or hearing, orthopedic, or other health impairments are the most likely to specify postsecondary education accommodations.
- The plans for students with autism, multiple disabilities, or deaf-blindness typically specify a constellation of postschool services, including vocational training, supported living arrangements, and behavioral interventions, as well as transportation, social work, mental health, and communication services.
- The plans for students with emotional disturbances are very likely to specify behavioral interventions and mental health services.
- For students with specific sensory or physical disabilities, the plans typically suggest corresponding services such as, audiology, vision and mobility services, occupational, or physical therapy.

The types of organizations that schools contact regarding programs or employment for students when they leave high school reflect both the students' postschool goals and identified needs. Schools typically make more contacts for students in the disability categories that have more identified needs. Schools also are more likely to provide parents of students in the disability categories that have multiple identified service needs with information about appropriate services than parents of students in disability categories with fewer identified needs.

Perceptions of the processes. Parents and school staff of students in each disability category hold a range of views regarding transition planning and the school programs designed to meet students' transition goals. For example:

- School staff report that more than half of students with visual impairments have programs that are very well suited to help them achieve their transition goals, whereas only one-third of students with emotional disturbances have such highly rated school programs.
- More than 4 in 10 students with mental retardation or visual impairments have parents who report that the transition planning process is very useful, although less than 3 in 10 students with autism have parents who felt this way.
- Parents report that one in four students with emotional disturbances or other health impairments have transition plans that are not very or not at all useful for their children, compared to 1 in 12 students with mental retardation whose parents report limited usefulness of transition planning.

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The Transition Planning Process Reflects Income and Racial/Ethnic Differences

The characteristics of the transition planning process that are associated with students' demographic characteristics are limited largely to some transition goals, parents' and youth's participation in the transition planning process, and parents' perceptions of that process.

Students' goals. Information on students' goals was provided by school staff. These data indicate that household income is strongly associated with the likelihood of students' having a transition goal of attending a 2- or 4-year college. Consistent with this finding, students from upper-income households are more likely than those from lower-income households to plan on attending a college or university, have postsecondary education accommodations identified as part of transition planning, and have schools make contacts with colleges and universities on their behalf. Larger proportions of African-American students than of their white peers have independent living or enhancement of social/interpersonal relationships as transition goals.

Participants in transition planning. In other data provided by school staff, household income and racial/ethnic differences are strongly associated with the participation of parents in the transition planning process.

- Students in the lowest household income group are less likely than those from the highest-income households to have parents who participate actively in transition planning.
- African-American students are less likely than white students to have parents who take part in transition planning.

Parents reported on their satisfaction with their level of involvement in the transition planning process and how useful they perceive that process to be. An interesting relationship exists between their satisfaction with involvement and perceptions of usefulness. The parents of students from culturally diverse backgrounds and from low-income households tend to be less satisfied with their level of involvement, but are more likely to perceive the transition planning process as useful, compared with parents of white students and those from more affluent families. Perhaps the lower level of involvement of these parents is not a reflection of the value they place on the process but more an indicator of their availability to participate, their comfort with school staff or procedures, or cultural influences.

School staff report more passive participation by African-American students, who also assume leadership roles less frequently than do their white or Hispanic peers.

It is encouraging to note that no differences exist between income or racial/ethnic groups regarding the participation of school staff or vocational rehabilitation counselors in the transition planning process. On the other hand, participants in transition planning from outside organizations (other than vocational rehabilitation) are more likely to be involved with planning for students from low-income households.

The information presented in this report is only the first step in the exploration of transition planning and its effects using NLTS2 data. Later reports will address the question of whether or not differences in students' transition planning relate to their achievements in postsecondary education, employment, and independence during early adulthood.

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1. PLANNING FOR TRANSITION FROM SCHOOL TO ADULTHOOD FOR SECONDARY SCHOOL YOUTH WITH DISABILITIES

Transition planning became a focus of federal policy for students with disabilities in the mid-1980s, when it was conceptualized as a “bridge” from school to young adulthood (Will, 1984). Since that time, transition planning and postschool outcomes have received much attention in special education research, with results influencing changes in classroom instruction, school policies, and legislation.

In early conceptualizations of educational transition, concerns focused on the “floundering period” (Halpern, 1990, 1992), the interval starting immediately after high school through the time the young adult either went to college or found a job. Since then, the term has become both more complex and less limited regarding age and time. The current notion of transition generally refers to the passage from one distinct educational stage or program to the next, during which children and youth may enter, continue, or exit from special education services, as determined by age, disability assessment, and/or individual need. Such transitions present challenges for children and youth served by special education and provide focus for practitioners.

This report examines efforts to prepare youth with disabilities for the last of these transitions—the movement from high school to young adulthood. It highlights the transition planning process undertaken during high school with and for youth with disabilities as they prepare for life after school.

Planning and Services for the Transition from Secondary School to Adult Life

In its 1997 reauthorization, the Individuals with Disabilities Education Act (IDEA '97) acknowledged that a primary purpose of the free appropriate public education guaranteed to children and youth with disabilities is to “prepare them for employment and independent living” [IDEA '97 Final Regulations, Section 300.1(a)]. Requirements were added to IDEA '97 to include transition planning in the individualized education programs (IEPs) of all secondary school students with disabilities beginning at age 14 or earlier in an effort to prepare them for the challenges of adulthood. Specifically, IDEA '97 requires that:

for each student with a disability beginning at age 14 (or younger, if determined appropriate by the IEP team), and updated annually, a statement of the transition service needs of the student under the applicable components of the student’s IEP that focuses on the student’s courses of study (such as participation in advanced-placement courses or a vocational education program); and for each student beginning at age 16 (or younger, if determined appropriate by the IEP team), a statement of needed transition services for the student, including, if appropriate, a statement of the interagency responsibilities or any needed linkages [IDEA '97 Final Regulations, Section 300.347(b)(1, 2)].

One outcome of these transition requirements has been to focus attention on how students’ educational programs can be planned to help them achieve their goals for life after secondary school and how postschool services can be identified that will promote students’ successful movement from school to postschool life.

Together with their parents, students with disabilities are expected to play a vital role in their own transition planning, particularly with regard to career decisions, residential options, recreational and social choices, and independent living (National Information Center for Children and Youth with Disabilities [NICHCY], 1999). Student's preferences and interests are intended to be an integral part of the decision-making regarding transition services. Depending on the purpose of the IEP meeting, in addition to students, parents, and school staff, other participants may be involved as well. For example, if one of the purposes of the meeting is to consider transition services for a student, school staff are expected to invite "a representative of any other agency that is likely to be responsible for providing or paying for transition services" [IDEA '97 Final Regulations, Section 300.344(b)(3)(i); NICHCY, 1999].

Students receiving special education services in secondary school are being encouraged to develop decision-making and self-determination skills to enhance their ability to express their views and to advocate for their preferences and needs, and to make judgments that reflect competence, motivation, and personal ambition (Abery & Stancliffe, 1996; Zhang, 2001). Instead of having life choices made for them, the preferences and expectations of youth with disabilities are increasingly being expressed and taken into account, especially with regard to their planning their transition from school to adult life (Johnson & Sharpe, 2000). Recent research on self-directed transition planning suggests that many students are attending their IEP meetings (Hasazi, Furney, & DeStefano, 1999) and that their self-determination is a cornerstone for successful transitions. Students who are expected to take responsibility for planning their transitions and who are trained to engage in self-determination activities early in secondary school have also been shown to take greater responsibility for their lives after school (Malian & Nevin, 2002; Price, Wolensky, & Mulligan, 2002; Wehmeyer & Schwartz, 1997).

This report, one in a series from the National Longitudinal Transition Study-2 (NLTS2), provides a national picture of the transition planning processes for secondary school youth with disabilities in a single school year. It does not, however, assess the implementation of the transition planning requirements of IDEA '97. NLTS2 findings presented here will be augmented in the next few years as youth, their parents, school staff, and other professionals further develop youth's transition plans and as youth complete their high school careers and participate in their communities as young adults. Future NLTS2 reports will elucidate how the transition services and supports students receive during secondary school affect their transition experiences and their success in the early adult life.

Background on NLTS2

The Office of Special Education Programs (OSEP) of the U.S. Department of Education is working to provide the information needed to improve the education and outcomes of secondary school students with disabilities, in part through NLTS2. NLTS2 is a 10-year study that is documenting the characteristics, experiences, and outcomes of a nationally representative sample of more than 11,000 youth who were ages 13 through 16 and were receiving special education services in grade 7 or above in the 2000-01 school year. NLTS2 findings generalize to youth with disabilities nationally and to youth in each of the 12 federal special education disability categories in use for students in the NLTS2 age range.¹

¹ Appendix A provides additional information about the NLTS2 design, methods, and measurement, including definitions of disability categories. Further details, including other NLTS2 reports, are available at www.nlts2.org.

Focus of the Report

Research Questions

This report considers the following questions for secondary-school-age youth with disabilities:

- What are the characteristics of the transition planning process? Specifically:
 - Age of students at initiation of transition planning
 - Participants in transition planning
 - Students' transition goals
 - School-based supports for transition
 - Schools' contacts with agencies and organizations on behalf of transitioning students
 - Postschool service information provided to parents.
- What are the perceptions of parents and teachers regarding the suitability and usefulness of the transition planning process?
- How do these factors differ for students with different primary disability classifications and selected demographic characteristics?

Information Sources

These questions are addressed using data collected from parents and from school staff who serve NLTS2 youth. Parents or guardians² of NLTS2 study members are a key source of information on the characteristics of students, their educational histories, and their lives outside of school. In addition, parents relay information regarding their participation in and satisfaction with the transition planning process. Telephone interviews conducted with parents in the spring and summer of 2001 addressed these important topics; mail questionnaires were administered to parents who could not be reached by phone. An 82% response rate resulted in interview/survey data for 9,230 students, who were ages 13 through 17 at the time.

In addition to parents, this report relies on information provided by staff in the schools NLTS2 sample members attended. The multipurpose students' school program survey involved mail questionnaires sent in the 2001-02 school year to school staff members identified as those who were most knowledgeable (often special educators) about the overall school programs of individual students; the survey had a response rate of 59%. Responses from these educators provide information about the students' transition goals, the participants in the transition planning process, whether the IEP specifies a course of study to meet the transition goals, the receipt of instruction in transition planning skills, the types of transition services identified as those that students will need after graduation, and the contacts made on behalf of students by schools as part of transition planning.

² For simplicity, parents and guardians are referred to here as "parents."

Technical Notes

Readers should remember the following issues when interpreting the findings in this report:

- **Findings are weighted.** NLTS2 was designed to provide a national picture of the characteristics, experiences, and achievements of youth with disabilities nationally in the NLTS2 age range. Therefore, all the statistics presented in this report are weighted estimates of the national population of youth with disabilities in the NLTS2 age group, as well as each disability category individually. Each response for each sample member is weighted to represent the number of youth nationally that are in his or her disability category in the kind of school district (defined by region, student enrollment, and proportion of students in poverty) or special school from which s/he was selected.
- **Standard errors.** For each mean and percentage in this report, a standard error is presented that indicates the precision of the estimate. For example, a variable with a weighted estimated value of 50% and a standard error of 2 means that the value for the total population, if it had been measured, would, with 95% confidence, lie between 48% and 52% (i.e., within plus or minus 2 percentage points of 50%). Thus, smaller standard errors allow for greater confidence to be placed in the estimate, whereas larger ones indicate caution is required in interpreting results.
- **Small samples.** Although NLTS2 data are weighted to represent the population, the size of standard errors is influenced heavily by the actual number of youth in a given group (e.g., a disability category). Groups with very small samples have comparatively large standard errors (in fact, findings are not reported separately for groups of fewer than 35 sample members). For example, because of the relatively few youth with deaf-blindness, estimates for that group have relatively large standard errors. Therefore, readers should be cautious in interpreting results for this group and others with small sample sizes and large standard errors.
- **Significant differences.** In discussions of the descriptive statistics, only differences among groups that reach a level of statistical significance of at least .05 are mentioned in the text; significance levels generally are noted there as well.

Organization of the Report

The chapters in this report reflect the research questions posed. Chapter 2 describes the transition planning process, including the students' age at initiation, their transition goals, whether they have a prescribed course of study to meet those goals, whether they receive instruction in transition planning, and their role in the planning process. Additionally, the chapter describes participation of parents and school personnel in the transition planning process, the postschool service needs identified for students, and the agencies or organization contacted on behalf of students regarding postschool programs and services. Chapter 3 presents parents' perspectives on the usefulness of the transition planning process and teachers' perceptions of the suitability of the transition goals. Chapter 4 summarizes the emerging themes regarding transition planning that NLTS2 data suggest. Appendix A provides additional information on NLTS2 methodological features. Appendix B describes the individual and household characteristics of students represented in NLTS2, and Appendix C presents the unweighted sample sizes for all data tables and figures in the report.

2. TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES

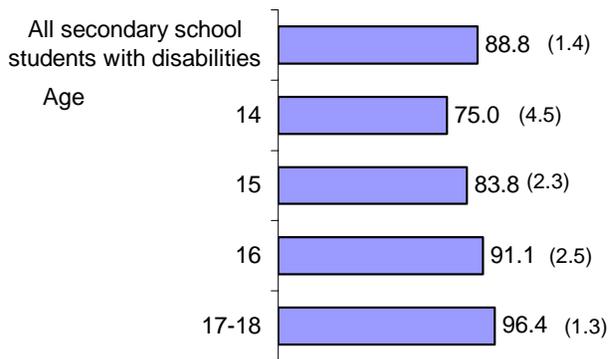
NLTS2 provides an up-to-date view of transition planning carried out for students with disabilities nationally. This chapter describes the following aspects of the transition planning process for secondary school students with disabilities:

- Initiation of transition planning
- Participants in transition planning
- Students' transition goals
- School-based supports for transition
- Schools' contacts with agencies and organizations on behalf of transitioning students
- Postschool service information provided to parents.

Information is drawn from the NLTS2 student's school program survey, which was completed in the 2001-02 school year by the school staff members who were most knowledgeable about the overall school programs of NLTS2 sample members. Findings are presented for students with disabilities as a whole and for students who differ in age, primary disability category, and selected demographic characteristics, when significant.

Initiation of Transition Planning

Exhibit 2-1
STUDENTS WHO HAVE HAD PLANNING FOR
TRANSITION TO ADULT LIFE, BY AGE



Source: NLTS2 Wave 1 student's school program survey.
Standard errors are in parentheses.

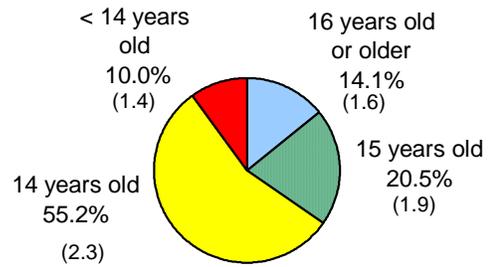
steadily across the age span. School staff report that transition planning takes place for 75% of 14-year-old students, 84% of 15-year-olds, 91% of 16-year-olds, and 96% of 17- and 18-year-olds ($p < .001$ for 14-year-olds vs. 17- and 18-year-olds).

NLTS2 findings suggest that transition planning requirements are being addressed for the large majority of students with disabilities. According to school staff, planning for the transition to adult life occurs for almost 90% of students with disabilities in secondary school (Exhibit 2-1). The 10% for whom transition planning apparently is not occurring include many of the 5% of students in this age range who discontinue their participation in special education in a 16-month period (Wagner, 2003) and, thus, would no longer be eligible for transition planning under IDEA.

The percentages of students for whom transition planning has taken place increase

For students for whom transition planning has begun, school staff were asked “what age was the student when transition planning first started for him or her?” Among these students school staff report that, on average, youth with disabilities begin formal transition planning at 14.4 years of age, with two-thirds of students beginning the process by age 14 (Exhibit 2-2). Twenty percent of students begin planning for their transition to adulthood at age 15, and another 14% begin the process at age 16 or older.

**Exhibit 2-2
AGE TRANSITION PLAN BEGAN**



Mean age is 14.4.

Source: NLTS2 Wave 1 student school program surveys. Standard errors are in parentheses.

Students’ Transition Goals

The postschool goals set by students, along with their families and the professionals who support them, are at the heart of effective transition planning. Services and supports that are identified and transition contacts that are made are intended to help students progress toward their transition goals. School staff who were most knowledgeable about the overall school programs of students who have begun transition planning were asked to complete the following statement: “For the period following high school, the primary goal of this student’s education program is to prepare him/her to...” Exhibit 2-3 lists the goals respondents indicated.¹

Exhibit 2-3 STUDENTS’ POST-HIGH-SCHOOL GOALS		
	Percentage with Goal	Standard Error
Postsecondary education/training		
Attend a 2- or 4-year college	46.8	2.3
Attend a postsecondary vocational training program	39.7	2.3
Employment		
Obtain competitive employment	53.2	2.3
Obtain supported employment	8.2	1.3
Obtain sheltered employment	4.8	1.0
Other		
Live independently	49.6	2.3
Maximize functional independence	20.1	1.9
Enhance social/interpersonal relationships and satisfaction	25.3	2.0

Source: NLTS2 Wave 1 student’s school program survey.
Note: Includes only students with transition planning.

Students with disabilities have postschool goals that are similar to those of other young adults in society, including continuing education and training, attaining employment, enhancing social competencies, and increasing independence. The majority of secondary students have some kind of postsecondary education or vocational training as a goal. On average, slightly fewer than half of students with disabilities look forward to 2- or 4-year college, and about 40% have a goal of attending a postsecondary vocational training program. About half of students with disabilities have competitive employment as their primary transition goal; small proportions of students are working toward supported (8%) or sheltered employment (5%).

The school programs of many students with disabilities mirror these kinds of goals. For example, comparisons of course-taking patterns of students with disabilities represented in NLTS2 and a similar population in 1987 indicate a significant increase in students taking core

¹ Respondents could indicate more than one goal.

academic courses that could prepare them to meet their college enrollment goals (Wagner, Newman, & Cameto, 2004). In addition, about 60% of students with disabilities take vocational education in a given semester, including about half who take occupationally specific vocational education (Cameto & Wagner, 2003); research has demonstrated that students who take such courses in high school are significantly more likely to go on to postsecondary vocational training and/or to obtain competitive employment—common goals for students with disabilities (Wagner, Blackorby, Cameto, & Newman, 1993).

Living independently is a primary transition goal for half of students with disabilities, with about one in five students working toward maximizing their functional independence, and one in four working on enhancing their social or interpersonal relationships. Transition goals do not vary markedly for students with disabilities by age.

Participants in Transition Planning

Effective transition planning programs are characterized by the consistent involvement and participation of appropriate individuals (Hasazi et al., 1999; Johnson & Sharpe, 2000; National Council on Disability, 2000). The IEP requirements of IDEA '97 emphasize “the involvement of parents and students, together with regular and special education personnel in making individual decisions to support each student’s educational success” (NICHCY, 2000). In addition, if the focus of an IEP meeting is transition planning, a student must be invited to participate in the meeting as well, and the school must notify the student’s parents in this regard (Final IDEA '97 regulations, Section 300.345).

For each NLTS2 sample member for whom transition planning has begun, school staff were asked “who has actively participated in this students’ transition planning?”² Special education staff, parents, and students are the most likely to be active participants in transition planning. Virtually all students with disabilities with transition planning (97%) have a special educator actively involved, and 85% have parents who participate. All but about 6% of these students participate in some way although only about 70% do so actively by providing input (58%) or taking a leadership role (12%) in the process.

A variety of other individuals actively participate in the transition planning process, including general education academic and vocational teachers, other school staff, and representatives from outside organizations. However, these participants are more likely to be involved in transition planning for some students with disabilities than for others. For example, about 60% of students have a general education academic teacher who is actively involved in transition planning, even though about 70% take a general education academic class in a given semester (Wagner, 2003). General education teachers are significantly more likely to participate actively in transition planning for students who have 2- or 4-year college as a postschool goal than for students who do not have a college goal (67% vs. 49%, $p < .001$). School counselors and school administrators are actively involved in transition planning for 61% and 56% of students with disabilities, respectively. Fewer general education vocational teachers are actively involved (32%), despite 43% of students with disabilities taking general education vocational classes in a given semester (Cameto & Wagner, 2003). General education vocational teachers are

² Because no definition or criteria were provided for the term “actively participated”; the term could mean different things to different respondents.

significantly more likely to participate actively in transition planning when students plan to attend a postsecondary vocational training program as a goal than when they do not (40% vs. 27%, $p < .01$).

Related service personnel are actively involved with only a fairly small percentage of students' transition planning (18%), even though parents of 59% of students with disabilities report they receive related services from their schools (Levine, Marder, & Wagner, 2004). However, when students' postschool goals include obtaining supported or sheltered employment, maximizing functional independence, or improving social and interpersonal skills, related service personnel are more likely to participate actively in transition planning than when students have other postschool goals. For example, for 43% of students with a postschool goal of obtaining supported employment related services personnel actively participate in their transition planning, whereas those personnel participate in planning for only 16% of students who do not have this goal ($p < .001$).

The level of participation in transition planning of personnel from organizations outside the school is much lower than that of school staff. According to school staff, more students (14%) have the active involvement of a vocational rehabilitation (VR) counselor than personnel from any other single type of outside organization. Students with goals of obtaining sheltered employment or maximizing functional independence are twice as likely as students who do not have these goals to have the active participation of a VR counselor in their transition planning process (28% vs. 14%, $p < .05$). Students with goals of obtaining supported or sheltered employment, enhancing social and interpersonal relationships, or maximizing functional independence also are more likely to have the active participation of personnel from an outside organization (e.g., social service, advocate) than students who do not have these transition goals (19% vs. 4%, $p < .001$ for supported employment; 22% vs. 5%, $p < .01$ for sheltered employment; 10% vs. 4%, $p < .05$ for social and interpersonal relationships; and 11% vs. 4%, $p < .05$ for maximizing functional independence).

Although the likelihood of parents' participation in transition planning does not differ significantly for students of different ages, the active participation of some school staff and agency representatives is more likely for older students. School staff report that general education vocational teachers are actively involved in transition planning for significantly larger proportions of 17- and 18-year-old students than for younger students (40% vs. 20%, for 14-year-olds, $p < .01$, Exhibit 2-4); this is not surprising given that vocational education course-taking increases significantly across the grade levels (i.e., from 55% of middle school students to 68% of high school juniors and seniors [Cameto & Wagner, 2003]). The active involvement of school administrators is more likely for older students as well (63% among 17- or 18-year-olds vs. 44% among 15-year-olds, $p < .01$). Notably, the likelihood of active participation by staff from outside organizations increases as older students approach the time of transition to adult life. Fewer than 1 in 10 students up to age 16 are reported to have a VR counselor actively involved in transition planning, compared with 1 in 4 students who are 17 or 18 years old ($p < .001$).

Exhibit 2-4
ACTIVE PARTICIPANTS IN TRANSITION PLANNING
FOR STUDENTS WITH A TRANSITION PLAN

	All Students with Transition Planning	14 Years Old	15 Years Old	16 Years Old	17-18 Years Old
Percentage of students who:					
Do not attend planning meetings or participate in the planning process	5.5 (1.1)	11.0 (3.8)	6.5 (2.5)	7.6 (2.6)	2.0 (1.0)
Are present for planning but participate little	24.6 (2.0)	28.9 (5.6)	26.8 (4.5)	27.3 (4.3)	20.7 (3.0)
Provide input in planning as moderately active participant	57.7 (2.3)	47.0 (6.1)	61.1 (5.0)	54.9 (4.8)	61.3 (3.6)
Are leaders in planning	12.2 (1.5)	13.1 (4.1)	5.6 (2.3)	10.2 (2.9)	16.0 (2.7)
Percentage with active participation by:					
Parent/guardian					
	84.8 (1.7)	79.2 (4.9)	88.0 (3.2)	85.9 (3.3)	84.5 (2.6)
School personnel					
Special education teacher	97.4 (.7)	97.3 (2.0)	97.0 (1.7)	98.1 (1.3)	97.3 (1.2)
General education academic teacher	58.6 (2.3)	59.0 (6.0)	63.6 (4.8)	54.9 (4.7)	58.2 (3.6)
General education vocational teacher	31.7 (2.1)	20.2 (4.9)	24.4 (4.3)	30.1 (4.3)	40.1 (3.6)
School counselor	61.4 (2.2)	48.9 (6.1)	62.3 (4.8)	60.7 (4.6)	65.7 (3.4)
Related services personnel	18.4 (1.8)	12.1 (4.0)	19.5 (3.9)	25.4 (4.1)	16.0 (2.7)
School administrator	55.6 (2.3)	47.9 (6.1)	43.9 (4.9)	57.9 (4.7)	62.6 (3.5)
Outside agency staff and others					
Vocational rehabilitation counselor	14.3 (1.6)	2.7 (2.0)	5.2 (2.2)	9.7 (2.8)	25.4 (3.2)
Others	16.9 (1.7)	14.6 (4.3)	10.9 (3.1)	18.3 (3.6)	19.9 (2.9)

Source: NLTS2 Wave 1 student's school program survey.

Note: The category "Others" includes staff of the Social Security Administration or other outside agencies, employers, representatives of postsecondary education institutions, and advocates or consultants.

Note: Includes only students with transition planning.

Standard errors are in parentheses.

The quality of the participation in transition planning of youth themselves also differs across the age range. When asked to "describe the student's role in his or her transition planning,"³ school staff report a gradual but significant shift to greater participation and leadership of the

³ Staff were instructed to select one of the following response choices: The student: has not attended planning meetings or participated in the transition planning process; has been present in discussions of transition planning, but participated very little or not at all; has provided some input into transition planning as a moderately active participant; or has taken a leadership role in the transition planning process, helping set the direction of discussions, goals, and programs or service needs identified.

transition planning process for older students, compared with their younger peers. For example, the level of moderately active participation of students in the transition planning process is 14 percentage points greater among students who are 17 or 18 years old than among 14-year-olds (61% vs. 47%, $p < .05$). Also, about 6% of students who are 15 years old take a leadership role in transition planning, compared with 16% of those who are 17 or 18 years old ($p < .01$).

Self-determination skills also relate to students' participation in transition planning (Exhibit 2-5). Students who are described by school staff as being able to ask for what they need "well" or "very well" are significantly more likely to participate more fully in transition planning. The percentage of students who are simply present during transition planning discussions and participate little is much greater among students who do not ask for what they need well than among those who are more able to do so (34% vs. 18%, $p < .001$). Conversely, the percentage of students who take a leadership role in transition planning is much greater among those who ask for what they need well than among students who do not (16% vs. 6%, $p < .01$).

Exhibit 2-5
STUDENTS' ROLE IN TRANSITION PLANNING, BY ABILITY TO ASK FOR WHAT THEY NEED

	Students ask for what they need	
	Not well	Well
Percentage who:		
Do not attend planning meetings or participate in the planning process	9.0 (2.1)	3.2* (1.1)
Are present for planning but participate little	34.5 (3.5)	17.8*** (2.4)
Provide input in planning as moderately active participant	50.7 (3.7)	62.7* (3.0)
Are leaders in planning	5.6 (1.7)	16.4*** (2.3)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Statistically significant difference in a two-tailed test at the following levels: * $p < .05$, *** $p < .001$.

Standard errors are in parentheses.

IDEA '97 encourages parents to be actively involved in their children's education, including participation in planning for their children's educational programs (U.S. Department of Education, 2003). In fact, increasing "informed parent participation and involvement in education planning, life planning, and decision-making" is considered one of the central challenges in developing more results-driven systems and enhancing research-to-practice efforts that will support better outcomes for transitioning youth with disabilities (National Center on Secondary Education and Transition, 2004).

Against this backdrop, parents report that school staff most often determine goals when asked, "Did the school mostly come up with the goals on the youth's IEP and transition plan or was it mostly you and/or the youth who came up with the goals?" According to parents,

**Exhibit 2-6
DECISION-MAKING AT IEP MEETINGS ABOUT
TRANSITION PLANNING**

	Percentage	Standard Error
Parents report IEP goals are determined:		
Mostly by the school	44.8	1.7
Mostly by parent and/or youth	21.2	1.4
By a combination of all	33.0	1.6

Source: NLTS2 Wave 1 parent interviews.

school staff make most goal-setting decisions for 45% of students (Exhibit 2-6). Parents report that about 20% of students have goals determined primarily by the parent or youth. However, following best practice, for one-third of students goal-setting is a team decision that includes the teacher, parent, and/or student.

Transition Preparation and Supports

One of the requirements related to transition planning for students ages 14 years and older involves specifying in the IEP students' courses of study (e.g., participation in certain academic or vocational classes) to meet their transition goals. Additionally, a statement of needed postschool services must be in place by age 16, including, for example, postsecondary education, vocational training, or independent living supports. Students with disabilities can receive further support through instruction that focuses on transition planning skills; such instruction can help students understand their interests and abilities and make informed decisions about their future. NLTS2 investigated whether or not students' IEPs specify a course of study in support of their transition goals, whether or not they have participated in instruction in transition planning skills, and what services or programs students require after leaving high school.

In-school Transition Preparation and Supports

School staff were asked "did this student's transition plan or IEP specifically state what course of study or kinds of classes student should pursue to meet his postschool transition goals?" Overall, school staff report about three-fourths of students with disabilities have IEPs or transition plans that specify the course of study or kinds of classes they should pursue to meet their postschool transition goals (Exhibit 2-7). The likelihood of having a course of study specified in their transition plan does not vary significantly with their age. School staff also were asked if students who have begun transition planning have "received instruction specifically focused on transition planning, for example, a specialized curriculum designed to help students assess options and develop strategies for leaving secondary school and transitioning to adult life." Overall, almost two-thirds of students are reported to have received such instruction. However, this type of instruction is more likely to have occurred for older students, despite most students beginning transition planning by age 14. About half of 14- and 15-year-old students (48% and 54%, respectively) have received instruction focused on transition planning, compared with 76% of 17- and 18-year-olds ($p < .001$).

Exhibit 2-7
SUPPORTS AND SERVICES SPECIFIED IN TRANSITION PLANNING, BY AGE

	All Students with Transition Planning	14 Years Old	15 Years Old	16 Years Old	17 or 18 Years Old
Percentage who:					
Have an IEP or transition plan that specifies a course of study to meet transition goals	74.2 (2.0)	72.0 (5.4)	67.6 (4.7)	74.5 (4.1)	77.9 (3.0)
Have received instruction focused on transition planning	64.5 (2.3)	47.7 (6.2)	53.8 (5.3)	64.6 (4.7)	75.8 (3.2)
Percentage with identified needs for the following services after high school:					
Any services	76.2 (2.0)	62.9 (6.0)	74.0 (4.5)	76.6 (4.1)	81.3 (2.9)
Postsecondary education accommodations	47.6 (2.4)	41.3 (6.1)	49.5 (5.2)	46.4 (4.9)	49.4 (3.8)
Vocational training, placement, or support	37.7 (2.3)	24.0 (5.3)	31.8 (4.8)	41.4 (4.8)	42.8 (3.7)
Behavioral intervention	6.4 (1.2)	9.0 (3.5)	6.9 (2.6)	8.5 (4.3)	4.3 (1.5)
Social work services	6.4 (1.2)	5.6 (2.8)	5.1 (2.3)	6.5 (2.4)	7.2 (1.9)
Supported living arrangements	5.3 (1.1)	4.4 (2.5)	4.0 (2.0)	5.9 (2.3)	5.8 (1.8)
Mental health services	4.5 (1.0)	2.8 (2.0)	3.6 (1.9)	4.3 (2.0)	5.6 (1.7)
Speech/communication therapy or services	4.3 (1.0)	5.3 (2.8)	2.7 (1.7)	4.1 (1.9)	4.8 (1.6)
Occupational therapy	1.9 (.7)	1.3 (1.4)	1.2 (1.1)	2.9 (1.6)	1.9 (1.0)
Physical therapy	1.3 (.5)	1.0 (1.2)	1.0 (1.0)	1.5 (1.2)	1.4 (.9)
Audiology services	1.3 (.5)	2.2 (1.8)	.9 (1.0)	1.3 (1.1)	1.1 (.8)
Transportation assistance	5.7 (1.1)	2.2 (1.8)	4.8 (2.2)	6.1 (2.3)	6.9 (1.9)
Mobility training	1.2 (.5)	.7 (1.0)	.7 (.9)	1.2 (1.1)	1.7 (.7)
Vision services	.9 (.4)	1.2 (1.3)	.7 (.9)	.8 (.9)	1.0 (.7)
Nursing or other medical services	.7 (.4)	.4 (.8)	.7 (.9)	1.0 (1.0)	.7 (.6)
Other	5.0 (1.0)	3.8 (2.4)	3.0 (1.8)	5.5 (2.2)	5.9 (1.8)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Standard errors are in parentheses

Postschool Service Needs Identified

To assess the extent to which postschool services needs are being taken into account in transition planning for students with disabilities, school staff were asked, “what service or program needs were identified for this student after high school in his or her IEP or transition plan?” About three-fourths of students with disabilities have postschool needs for services identified as part of their transition planning. Two types of services predominate: accommodations to help in the pursuit of postsecondary education and vocational services to help in securing employment. Almost half of students have a need for postsecondary education accommodations specified in their transition plans, consistent with the postschool goal of half of students with disabilities for postsecondary education. The transition plans of 38% of students with disabilities specify vocational training, placement, or support services as postschool needs consistent with the postschool goal of a similar percentage of students with disabilities for postsecondary vocational education or training. Other types of services are reported for about 5% of students; those services include mental health, social work, and transportation services; behavioral interventions, and supported living arrangements. More specialized services, for example, occupational or physical therapy, are reported for even fewer students.

Older students (i.e., 17- and 18-year-olds) are more likely to have post-high-school service needs identified in their transition plans (81%) than their 14-year-old peers (63%, $p < .01$). Although many of the individual services listed in Exhibit 2-7 tend to be more frequently identified for older students, only in the case of vocational services do 14-year-old students (24%) differ significantly from their 17- and 18-year old peers (43%, $p < .01$).

Moreover, the types of postschool service needs identified during transition planning reflect students’ goals for adult life. Two-thirds of students planning on college attendance have postsecondary education accommodations specified as a needed service, compared with fewer than one-third of students who do not have college as a transition goal ($p < .001$, Exhibit 2-8). Similarly, the need for these accommodations is more commonly specified for students who plan on attending vocational school than for students who do not (56% vs. 42%, $p < .01$). No other postschool services are more likely for students with postsecondary education or vocational training goals or for students with independent living or competitive employment goals, with one exception: Students with an independent living goal are more likely than students who do not have this goal to have vocational service needs identified (44% vs. 32%, $p < .01$).

In contrast, students with postschool goals that include supported or sheltered employment, maximized functional independence, or enhanced social and interpersonal relationships are more likely to have many needed postschool services identified as part of their transition planning than students without such goals. These students are more likely than students who do not have these goals to have transition plans that specify postschool needs for vocational training, placement, or support; supported living arrangements, behavioral interventions; or mental health, social, speech/communication, and transportation services ($p < .05$ to $p < .001$).

Exhibit 2-8
POSTSCHOOL SERVICE NEEDS SPECIFIED IN TRANSITION PLANNING,
BY STUDENTS' POSTSCHOOL GOALS

	Students with goals:					
	2- or 4-year College		Vocational Training		Competitive Employment	
	No	Yes	No	Yes	No	Yes
Percentage with identified needs for the following services after high school:						
Postsecondary education accommodations	31.9 (2.9)	65.9*** (3.5)	42.5 (3.0)	56.1** (3.9)	48.0 (3.3)	47.7 (3.4)
Vocational training, placement, or support	56.6*** (3.1)	17.4 (2.8)	34.5 (2.9)	44.0 (3.9)	35.5 (3.2)	40.7 (3.4)
Behavioral intervention	8.7* (1.8)	4.1 (1.5)	6.0 (1.4)	7.4 (2.1)	6.2 (1.6)	6.9 (1.7)
Mental health services	6.1 (1.5)	2.8 (1.2)	5.3 (1.4)	3.4 (1.4)	5.8 (1.6)	3.4 (1.3)
Social work services	10.1*** (1.9)	2.3 (1.1)	7.5 (1.6)	4.8 (1.7)	7.3 (1.7)	5.7 (1.6)
Supported living arrangements	9.5*** (1.8)	.7 (.6)	7.6** (1.6)	2.0 (1.1)	8.3** (1.8)	2.7 (1.1)
Speech/communication therapy or services	6.2* (1.5)	2.1 (1.1)	4.9 (1.3)	3.4 (1.4)	6.4 (1.6)	2.4* (1.0)
Occupational training	2.2 (.9)	1.5 (.9)	2.2 (.9)	1.4 (.9)	2.7 (1.1)	1.2 (.7)
Physical therapy	1.9 (.9)	.6 (.6)	2.0* (.8)	0.2 (.4)	2.5* (1.0)	0.2 (.3)
Transportation assistance	9.2* (1.8)	1.9 (1.0)	8.3** (1.7)	2.0 (1.1)	9.7*** (2.0)	2.3 (1.0)
Vision services	1.0 (.6)	.8 (.7)	1.1 (.6)	.7 (.6)	1.3 (.8)	.5 (.5)
Audiology services	.8 (.6)	1.8 (1.0)	1.3 (.7)	1.2 (.9)	1.5 (.8)	1.0 (.7)
Mobility training	1.7 (.8)	.7 (.6)	1.5 (.7)	.8 (.7)	1.8 (.9)	.8 (.6)
Nursing or other medical services	1.2 (.7)	.2 (.3)	1.1 (.6)	.1 (.3)	1.3 (.8)	.2 (.3)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition plans.

Statistically significant difference in a two-tailed test at the following levels: *p<.05, **p<.01, ***p<.001.

Standard errors are in parentheses.

**Exhibit 2-8
POSTSCHOOL SERVICE NEEDS SPECIFIED IN TRANSITION PLANNING,
BY STUDENTS' POSTSCHOOL GOALS (Concluded)**

Students with goals:

	Supported Employment		Sheltered Employment		Enhanced Social or Interpersonal Relationships		Living Independently		Maximized Functional Independence	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Percentage with identified needs for the following services after high school										
Postsecondary education accommodations	50.7*** (2.6)	17.1 (3.8)	49.6*** (2.5)	13.7 (4.7)	50.9* (2.9)	38.8 (3.9)	46.7 (3.4)	48.9 (3.4)	52.1*** (2.8)	31.0 (4.2)
Vocational training, placement, or support	34.5 (2.5)	79.2*** (4.1)	36.5 (2.4)	71.5*** (6.2)	33.6 (2.8)	51.7*** (4.0)	32.4 (3.1)	44.3** (3.4)	32.9 (2.6)	59.1*** (4.5)
Behavioral intervention	6.0 (1.2)	12.0 (3.3)	6.0 (1.2)	16.5* (5.1)	4.0 (1.2)	13.7** (2.8)	6.1 (1.6)	7.0 (1.8)	5.1 (1.2)	12.0* (3.0)
Mental health services	3.7 (1.0)	13.6** (3.4)	3.7 (.9)	20.7** (5.5)	2.3 (.9)	11.2*** (2.5)	4.8 (1.4)	4.3 (1.4)	3.3 (1.0)	9.5* (2.7)
Social work services	5.2 (1.2)	19.6*** (4.0)	5.3 (1.1)	28.8*** (6.2)	4.1 (1.2)	13.4** (2.7)	6.6 (1.7)	6.4 (1.7)	4.8 (1.2)	13.0* (3.1)
Supported living arrangements	2.5 (.8)	36.6*** (4.8)	3.3 (.9)	45.0*** (6.8)	2.1 (.8)	14.9*** (2.9)	5.9 (1.6)	4.9 (1.5)	2.2 (.8)	18.0** (3.5)
Speech/communication therapy or services	3.6 (1.0)	12.2* (3.3)	3.1 (.9)	26.9*** (6.1)	3.0 (1.0)	8.1* (2.2)	4.8 (1.4)	3.8 (1.3)	2.7 (.9)	10.5** (2.8)
Occupational training	1.6 (.7)	4.6 (2.1)	1.6 (.6)	7.4 (3.6)	1.4 (.7)	3.3 (1.4)	2.4 (1.0)	1.4 (.8)	1.3 (.6)	4.0 (1.8)
Physical therapy	1.0 (.5)	4.1 (2.0)	.9 (.5)	8.5* (3.8)	.9 (.5)	2.5 (1.3)	2.1 (1.0)	.5 (.5)	.7 (.5)	3.5 (1.7)
Transportation assistance	3.4 (.9)	31.8*** (4.7)	4.1 (1.0)	38.8*** (6.7)	3.2 (1.0)	13.4*** (2.7)	7.0 (1.7)	4.6 (1.4)	2.9 (.9)	17.4*** (3.5)
Vision services	.8 (.5)	1.9 (1.4)	.8 (.4)	2.9 (2.3)	.6 (.4)	1.9 (1.1)	1.0 (.7)	.8 (.6)	.6 (.4)	2.2 (1.3)
Audiology services	1.2 (.6)	1.8 (1.3)	1.2 (.5)	2.7 (2.2)	.9 (.5)	2.4 (1.2)	1.2 (.7)	1.3 (.8)	1.1 (.6)	2.0 (1.3)
Mobility training	.9 (.5)	5.2 (2.2)	.9 (.5)	7.2 (3.5)	.6 (.4)	3.2 (1.4)	1.4 (.8)	1.1 (.7)	.5 (.4)	4.2* (1.8)
Nursing/medical services	.6 (.5)	1.6 (1.3)	.6 (.4)	1.8 (1.8)	.6 (.4)	1.1 (.8)	1.2 (.7)	.2 (.3)	.4 (.3)	2.0 (1.3)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition plans.

Statistically significant difference in a two-tailed test at the following levels: *p<.05, **p<.01, ***p<.001.

Standard errors are in parentheses.

School Contacts with Service Providers and Organizations on Behalf of Transitioning Students with Disabilities

Best practices in the transition field suggest that “effective transition planning and service depend upon functional linkages among schools, rehabilitation services, and other human service and community agencies” (National Center on Secondary Education and Transition, 2004). Coordination and collaboration between schools and service agencies that may provide services to youth with disabilities as they transition into the adult world can be a critical element in helping youth access those services and making their entry into adult life a more positive experience.

Although NLTS2 has not investigated the extent to which schools and agencies coordinate at the organizational level (e.g., have memoranda of understanding), the extent to which schools contact outside organizations and individuals as part of the transition planning process for individual students who had begun transition planning has been explored. School staff were asked if any of the organizations listed in Exhibit 2-9 were “contacted by the school or school system regarding programs or employment for this student when s/he leaves high school.” The percentage of students for whom schools make contacts with any one of these organizations ranges from fewer than 5% to almost 40%. The state VR agency is the organization contacted for the most students (38%). Contacts with colleges and vocational schools are equally likely; 24% of students with disabilities have contacts made on their behalf with each kind of institution. The school contacts a variety of employment organizations, including sheltered workshops (for 7% of students), supported employment programs (14%), vocational training programs (26%), and job placement agencies (24%). Employers (for 20% of students) and the military (15%) also are contacted. With the exception of VR agencies, school staff initiate contacts for fewer than one in five students with individual adult service agencies.

Contacts with certain agencies or types of organizations are more likely to occur for older students beginning at age 16, consistent with the IDEA '97 requirement for interagency involvement, if appropriate. Schools are significantly more likely to contact postsecondary education and training institutions for high school students preparing to leave school than those beginning high school; 38% of 17- and 18-year-old students have had colleges contacted on their behalf, and 32% have had vocational schools contacted, compared with 6% and 4% of 14-year-old students, respectively ($p < .001$). All sources of employment or job training programs are contacted significantly more often for older than younger students ($p < .001$ for 17- and 18-year olds, compared with 14-year-old students for employers, military, vocational training programs, and job placement agencies; $p < .01$ for supported and sheltered work programs).

By the time students with disabilities are 17 or 18 years old, more than half (56%) are reported to have had their schools contact the state VR agency on their behalf, compared with 16% of 15-year-olds ($p < .001$). The likelihood of schools contacting other social services on students' behalf also increases (9% of 15-year-old students vs. 26% of 17- and 18-year-olds, $p < .05$).

Exhibit 2-9
CONTACTS MADE BY SCHOOLS ON BEHALF OF STUDENTS WITH
TRANSITION PLANNING, BY AGE

	All Students with Transition Planning	14 Years Old	15 Years Old	16 Years Old	17 or 18 Years Old
Percentage with contacts made with:					
Postsecondary education					
2- and 4-year colleges	24.0 (2.6)	6.3 (3.6)	13.1 (4.4)	21.1 (5.3)	37.7 (4.6)
Vocational schools	24.3 (2.5)	4.5 (3.1)	19.8 (5.1)	26.3 (5.3)	32.5 (4.2)
Employment					
Potential employers	19.8 (2.3)	3.6 (2.7)	8.9 (3.5)	19.5 (4.6)	30.9 (4.1)
Military	15.1 (2.2)	1.6 (2.0)	8.0 (3.6)	13.5 (4.6)	24.7 (4.2)
Job placement agencies	24.0 (2.4)	8.2 (4.0)	14.7 (4.4)	23.6 (5.0)	34.1 (4.3)
Other vocational training programs	26.2 (2.5)	8.2 (4.1)	17.4 (4.6)	33.1 (5.7)	32.8 (4.3)
Supported employment programs	14.2 (2.2)	4.9 (3.5)	8.1 (3.7)	16.4 (4.8)	19.8 (4.0)
Sheltered employment programs	7.4 (1.7)	1.2 (1.9)	5.3 (3.2)	6.4 (3.4)	11.6 (3.3)
Other service agencies/programs					
Mental health	10.7 (2.0)	4.5 (3.4)	4.6 (3.0)	13.6 (4.7)	14.8 (3.6)
Social Security Administration	11.5 (2.1)	5.1 (3.6)	8.7 (4.1)	9.2 (4.1)	17.0 (3.7)
State VR agency	37.8 (2.7)	8.3 (4.3)	16.3 (4.6)	35.8 (5.6)	56.4 (4.2)
Other social service agency	18.1 (2.5)	6.9 (4.4)	9.1 (4.2)	20.8 (5.4)	25.5 (4.5)
Supervised residential support	5.6 (1.5)	2.7 (2.9)	5.0 (3.3)	4.3 (2.9)	7.8 (2.9)
Adult day program	5.2 (1.5)	2.6 (2.8)	5.7 (3.5)	5.8 (3.4)	5.7 (2.5)
Congregate care facility	2.0 (1.0)	2.4 (2.7)	2.1 (2.2)	1.1 (1.6)	2.2 (1.7)
Other	7.2 (2.1)	1.9 (2.7)	3.8 (3.6)	10.0 (5.3)	10.0 (3.9)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Standard errors are in parentheses.

The type of agency or organization contacted on behalf of students relates to the postschool service needs identified in the transition planning process that is in turn reflective of their goals (Exhibit 2-10). Students who will need postsecondary education accommodations are more likely to have teachers contact 2- or 4-year colleges or vocational schools than students who have not had such accommodations specified (35% vs. 10%, $p < .001$ for colleges and 31% vs. 17%, $p < .01$ for vocational schools). Students with postschool vocational service needs identified are more likely than students who do not have such needs identified to have a variety of agencies or organizations contacted on their behalf, including job placement agencies, the state VR agency, vocational training programs, employers, and supported or sheltered employment programs.

Exhibit 2-10
CONTACTS MADE BY SCHOOLS, BY STUDENTS' MOST COMMONLY NEEDED SERVICES

		Student had services identified									
		Postsecondary Education Accommodations		Vocational Training, Placement, or Support		Supported Living Arrangements		Behavioral Intervention		Mental Health Services	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Percentage with contacts made with:											
Postsecondary education											
	2- and 4-year colleges	9.8 (2.8)	34.6*** (4.0)	29.5*** (3.4)	11.8 (3.6)	24.8*** (2.7)	5.1 (4.4)	24.6 (2.8)	17.5 (9.6)	24.4 (2.7)	19.3 (11.2)
	Vocational schools	17.3 (3.2)	31.1** (3.8)	21.4 (3.1)	30.1 (4.5)	24.9 (2.6)	16.8 (6.5)	24.6 (2.7)	25.1 (9.2)	24.5 (2.6)	29.0 (10.1)
Employment											
	Potential employers	20.3 (3.2)	19.6 (3.4)	15.1 (2.7)	27.4* (4.0)	20.0 (2.4)	19.5 (7.1)	18.2 (2.3)	43.9* (11.2)	18.9 (2.3)	40.3 (12.0)
	Military	14.8 (3.2)	15.8 (3.3)	12.3 (2.6)	20.4 (4.3)	16.0*** (2.4)	.7 (2.0)	14.9 (2.4)	22.3 (10.8)	15.2 (2.4)	17.9 (10.4)
	Job placement agencies	25.4 (3.4)	23.5 (3.7)	18.3 (3.0)	33.8** (4.2)	24.1 (2.6)	29.8 (7.6)	23.3 (2.6)	42.8 (10.8)	23.5 (2.6)	44.1 (12.4)
	Other vocational training programs	26.2 (3.5)	27.9 (3.9)	15.5 (2.9)	42.0*** (4.5)	26.2 (2.7)	38.7 (8.3)	25.9 (2.7)	41.8 (10.9)	26.2 (2.7)	44.1 (12.3)
	Supported employment programs	17.7 (3.1)	10.1 (3.0)	9.4 (2.6)	20.6* (3.8)	11.7 (2.2)	39.7*** (7.6)	13.1 (2.3)	30.8* (8.6)	13.0 (2.2)	38.7* (12.6)
	Sheltered employment programs	13.2*** (2.9)	1.4 (1.2)	3.8 (1.8)	13.1* (3.3)	4.6 (1.5)	38.1*** (7.9)	6.9 (1.8)	19.3 (7.6)	6.2 (1.7)	39.2* (13.6)
Other service agencies/programs											
	Mental health agencies	16.7** (3.2)	5.3 (2.3)	7.3 (2.3)	17.0* (3.8)	8.9 (2.0)	38.1** (8.7)	8.2 (1.9)	45.0*** (11.0)	6.3 (1.7)	74.9*** (9.9)
	State VR agency	39.3 (3.8)	38.5 (4.2)	31.3 (3.5)	49.6** (4.4)	38.2 (2.9)	50.5 (8.3)	38.5 (2.9)	45.5 (11.3)	38.3 (2.9)	53.8 (12.4)
	Supervised residential support	9.8** (2.6)	1.8 (1.5)	3.3 (1.7)	9.9 (3.1)	3.3 (1.4)	30.8*** (6.1)	5.1 (1.6)	17.1 (7.4)	5.4 (1.6)	17.6 (8.5)
	Adult day program	8.9 (2.5)	1.6* (1.4)	3.4 (1.7)	8.8 (3.0)	3.6 (1.4)	24.9*** (6.0)	5.2 (1.7)	10.1 (6.3)	5.5 (1.7)	7.4 (6.5)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Statistically significant difference in a two-tailed test at the following levels: * $p < .05$, ** $p < .01$, *** $p < .001$.

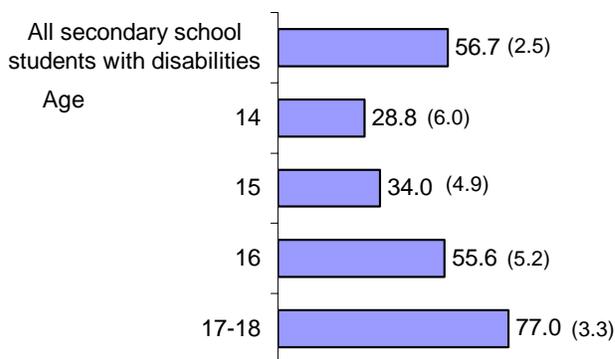
Standard errors are in parentheses

Students with supported living arrangements identified as needed after high school are more likely than those without this need identified to have their schools contact mental health service providers or sheltered employment, supervised residential programs, or adult day programs. Although standard errors for these data are relatively high in some cases, the schools of students for whom postschool behavioral intervention and mental health service needs are specified are more likely to contact mental health agencies on the students' behalf than they are for students without these needs specified (45% vs. 8%, and 75% vs. 6%, $p < .001$). Interestingly, schools also are more likely to contact supported or sheltered employment programs or employers for students with behavioral intervention or mental health services identified than they are for students who do not have these needs identified ($p < .05$).

Informing Parents of Postschool Service Options

Keeping parents informed about the services related to a student's disability that are available after high school is an important part of the school's role in assisting the transition of students to adult life. As students approach the transition years, having postschool information becomes more important to parents. In fact, surveys indicate that parents actively seek information on a variety of topics to support their adolescent and young adult children in transition, including postsecondary and employment options, financial planning, Medicaid, and VR (Pacer, 2001).

Exhibit 2-11
PARENTS PROVIDED INFORMATION ABOUT POSTSCHOOL SERVICES, BY AGE



Source: NLTS2 Wave 1 student's school program survey. Standard errors are in parentheses.

School staff were asked if "information about services available after high school related to this student's kind of disability had been provided his or her parents/guardians by the school system." NLTS2 findings are consistent with a pattern of schools providing an increasing percentage of parents with information as students prepare to exit high school (Exhibit 2-11). For example, parents of about one-third of students who are 15 years old are provided information about postschool services and programs, compared with parents of about three-fourths of students who are 17 and 18 years old ($p < .001$). However, school staff report that information about students' postschool services has not yet been

provided to parents of about one in four students who are 17 to 18 years old and about to leave high school.

Disability Differences in Transition Planning

NLTS2 findings have documented the tremendous diversity in the characteristics and experiences of students with disabilities. This diversity in experiences extends to some aspects of transition planning as well, as noted below.

Initiation of Transition Planning

Although the vast majority of special education students receive services in secondary school that include transition planning, about a 10-percentage-point difference exists across disability categories in the likelihood of receipt of these services. Students with visual impairments are the most likely to have transition planning occurring on their behalf (95%); 89% or 90% of students with learning disabilities, emotional disturbances, other health impairments, or deaf-blindness have transition planning occurring. With the exception of students with speech impairments, rates of transition planning for students in other categories range from 84% (students with orthopedic impairments) to 88% (those with mental retardation). Students with speech impairments are the least likely to receive transition planning (83%, $p < .01$, compared with students with visual impairments), which is consistent with this group's being the most likely to discontinue special education services in a given 16-month period (Wagner, 2003). No differences occur across disability categories in the mean age at which transition planning begins.

Students' Transition Goals

In general, the overall percentages for students with disabilities who have various postschool goals mask wide variations among specific disability categories (Exhibit 2-12). Although some students in every category have each kind of goal investigated in NLTS2, postsecondary education is less likely to be a goal for students with mental retardation, autism, multiple disabilities, or deaf-blindness, among whom 10% to 32% have a 2- or 4-year college attendance goal, than for those with hearing or visual impairments, 61% and 72% of whom have such a goal, respectively ($p < .001$). Compared with students with visual impairments who have a strong focus on 2- or 4-year college attendance (72%) and much less interest in vocational training (19%), others have both college and vocational training as postschool goals. For example, a relatively large percentage of students with learning disabilities, speech or other health impairments, or emotional disturbance have goals of both attending college (44% to 57%) and participating in vocational training (43% to 58%).

The majority of students with learning disabilities, emotional disturbances, other health impairments, or traumatic brain injuries focus on finding competitive employment after high school, whereas students with mental retardation, autism, multiple disabilities, or deaf-blindness are working toward supported or sheltered employment. These students also are more likely to have goals of maximizing their functional independent living skills and social skills than students whose goals emphasize competitive employment.

Exhibit 2-12
STUDENTS' POST-HIGH-SCHOOL GOALS, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage with goal of:												
Postsecondary education												
Attend 2- or 4-year college	54.3 (3.5)	57.2 (4.2)	9.9 (2.1)	44.2 (4.5)	60.9 (4.3)	71.7 (4.9)	56.9 (4.0)	56.2 (3.5)	22.9 (3.2)	33.9 (6.6)	13.9 (3.0)	31.8 (6.6)
Attend vocational training program	43.4 (3.5)	43.3 (4.2)	25.6 (3.1)	44.2 (4.5)	32.9 (4.1)	19.4 (4.3)	24.6 (3.5)	57.5 (3.4)	18.5 (3.0)	34.4 (6.6)	15.9 (3.1)	23.3 (6.0)
Employment												
Obtain competitive employment	57.1 (3.5)	44.1 (4.2)	44.3 (3.6)	57.8 (4.5)	34.6 (4.2)	33.3 (5.1)	28.5 (3.6)	50.6 (3.5)	22.4 (3.2)	50.6 (6.9)	26.9 (3.8)	30.8 (6.5)
Obtain supported employment	1.6 (.9)	6.3 (2.1)	34.4 (3.4)	8.7 (2.6)	6.5 (2.2)	8.7 (3.1)	18.0 (3.1)	5.9 (1.7)	38.7 (3.7)	19.1 (5.4)	35.1 (4.1)	24.3 (6.1)
Obtain sheltered employment	.9 (.7)	2.3 (1.3)	19.6 (2.9)	2.6 (1.5)	5.5 (2.0)	10.8 (3.4)	11.3 (2.5)	4.5 (1.5)	38.7 (3.7)	13.0 (4.7)	31.0 (4.0)	25.7 (6.2)
Other												
Live independently	49.8 (3.5)	39.5 (4.2)	51.6 (3.6)	53.3 (4.6)	51.3 (4.4)	47.8 (5.4)	41.7 (4.0)	48.8 (3.5)	27.9 (3.4)	52.7 (6.9)	34.6 (4.1)	47.5 (7.1)
Maximize functional independence	12.5 (2.3)	13.9 (2.9)	48.5 (3.6)	20.7 (3.7)	21.2 (3.6)	34.4 (5.2)	35.3 (3.8)	16.9 (2.7)	57.8 (3.8)	34.6 (6.6)	58.3 (4.2)	51.6 (7.1)
Enhance social/ interpersonal relationships	16.2 (2.6)	19.1 (3.4)	45.8 (3.6)	45.4 (4.6)	24.7 (3.8)	34.5 (5.2)	32.6 (3.8)	23.3 (3.0)	57.1 (3.8)	36.7 (6.7)	55.9 (4.3)	41.8 (7.0)

Source: NLTS2 Wave 1 student's school program survey.
Note: Includes only students with transition planning.
Standard errors are in parentheses.

Participants in Transition Planning

Active participation in students' transition planning differs considerably across disability categories (Exhibit 2-13). Parents' involvement in transition planning is high for most categories of youth, yet varies across disability categories. Ninety-percent or more of students with visual, orthopedic, or other health impairments, autism, multiple disabilities, or deaf-blindness have parents who actively participate in transition planning, whereas 83% of students with speech impairments or mental retardation have parents who do so ($p < .01$ comparing students with multiple disabilities and mental retardation).

Students' involvement in transition planning also varies across disability categories. About 80% to 95% of students in most disability categories, except students with autism and multiple disabilities, are involved in planning in some way for their transition to adult life. Nevertheless, the differences in students' engagement in transition planning are significant. The percentage who are simply present but provide little input varies from 18% for students with visual or other health impairments to 45% of students with autism ($p < .001$). On the other hand, although about half of students in most disability categories have a moderate level of participation providing input to discussions and meetings, students with other health impairments are the most likely to be described in this way (69%), whereas the participation of students with autism is the least likely to be described in this way (30%, $p < .001$).

Exhibit 2-13
ACTIVE PARTICIPANTS IN TRANSITION PLANNING, BY DISABILITY CATEGORY

	Learning Disability	Speech/Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage of students who:												
Do not attend meetings	3.8 (1.4)	7.2 (2.2)	10.6 (2.2)	6.0 (2.2)	2.5 (1.4)	6.1 (2.6)	5.3 (1.8)	3.6 (1.3)	22.6 (3.2)	6.5 (3.5)	19.5 (3.5)	11.4 (4.5)
Are present for planning but participate little	21.1 (2.9)	24.3 (3.7)	36.1 (3.5)	30.4 (4.2)	20.3 (3.6)	18.3 (4.2)	24.5 (3.5)	17.5 (2.7)	44.8 (3.8)	23.6 (5.9)	42.2 (4.3)	33.8 (6.7)
Are moderately active participants in discussions and meetings	60.5 (3.5)	59.1 (4.2)	49.9 (3.6)	52.8 (4.6)	59.5 (4.3)	50.7 (5.4)	52.8 (4.0)	68.6 (3.3)	30.0 (3.5)	56.3 (6.9)	35.9 (4.2)	43.0 (7.1)
Are leaders in planning	14.6 (2.5)	9.4 (2.5)	3.3 (1.3)	10.8 (2.9)	17.7 (3.4)	25.0 (4.7)	17.5 (3.1)	10.3 (2.2)	2.6 (1.2)	13.7 (4.8)	2.3 (1.3)	11.8 (4.6)
Percentage with active participation in transition planning by:												
Parent/guardian												
	84.5 (2.5)	83.1 (3.2)	83.1 (2.7)	83.7 (3.4)	84.4 (3.1)	90.3 (3.2)	91.1 (2.3)	90.3 (2.1)	91.4 (2.1)	85.0 (5.0)	94.0 (2.0)	90.0 (4.2)
School personnel												
Special education teacher	97.3 (1.1)	89.1 (2.6)	99.3 (.6)	99.4 (.7)	90.6 (2.5)	92.2 (2.9)	95.2 (1.7)	97.5 (1.1)	95.9 (1.5)	98.2 (1.9)	98.6 (1.0)	88.3 (4.5)
General education academic teacher	62.8 (3.4)	65.2 (4.0)	39.2 (3.5)	56.5 (4.5)	57.7 (4.3)	62.3 (5.2)	59.5 (3.9)	71.1 (3.2)	38.9 (3.7)	48.8 (7.0)	32.8 (3.9)	40.5 (6.9)
General education vocational teacher	32.9 (3.3)	28.6 (3.8)	32.6 (3.4)	30.3 (4.2)	23.6 (3.7)	25.2 (4.6)	26.4 (3.5)	30.2 (3.2)	19.9 (3.0)	21.3 (5.7)	18.5 (3.3)	19.1 (5.5)
School counselor	61.8 (3.4)	56.8 (4.2)	54.3 (3.6)	71.4 (4.1)	55.9 (4.3)	59.4 (5.2)	59.2 (3.9)	57.9 (3.5)	54.5 (3.8)	62.2 (6.8)	58.4 (4.1)	58.6 (6.9)
Related service personnel	12.1 (2.3)	48.9 (4.2)	29.3 (3.3)	14.9 (3.2)	53.0 (4.3)	51.0 (5.3)	51.3 (4.0)	17.3 (2.7)	57.7 (3.7)	37.2 (6.7)	57.8 (4.2)	70.9 (6.4)
School administrator	53.8 (3.5)	51.4 (4.2)	61.3 (3.5)	58.5 (4.5)	58.7 (4.3)	60.3 (5.2)	58.7 (3.9)	51.9 (3.5)	57.0 (3.7)	62.7 (6.7)	64.0 (4.0)	68.3 (6.6)
Agency personnel and others												
VR counselor	12.8 (2.3)	12.8 (2.8)	22.7 (3.0)	12.4 (3.0)	19.3 (3.4)	29.9 (4.9)	19.9 (3.2)	12.9 (2.4)	19.2 (3.0)	14.9 (5.0)	13.0 (2.8)	29.9 (6.4)
Others	3.5 (2.4)	12.8 (2.8)	26.8 (3.2)	17.7 (3.5)	24.1 (3.7)	31.0 (4.9)	29.5 (3.6)	17.5 (2.7)	29.8 (3.5)	29.3 (6.0)	38.4 (4.1)	34.1 (6.7)

Source: NLTS2 Wave 1 student's school program survey.

Note: The category "others" includes staff of the Social Security Administration or other outside agencies, employers, representatives of postsecondary education institutions, and advocates or consultants.

Note: Includes only students with transition planning.

Standard errors are in parentheses.

Students who take a leadership role in transition planning are in the minority in all disability categories, but this aspect of transition planning also varies with the disability of the student. Significantly larger proportions of students with visual (25%), hearing (18%), or orthopedic impairments (18%) take a leadership role than do students with mental retardation (3%), autism (3%), or multiple disabilities (2%; $p < .001$). Nonetheless, school staff report that some students in each disability category are leaders of their transition planning.

Although special education teachers are participants in transition planning, for the vast majority of students, regardless of their disability, up to a 10-percentage-point variation in that participation is associated with the disability category of students. Almost all students with emotional disturbances, mental retardation, or multiple disabilities (99%) are reported to have a special education teacher involved with their transition planning, compared with 89% of students with speech impairments ($p < .001$ compared with students with mental retardation). The relatively lower likelihood of participation by special educators in transition planning for students with speech impairments is consistent with this group of students being the least likely to take special education classes; half of students with speech impairments take special education courses, compared with 92% of students with mental retardation, for example (Wagner, 2003).

The variation in the participation of general education teachers is greater for students in different disability categories. This is understandable because students' participation in general education classes also varies by disability category. Students with autism, multiple disabilities, or deaf-blindness (39%, 33%, and 40%, respectively) are the least likely to have general education teachers actively participate in their transition planning. They also are least likely to take general education classes (40% to 62% take such classes; Wagner, 2003). In contrast, students with learning disabilities or speech, visual, or other health impairments have a general education teacher actively participate in their transition planning (63%, 65%, 62%, and 71%, respectively, $p < .001$ compared with students with mental retardation, autism, or multiple disabilities); more than 90% of students with learning disabilities or speech, or other health impairments take general education courses (Wagner, 2003).

Although general education vocational teachers are less likely than other teachers to participate actively in transition planning, differences are associated with the student's disability category. About one-third of students with learning disabilities or mental retardation have a general education vocational teacher who actively participates in planning their transition, compared with fewer than 20% of students with autism, multiple disabilities, or deaf-blindness ($p < .01$).

The participation of other school personnel also varies significantly across disability categories. School administrators are actively involved in transition planning for 61% to 68% of students with mental retardation, traumatic brain injuries, multiple disabilities, or deaf-blindness, compared with 51% for students with speech impairments ($p < .05$). Various related services personnel are actively involved in transition planning with significantly larger proportions (49% to 71%) of students with speech, hearing, visual, or orthopedic impairments, autism, multiple disabilities, or deaf-blindness than with students with learning disabilities, emotional disturbances, or other health impairments (12% to 17%, $p < .001$). School counselors are more likely to participate actively in transition planning for students with emotional disturbances than for their peers with mental retardation (71% vs. 54%, $p < .01$).

Active participation in transition planning by individuals from outside the school varies considerably for students in different disability categories. For example, active participation of a VR counselor varies by about 20 percentage points for students in different disability categories, from 30% for students with visual impairments to 12% for students with emotional disturbances ($p < .01$). The percentages of students for whom representatives of other outside organizations (e.g., social services, postsecondary education) actively participate vary by more than 30 percentage points. These representatives are least likely to participate actively in planning for

students with learning disabilities (4%) and most likely to do so for students with multiple disabilities or deaf-blindness (38% and 34% respectively, $p < .001$).

Transition Preparation and Supports

The supports provided by schools to aid students' progress toward their transition goals differ across disability categories (Exhibit 2-14). Although the majority of students in all categories receive instruction focused on transition planning, a greater percentage of students with mental retardation (76%), autism (71%), or multiple disabilities (69%) receive this instruction than other students, for example, students with other health impairments (55%, $p < .001$). NLTS2 analyses found that students with hearing or visual impairments who receive this type of instruction are more likely to take a leadership role in their transition planning. With instruction, 24% of students with hearing impairments and 31% of students with visual impairments take a leadership role in their transition planning; 8% and 14%, respectively, of those who do not receive transition planning instruction, are leaders of their transition planning ($p < .05$). However, this relationship between instruction in transition planning and leadership in the planning process is not demonstrated for students in other disability categories.

Fewer variations occur among students in different disability categories regarding having an IEP or transition plan that specifies a course of study to meet their transition goals than is apparent for participation in transition-focused instruction. The percentage of students with a specified course of study ranges from 76% for students with learning disabilities to 64% for students with hearing impairments ($p < .05$).

Because goals differ with a student's disability, the nature of the postschool service needs related to them also differ. Students who are more likely to have college as a postschool goal (e.g., students with visual impairments) also are more likely to have postsecondary education accommodations specified in their transition plans. Likewise, students who are more likely to plan on supported or sheltered work (e.g., students with mental retardation) are more likely to have vocational service needs identified. To further illustrate this pattern, supported living arrangements are more often identified for students with multiple disabilities, who also are more likely to have maximizing their functional independence as a transition goal.

Except for postsecondary education accommodations and vocational training, placement, or support, on average about 5% of students overall have needs specified for any one of the services listed in Exhibit 2-14. However, a substantial percentage of students in certain disability categories have some of these services identified, compared with very small percentages in other categories. For example, more than 40% of students with hearing impairments and 31% of students with deaf-blindness have audiology service needs identified, compared with fewer than 4% of students in any other disability category ($p < .001$). Similarly, specification of vision service needs predominate among those with visual impairments or deaf-blindness (67% and 35%, respectively), physical therapy needs predominate among those with orthopedic impairments or multiple disabilities (26% and 23%, respectively), and behavioral intervention needs are most common for youth with emotional disturbances or autism (21% and 18%, respectively).

Exhibit 2-14
SUPPORTS AND SERVICES SPECIFIED IN TRANSITION PLANNING, BY DISABILITY CATEGORY

	Learning Disability	Speech/Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage who:												
Have an IEP that specifies a course of study to meet transition goals	75.6 (3.0)	71.9 (3.8)	72.4 (3.2)	72.8 (4.1)	64.4 (4.2)	69.8 (5.0)	71.3 (3.6)	70.8 (3.2)	66.0 (3.6)	72.9 (6.2)	71.8 (3.8)	68.0 (6.5)
Have received instruction focused on transition planning	63.0 (3.5)	59.6 (4.4)	75.7 (3.2)	64.7 (4.6)	63.5 (4.3)	62.8 (5.4)	59.7 (4.0)	55.0 (3.6)	70.6 (3.5)	64.7 (7.0)	69.2 (4.1)	61.8 (7.0)
Percentage with identified needs for the following services after high school:												
Any services	75.0 (3.2)	60.7 (4.2)	81.3 (2.9)	74.7 (4.1)	85.6 (3.2)	95.1 (2.4)	87.4 (2.8)	77.3 (3.0)	87.6 (2.6)	80.8 (5.8)	88.9 (2.8)	93.4 (3.6)
Postsecondary education accommodations	55.0 (3.6)	37.3 (4.2)	22.7 (3.1)	41.6 (4.7)	55.5 (4.5)	64.8 (5.3)	50.7 (4.2)	52.0 (3.6)	28.2 (3.5)	32.8 (6.9)	17.6 (3.3)	36.5 (7.0)
Vocational training, placement, or support	32.4 (3.4)	23.6 (3.7)	65.8 (3.5)	38.7 (4.6)	28.7 (4.1)	27.3 (4.9)	40.3 (4.1)	30.3 (3.3)	54.8 (3.9)	55.5 (7.3)	55.3 (4.4)	48.9 (7.3)
Behavioral intervention	4.1 (1.1)	1.0 (.7)	6.1 (1.9)	20.8 (3.1)	2.9 (1.7)	.9 (1.8)	1.3 (1.4)	5.5 (1.6)	18.4 (2.7)	8.4 (2.4)	8.8 (2.5)	11.8 (4.9)
Social work services	3.2 (1.3)	2.6 (1.4)	16.4 (2.7)	11.0 (3.0)	4.0 (1.8)	10.7 (3.4)	8.8 (2.4)	5.4 (1.6)	16.4 (2.9)	9.4 (4.3)	15.7 (3.2)	20.2 (5.8)
Mental health services	2.4 (1.1)	0.6 (.7)	6.8 (1.9)	12.2 (3.1)	3.8 (1.7)	2.9 (1.8)	3.1 (1.4)	5.2 (1.6)	13.5 (2.7)	2.7 (2.4)	9.3 (2.5)	13.1 (4.9)
Speech/communication therapy or services	1.7 (.9)	19.6 (3.4)	9.6 (2.2)	2.7 (1.5)	19.6 (3.6)	2.8 (1.8)	12.1 (2.7)	3.4 (1.3)	23.3 (3.3)	3.5 (2.7)	17.3 (3.3)	22.6 (6.1)
Supported living arrangements	1.1 (.8)	2.4 (1.3)	19.9 (3.0)	4.5 (2.0)	4.3 (1.8)	10.2 (3.3)	16.1 (3.1)	4.2 (1.5)	30.8 (3.6)	8.1 (4.0)	36.4 (4.2)	27.4 (6.5)
Transportation assistance	.7 (.6)	2.1 (1.2)	22.7 (3.1)	3.0 (1.6)	4.3 (1.8)	24.9 (4.8)	31.0 (3.9)	6.2 (1.7)	34.2 (3.7)	16.3 (5.4)	41.2 (4.3)	29.5 (6.6)
Audiology services	.5 (.5)	1.8 (1.2)	.5 (.5)	1.1 (1.0)	40.9 (4.4)	.7 (.9)	1.6 (1.0)	.8 (.6)	.0 (.9)	.4 (.9)	3.7 (1.7)	31.3 (6.8)
Vision services	.1 (.2)	.0	1.1 (.8)	.0	.4 (.6)	66.8 (5.2)	4.2 (1.7)	1.1 (.8)	.7 (.7)	.8 (1.3)	8.7 (2.5)	34.8 (6.9)
Mobility training	.3 (.4)	.4 (.5)	2.9 (1.2)	.0	.6 (.7)	38.6 (5.4)	15.2 (3.0)	1.0 (.7)	5.5 (1.8)	1.8 (2.0)	9.6 (2.6)	18.5 (5.7)
Occupational therapy	.6 (.6)	.9 (.8)	4.2 (1.5)	.6 (.7)	1.6 (1.1)	6.1 (2.6)	20.3 (3.4)	2.2 (1.1)	7.2 (2.0)	2.2 (2.2)	22.5 (3.7)	10.5 (4.5)
Physical therapy	.0	.2 (.4)	3.2 (1.3)	.0	1.7 (1.2)	6.9 (2.8)	26.5 (3.7)	.7 (.6)	3.5 (1.4)	3.7 (2.8)	22.9 (3.7)	11.9 (4.7)
Nursing or other medical services	.0	1.1 (.9)	2.9 (1.2)	.0	1.0 (.9)	2.6 (1.8)	3.8 (1.6)	1.3 (.8)	3.0 (1.3)	1.4 (1.7)	8.4 (2.4)	5.2 (3.2)

Source: NLTS2 Wave 1 student's school program survey.
 Note: Includes only students with transition planning.
 Standard errors are in parentheses.

School Contacts with Service Providers and Organizations on Behalf of Transitioning Students

Considerable variations occur among students with different disability classifications in the types of organizations that schools contact on their behalf that reflect the postschool goals of these youth (Exhibit 2-15). For example, students with hearing or visual impairments are the

**Exhibit 2-15
CONTACTS MADE BY SCHOOLS ON BEHALF OF STUDENTS WITH TRANSITION PLANNING,
BY DISABILITY CATEGORY**

	Speech/ Learning Dis- ability	Language Impair- ment	Mental Retar- dation	Emo- tional Distur- bance	Hearing Impair- ment	Visual Impair- ment	Ortho- pedic Impair- ment	Other Health Impair- ment	Autism	Trau- matic Brain Injury	Multiple Disabili- ties	Deaf- Blind- ness
Percentage with contacts made with:												
Postsecondary education												
2- or 4-year colleges	26.4 (3.8)	24.0 (4.7)	11.0 (3.7)	17.7 (4.3)	43.3 (5.5)	44.1 (7.1)	34.3 (5.0)	19.9 (3.5)	22.8 (5.1)	15.2 (6.9)	16.4 (5.6)	32.8 (9.7)
Vocational schools	26.2 (3.7)	18.4 (4.2)	16.6 (3.7)	23.4 (4.6)	29.2 (5.2)	20.0 (5.6)	19.1 (4.0)	24.4 (3.7)	21.2 (4.6)	10.3 (5.8)	16.2 (5.1)	7.4 (5.2)
Employment												
Potential employers	17.2 (3.3)	16.3 (4.1)	28.6 (4.0)	24.4 (4.5)	16.7 (4.3)	20.4 (5.3)	18.0 (3.8)	18.2 (3.3)	22.9 (4.3)	19.4 (7.1)	21.1 (4.8)	25.0 (7.4)
Military	18.1 (3.5)	8.7 (3.4)	4.9 (2.3)	15.1 (4.1)	3.4 (2.6)	3.1 (2.8)	3.0 (2.0)	9.7 (2.6)	5.7 (2.9)	6.3 (4.9)	4.5 (3.0)	3.5 (4.1)
Job placement agencies	21.4 (3.7)	16.1 (4.1)	32.9 (4.1)	29.1 (4.8)	20.6 (3.5)	26.2 (5.7)	23.6 (4.3)	19.3 (3.4)	25.1 (4.2)	35.1 (8.8)	29.5 (5.2)	23.3 (7.6)
Other vocational training programs	26.7 (4.0)	20.2 (4.4)	33.5 (4.1)	21.5 (4.6)	19.3 (4.5)	17.9 (5.3)	17.7 (3.9)	16.6 (3.3)	24.3 (4.1)	24.0 (7.9)	32.3 (5.5)	24.8 (7.7)
Supported employment programs	6.5 (2.6)	14.8 (4.4)	36.0 (4.3)	12.6 (4.0)	12.5 (4.2)	16.9 (5.4)	21.7 (4.4)	12.5 (3.2)	35.5 (4.5)	29.7 (9.1)	36.7 (5.6)	35.8 (8.4)
Sheltered employment programs	2.3 (1.6)	4.5 (2.8)	23.9 (4.0)	3.7 (2.5)	4.1 (2.8)	16.3 (5.5)	12.3 (3.7)	5.8 (2.4)	29.6 (4.2)	21.7 (9.0)	24.0 (4.7)	28.0 (8.6)
Other social service agencies/programs												
Mental health	5.7 (2.5)	8.6 (3.7)	21.5 (4.1)	16.5 (4.4)	3.9 (2.8)	10.8 (4.7)	11.5 (3.7)	9.4 (2.9)	30.5 (4.5)	14.0 (7.7)	30.8 (5.8)	24.9 (8.6)
Social Security Administration	5.4 (2.4)	9.5 (3.9)	29.9 (4.4)	9.7 (3.7)	19.6 (5.0)	29.2 (6.3)	27.2 (4.9)	11.7 (3.2)	35.1 (4.7)	30.1 (9.5)	31.2 (5.6)	38.8 (8.5)
VR	33.6 (4.1)	28.6 (5.0)	55.7 (4.3)	37.2 (5.4)	44.9 (5.3)	59.3 (6.9)	53.1 (4.9)	34.1 (4.1)	51.4 (4.8)	49.0 (9.2)	41.9 (5.6)	53.9 (8.6)
Other social service agencies	12.4 (3.6)	8.8 (3.8)	32.2 (4.3)	21.4 (5.4)	12.6 (4.6)	29.4 (6.7)	29.4 (5.5)	12.9 (3.5)	37.0 (4.5)	26.2 (9.6)	40.1 (5.2)	26.4 (8.1)
Supervised residential support	.4 (.7)	2.3 (2.2)	17.7 (3.6)	3.5 (2.6)	4.0 (3.3)	12.3 (5.3)	15.8 (4.6)	5.4 (2.5)	20.7 (3.8)	12.8 (8.2)	25.9 (4.9)	33.1 (9.3)
Adult day programs	1.1 (1.2)	.0	17.1 (3.6)	2.2 (2.2)	.3 (.9)	16.1 (5.8)	7.4 (3.3)	2.0 (1.6)	21.4 (3.9)	8.9 (7.1)	22.3 (4.5)	32.4 (9.3)
Congregate care facilities	.4 (.7)	2.0 (2.0)	5.8 (2.4)	2.2 (2.2)	2.5 (2.6)	2.2 (2.6)	8.8 (3.9)	1.1 (1.2)	5.2 (2.3)	8.5 (7.2)	7.9 (3.1)	8.2 (5.8)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Standard errors are in parentheses.

most likely to have postsecondary education as a goal and also are the most likely to have their school make contacts with colleges on their behalf (43% and 44%, respectively). Students with emotional disturbances are most likely to have competitive employment as their postschool goal (58%) and are among those most likely to have their school contact potential employers (24%). Similarly, students with mental retardation, autism, multiple disabilities, or deaf-blindness are the most likely to have noncompetitive employment and the maximization of their functional skills as postschool goals; they also are the most likely to have schools contact a variety of employment programs and a wide variety of other service agencies on their behalf. For example, students with autism (39%) are more likely than students with other disabilities to have the goal of supported employment and among the most likely to have their school make contacts with those types of programs (36%).

Informing Parents about Postschool Services

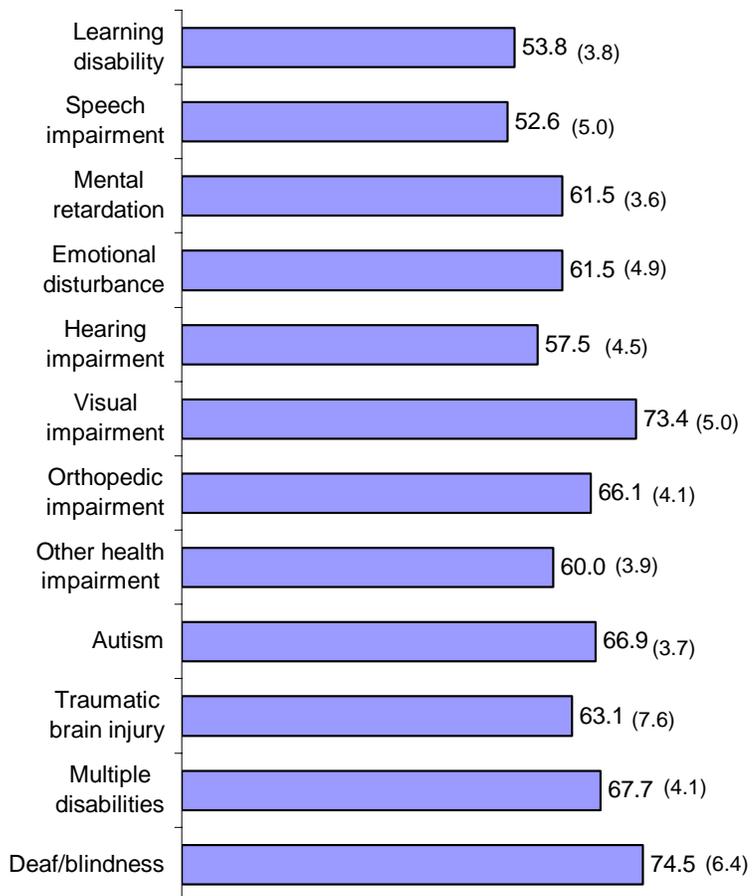
Although the parents of the majority of students in all disability categories have been provided information about services available after high school, parents of students with visual or orthopedic impairments, autism, multiple disabilities, or deaf-blindness are more likely than parents of students in many other disability categories to have been provided such information. For example, the parents of 73% of students with visual impairments have been provided information about services available after high school, compared with 53% of students with speech impairments ($p < .01$, Exhibit 2-16).

Demographic Differences in Transition Planning

Students' Transition Goals

Attending a vocational training program is the only postschool goal associated with gender; males have a greater likelihood of having this goal than do females (43% vs. 32%, $p < .05$). The household income and racial/ethnic background of students are associated with some types of transition goals. Household income is very strongly related to whether a student has college as a

Exhibit 2-16
PARENTS PROVIDED INFORMATION ABOUT POSTSCHOOL SERVICES, BY DISABILITY CATEGORY



Source: NLTS2 Wave 1 student's school program survey.
Note: Includes only students with transition planning.
Standard errors are in parentheses.

transition goal. Students from lower and middle-income households are less likely than students from the highest-income households to have college as a postschool goal (38% and 43% vs. 58%, $p < .001$ and $p < .05$, respectively, Exhibit 2-17). In contrast, income is not associated with employment or other types of postschool goals. Although students' racial/ethnic background is not related to having postsecondary education and training or employment as a postschool goal, it is related to whether students have independent living or enhancement of social/interpersonal relationships as goals for their postschool years. Significantly larger proportions of African-American students (60%) have goals of independent living and enhancement of social/interpersonal relationships (34%) compared with 47% and 22% for white students ($p < .05$).

Exhibit 2-17
STUDENTS' POST-HIGH-SCHOOL GOALS,
BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000	White	African-American	Hispanic
Percentage with transition goal of:						
Postsecondary education						
2- or 4-year college	37.7 (4.0)	43.2 (4.6)	58.4 (4.5)	47.8 (2.9)	40.2 (5.0)	48.8 (6.9)
Vocational school	39.9 (4.0)	39.3 (4.5)	37.8 (4.4)	37.4 (2.8)	46.0 (5.1)	42.9 (6.8)
Other						
Live independently	55.3 (4.1)	48.5 (4.6)	45.3 (4.5)	46.7 (2.9)	59.6 (5.0)	46.6 (6.8)
Enhance social/interpersonal relationships	29.4 (3.7)	26.2 (4.1)	20.1 (3.7)	22.5 (2.4)	34.4 (4.8)	23.3 (5.8)
Maximize functional independence	22.2 (3.4)	19.3 (3.7)	18.5 (3.5)	18.6 (2.2)	27.0 (4.5)	16.5 (5.1)

Source: NLTS2 Wave 1 student's school program survey.
 Note: Includes only students with transition planning.
 Standard errors are in parentheses.

Participants in Transition Planning

No differences are apparent between young men and women with disabilities regarding participation in the transition planning process. And, although no differences occur among youth with different racial/ethnic backgrounds or household incomes associated with whether or not transition planning occurs, the extent to which some of the participants are actively involved in the process does differ (Exhibit 2-18). Both household income and racial/ethnic background are related to parents' participation in transition planning. Students in the lowest household income group are less likely to have parents who actively participate in transition planning than those from the highest-income households (80% vs. 90%, $p < .05$), and African-American students are less likely than white students to have parents who take part in transition planning (77% vs. 87%, $p < .05$). The role of students in transition planning is associated with their racial/ethnic background as well. African-American students (6%) are less likely than either white (13%) or Hispanic students (18%) to take a leadership role in planning for their transition to adult life ($p < .05$).

Exhibit 2-18
ACTIVE PARTICIPANTS IN TRANSITION PLANNING,
BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000	White	African-American	Hispanic
Percentage of youth who:						
Do not attend meetings	7.1 (2.1)	6.0 (2.2)	4.5 (1.9)	4.5 (1.2)	8.6 (2.9)	5.4 (3.1)
Are present for planning but participate little	26.3 (3.7)	23.8 (4.0)	24.8 (4.0)	22.7 (2.4)	33.7 (4.9)	21.4 (5.7)
Are moderately active participant in discussions and meetings	56.4 (4.1)	57.1 (4.6)	56.1 (4.6)	60.0 (2.8)	51.5 (5.2)	55.2 (6.9)
Are leaders in planning	10.2 (2.5)	13.0 (3.1)	14.5 (3.3)	12.8 (1.9)	6.2 (2.5)	18.0 (5.3)
Percentage with active participation by:						
Parent/guardian	79.9 (3.3)	83.9 (3.4)	89.5 (2.8)	87.4 (1.9)	77.3 (4.3)	84.9 (4.9)
Selected school personnel						
Related service personnel	20.1 (3.3)	16.7 (3.4)	18.6 (3.5)	14.8 (2.0)	20.6 (4.1)	28.3 (6.1)
Other agency personnel	23.2 (3.5)	12.8 (3.1)	14.1 (3.2)	15.5 (2.1)	21.6 (4.2)	14.6 (4.8)

Source: NLTS2 Wave 1 student's school program survey.

Note: Includes only students with transition planning.

Standard errors are in parentheses.

Among school personnel, related services staff are actively involved in transition planning with Hispanic students (28%) more often than with white students (15%, $p < .05$). Hispanic students also appear to benefit from instruction in transition planning; those who receive this type of instruction are more likely to take a leadership role in the planning (22%) than those who have not received instruction (4%, $p < .05$), a relationship that is not found for white or African-American students. Representatives of agencies are more involved in the transition planning process for students from the lowest income households (23%) than for students from the middle- or upper-income groups (13% and 14%, respectively, $p < .05$). This finding may reflect the fact that eligibility for some services is based on financial need.

Transition Preparation and Supports

Although, males and females do not differ in their likelihood of having postsecondary education as a postschool goal, males are more likely to have accommodations for postsecondary education specified in their transition plans (51% vs. 41%, $p < .05$). Consistent with the finding that males have a greater likelihood than females of a goal to attend a postsecondary vocational training program, schools are more likely to make contacts with vocational schools for male students (28% vs. 16% for females), other vocational programs (30% vs. 19%, $p < .05$), and branches of the military (19% vs. 6%, $p < .01$). Consistent with upper income students being more likely to have college as a postschool goal, those students are more likely to have postsecondary education accommodations identified as part of transition planning (53% vs. 41%,

p<.05), and schools are more likely to contact colleges and universities as part of this process for them than for students from low-income households (39% vs. 22%, p<.05). Low-income students and African-American students are more likely to have postschool vocational needs identified in their transition plans (48% vs. 30%, p<.01, for low-income vs. upper-income; and 47% vs. 35%, p<.05, for African-American vs. white). Schools also are more likely to make contacts with vocational schools on behalf of African-American students (39%) than their white peers (22%, p<.05).

With this background regarding the characteristics of the transition planning process for secondary school students with disabilities, the next chapter examines the perceptions of parents and school staff regarding that process.

3. FAMILY AND SCHOOL STAFF PERCEPTIONS OF IEP AND TRANSITION PLANNING PROCESSES

This chapter describes the perceptions of families and school staff regarding the transition planning process for secondary school students with disabilities. Specifically, it highlights:

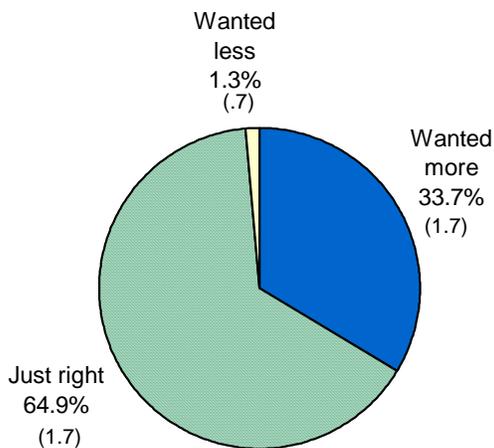
- Parents’ perceptions of the decision-making of students, parents, and school staff in the transition planning process.
- Parents’ perceptions of how useful transition planning has been in helping their sons and daughters prepare for life after school.
- School staff’s perceptions of how well suited students’ programs are for preparing them to achieve their transition goals.
- School staff’s perceptions of how much progress students are making toward their transition goals.

Information is drawn from two sources: parent interviews conducted in 2001, when children were ages 13 through 17, and the NLTS2 student’s school program survey, which was completed in the 2001-02 school year by the school staff who were most knowledgeable about the overall school programs of NLTS2 sample members. Sample members at the time of the school survey were ages 14 to 18. Findings are presented for students with disabilities as a whole and, when significant, for students who differ in their primary disability category and selected demographic characteristics.

Perceptions of Decision-Making in Transition Planning

The majority of students with disabilities (65%) have parents who report that their involvement in decisions concerning their son’s or daughter’s transition planning is “just about the right amount” when asked, “How do you feel about your family’s involvement in the decisions about [youth’s] IEP and transition plan?” (Exhibit 3-1). Few students have parents who want less involvement in transition planning, but one in three students with disabilities have parents who report they would like to be more involved in the process.

Exhibit 3-1
PARENTS’ PERCEPTIONS OF THEIR INVOLVEMENT IN THE IEP PROCESS

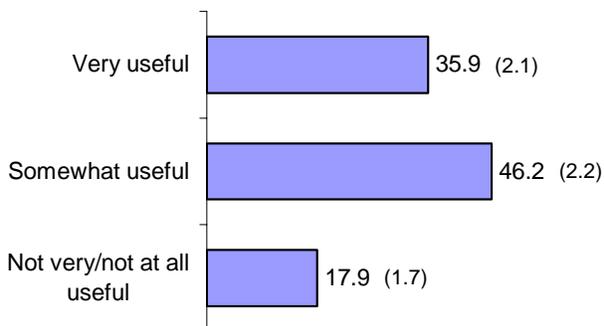


Source: NLTS2 Wave 1 parent interviews. Standard errors are in parentheses.

Parents also were asked, “How useful has the transition planning been in helping [youth] prepare for life after high school?” Although the vast majority of students were still in high school at the time of the NLTS2 parent interview and, therefore, parents were reporting about an ongoing process, 36% of students’ parents report that the transition planning process has been “very useful” in preparing youth for life after school; another 46% report the process has been “somewhat useful” (Exhibit 3-2).

However, parents of 18% of students report the transition planning experience to be “not

**Exhibit 3-2
PARENTS' PERCEPTION OF USEFULNESS OF
PLANNING FOR LIFE AFTER HIGH SCHOOL**



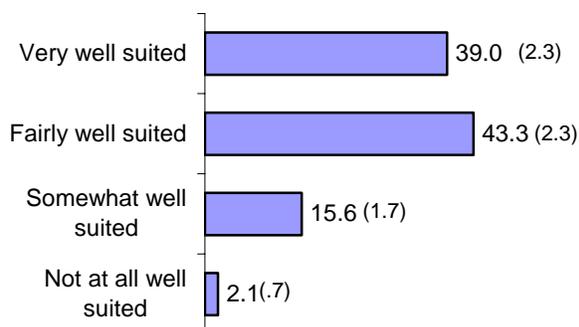
Source: NLTS2 Wave 1 student's school program surveys.
Standard errors are in parentheses.

very useful” or “not at all useful” in preparing students for postschool life. These findings are considerably more positive than the responses of a national random sample of parents of approximately 500 high school students with disabilities who were interviewed in 2002 regarding their children’s school programs; 45% of those parents reported “their child’s special education program is ‘failing’ or ‘needs

improvement’ when it comes to preparing them for life in the real world after high school” (Johnson & Duffett, 2002).

Like parents, school staff report mixed views regarding the suitability of students’ school programs for helping them meet their transition goals. School staff report that somewhat more than one-third (39%) of students have an educational program that is “very well suited” for preparing students to achieve their transition goals, and they report that 43% have programs that are “fairly well suited” for this purpose (Exhibit 3-3). For almost one in five students, however, school staff are less convinced about the suitability of students’ school programs for preparing them to achieve their transition goals: The school programs of 16% of students with disabilities are reported to be only “somewhat suitable,” and the programs of 2% of students with disabilities are reported to be “not at all suitable.”

**Exhibit 3-3
SCHOOL STAFFS' PERCEPTIONS OF THE SUITABILITY OF
STUDENT'S PROGRAMS TO ACHIEVE TRANSITION GOALS**



Source: NLTS2 Wave 1 student's school program surveys.
Note: Includes only students with transition planning.
Standard errors are in parentheses.

Disability Differences in Perceptions of the IEP and Transition Planning Processes

Although about two-thirds of students with disabilities have parents who report satisfaction with their level of involvement in their son's or daughter's transition planning process, significant differences are associated with the student's disability category (Exhibit 3-4). Youth with hearing or visual impairments, traumatic brain injuries, or deaf-blindness are the most likely to have parents who report being content with their level of involvement in this process; more than 70% do so. In contrast, youth with mental retardation or emotional disturbances have parents who are the least likely to accept their current level of involvement (58% and 61%, respectively, $p < .01$ comparing youth with emotional disturbances and hearing impairments).

Exhibit 3-4
PARENTS' PERCEPTIONS OF THEIR INVOLVEMENT IN AND THE USEFULNESS OF
TRANSITION PLANNING, BY DISABILITY CATEGORY

	Speech/ Learning Dis- ability	Language Impair- ment	Mental Retar- dation	Emo- tional Distur- bance	Hearing Impair- ment	Visual Impair- ment	Ortho- pedic Impair- ment	Other Health Impair- ment	Autism	Trau- matic Brain Injury	Multiple Disabili- ties	Deaf- Blind- ness
Percentage with parents who report they:												
Want more involve- ment in the IEP and transition planning process	32.3 (2.6)	33.5 (2.8)	40.1 (2.7)	37.4 (2.7)	26.4 (2.7)	26.9 (3.3)	29.3 (2.7)	33.1 (2.4)	34.9 (2.6)	28.8 (4.3)	30.2 (2.6)	24.2 (4.8)
Have the right amount of involve- ment	66.4 (2.6)	65.7 (2.8)	58.5 (2.7)	60.6 (2.8)	71.6 (2.8)	72.5 (3.3)	69.3 (2.7)	66.0 (2.4)	63.9 (2.7)	70.8 (4.3)	68.9 (2.6)	73.6 (4.9)
Percentage with parents who report transition planning is:												
Very useful	34.8 (3.2)	45.0 (3.9)	43.1 (3.3)	34.1 (3.4)	41.4 (3.7)	39.4 (4.5)	30.8 (3.6)	30.2 (3.0)	28.1 (3.4)	37.6 (5.9)	37.5 (3.7)	37.4 (7.1)
Somewhat useful	47.2 (3.3)	40.8 (3.8)	48.1 (3.4)	40.6 (3.5)	40.0 (3.6)	46.1 (4.6)	48.3 (3.9)	45.0 (3.3)	48.4 (3.8)	44.0 (6.0)	41.0 (3.8)	40.8 (7.2)
Not very/not at all useful	18.0 (2.6)	14.2 (2.7)	8.7 (1.9)	25.3 (3.1)	18.6 (2.9)	14.4 (3.2)	20.9 (3.2)	24.9 (2.9)	23.5 (3.2)	18.5 (4.7)	21.5 (3.2)	21.8 (6.1)

Source: NLTS2 Wave 1 parent interviews.
Standard errors are in parentheses.

Even though parents of youth with mental retardation may express the desire for more involvement, they join parents of students with speech or hearing impairments as being the most likely to report that the transition planning process has been "very useful" in preparing their sons or daughters for life after school (41% to 45%). In contrast, the usefulness of the schools' transition planning for life after school is rated less highly by parents of students with autism, other health impairments, or emotional disturbances; about one-fourth of these students' parents report transition planning has been "not very" or "not at all useful."

Variations in the perceptions of school staff regarding the suitability of the students' school programs to prepare students to achieve their transition goals are similar to those for parents' opinions (Exhibit 3-5). For example, students with emotional disturbances are less likely to have school programs that are rated as "very well suited" for meeting their transition goals (33%) than students in other categories, especially students with hearing or visual impairments (50% and 52% respectively, $p < .01$). School staff report that one in four students with emotional disturbances have school programs that are only "somewhat" or "not at all well suited" to prepare these youth to achieve their transition goals.

Exhibit 3-5
SCHOOL STAFFS' PERCEPTIONS OF SUITABILITY OF PROGRAM TO ACHIEVE
TRANSITION GOALS, BY DISABILITY CATEGORY

	Speech/ Learning Dis- ability	Language Impair- ment	Mental Retar- dation	Emo- tional Distur- bance	Hearing Impair- ment	Visual Impair- ment	Ortho- pedic Impair- ment	Other Health Impair- ment	Autism	Trau- matic Brain Injury	Multiple Disabili- ties	Deaf- Blind- ness
Percentage with suitability of educational program for meeting transition goals:												
Very well suited	39.6 (3.4)	48.9 (4.1)	38.8 (3.5)	32.6 (4.3)	49.5 (4.3)	52.1 (5.4)	38.3 (3.9)	43.9 (3.5)	45.2 (3.8)	38.7 (6.7)	39.8 (4.1)	40.5 (6.9)
Fairly well suited	44.2 (3.5)	42.7 (4.2)	41.9 (3.5)	43.1 (4.5)	39.2 (4.2)	35.2 (5.1)	43.3 (4.0)	39.2 (3.4)	36.6 (3.6)	51.9 (6.9)	41.2 (4.2)	46.7 (7.0)
Somewhat well suited	14.6 (2.5)	16.5 (3.1)	16.8 (2.7)	20.5 (3.7)	10.7 (2.7)	11.4 (3.4)	16.3 (3.0)	14.3 (2.5)	17.1 (2.8)	9.0 (3.9)	18.1 (3.3)	12.9 (4.7)
Not at all well suited	1.6 (.9)	1.9 (1.1)	3.5 (1.3)	3.8 (1.7)	.6 (.6)	1.2 (1.2)	2.1 (1.2)	2.6 (1.1)	1.0 (.8)	0.4 (.9)	.9 (.8)	—

Source: NLTS2 Wave 1 student's school program surveys.

Note: Includes only students with transition planning.

– Too few to report separately.

Standard errors are in parentheses.

Demographic Differences in Perceptions of Transition Planning

The perceptions of parents and school staff do not differ about transition planning for youth of different age or gender. However, NLTS2 analyses have demonstrated significant differences in several aspects of the school programs of students with disabilities who differ in household income levels and in racial/ethnic backgrounds (Wagner, Newman, Cameto, Levine, & Marder, 2003). Thus, parents' perceptions about their interactions with schools and the usefulness of students' school programs would be expected to be associated with income and racial/ethnic differences as well.

In fact, such differences in parents' perceptions do occur (Exhibit 3-6). For example, parents of 55% of youth living in households with incomes of \$25,000 or less report their involvement in the IEP and transition planning process is "just the right amount," with 44% of parents reporting they would like to be more involved. For youth living in households with incomes between \$25,001 and \$50,000, the gap between these perceptions expands to two-thirds of parents who report being happy with the extent of their involvement and one-third of parents wanting more ($p < .05$ compared with lower-income students). The gap widens even further for

Exhibit 3-6
PARENTS' PERCEPTIONS OF THEIR INVOLVEMENT IN AND THE USEFULNESS OF
TRANSITION PLANNING, BY HOUSEHOLD INCOME AND RACE/ETHNICITY

	Income			Race/Ethnicity		
	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000	White	African-American	Hispanic
Percentage with parents who report they:						
Want more involvement in the IEP and transition planning process	43.5 (2.9)	33.8 (3.2)	25.8 (2.8)	26.7 (2.0)	50.7 (4.0)	42.9 (5.2)
Have the right amount of involvement	55.0 (2.9)	65.4 (3.2)	73.1 (2.8)	72.4 (2.0)	47.3 (4.0)	55.6 (5.2)
Percentage with parents who report transition planning is:						
Very useful	44.3 (3.5)	34.9 (4.1)	27.5 (3.7)	31.2 (2.6)	41.9 (4.8)	45.5 (6.1)
Somewhat useful	41.5 (3.5)	45.7 (4.3)	49.4 (4.2)	49.0 (2.8)	45.4 (4.8)	40.5 (6.0)
Not very/not at all useful	14.2 (2.5)	19.4 (3.4)	23.1 (3.5)	19.8 (2.3)	12.8 (3.2)	14.0 (4.2)

Source: NLTS2 Wave 1 parent interviews.
Standard errors are in parentheses.

youth living in households with incomes of more than \$50,000; almost three-fourths of these parents are content with their level of involvement in the IEP process, whereas one-fourth of these parents report wanting to be more involved ($p < .001$ compared with low-income youth).

Although parents of higher income households are more satisfied with their level of involvement in the IEP and transition planning process, they are less satisfied with the usefulness of the planning for life after high school. Smaller proportions of students in higher income households than in low-income households have parents who report transition planning is “very useful” for preparing students for life after school (28% vs. 44%, respectively, $p < .001$).

Parents of students with different racial/ethnic backgrounds also differ significantly in their perceptions regarding transition planning. White students are more likely to have parents who report that their level of involvement is “just the right amount” (72%) than are parents of African-American (47%) or Hispanic students (56%, $p < .001$ for African-American and $p < .01$ for Hispanic students). Moreover, significantly more parents of African-American and Hispanic students voice a desire for greater involvement in this process (51% and 43%, respectively) than do white students’ parents (27%, $p < .001$). As is the case with income-related differences, despite being less satisfied with their involvement in decision-making, larger proportions of African-American and Hispanic students than white students have parents who report that their children’s education programs are “very useful” for preparing them for adult life (42% and 46%, respectively, vs. 32%; $p < .05$).

The next and last chapter summarizes the information in this report from parents and school staff regarding the IEP and transition planning processes for secondary students with disabilities.

4. EMERGING THEMES REGARDING THE IEP AND TRANSITION PLANNING PROCESSES

In the years since transition planning entered the special education lexicon, efforts related to policy, research, model demonstrations, personnel preparation, parent education, and student support have helped shape the implementation of the transition planning process in schools for students with disabilities (National Center on Secondary Education and Transition, 2004). NLTS2 has provided a national picture of transition planning, including variations in that planning for students who differ in disability and other characteristics. Four main themes emerge about the transition planning process from this national picture:

- The extent to which the expectations for the transition planning process that are embedded in law, regulation, and best practice are being met varies across the range of secondary-school-age students with disabilities.
- The transition planning process develops over time.
- Transition planning reflects the diversity of students' needs and abilities.
- The transition planning process differs for students with different household incomes and racial/ethnic backgrounds.

A Mixed Picture of Transition Planning

NLTS2 findings demonstrate that the basic requirement for transition planning is being met for many students with disabilities. Almost 90% of secondary school students in special education have transition planning under way on their behalf, with about two-thirds having begun the process by age 14 as required by IDEA '97. Furthermore, school staff report that about three-fourths of students, regardless of age, have a course of study identified that will help them achieve their transition goals.

Participants in transition planning. Federal law actively encourages parents' and students' participation in transition planning, and, in fact, the vast majority of students and their parents do participate. In addition, about two-thirds of participating parents report being satisfied with their level of participation. When students participate in transition planning, school staff report that more than half actively provide input to the process, and more than 1 in 10 take a leadership role. Yet there are about 6% of secondary school students with disabilities who reportedly do not attend IEP or transition planning meetings, and about 15% have parents who do not attend. Also, about one-third of participating parents report that the IEP and transition planning processes for their children do not provide as much opportunity for their involvement in decisions as they would like. Further, although the partnership between families and schools in setting goals for students is a reality for about one-third of students, parents report that the school mostly decides students' goals for almost half of students, and mostly parents and youth decide for one in five students.

In addition to students and their parents, special education teachers are part of the transition planning team for virtually all students with disabilities with transition planning efforts under way on their behalf; almost 60% have general education academic teachers, and 30% have general education vocational teachers on the team as well. However, two-thirds of students take

a general education academic class in a given semester, and 43% take a general education vocational class (Wagner, 2003), suggesting that some students who are taking general education classes do not have a general education teacher participating in their transition planning.

Despite the intention that families, schools, and other organizations collaborate in the process, transition planning involves primarily families and school staff; representatives of outside organizations are reported to participate actively in students' transition planning only infrequently. However, the efforts to contact outside organizations on behalf of students reported by school staff appear to match or even exceed the identified postschool service needs of some students. For example, 4% of students are reported to have mental health service needs identified for the period after high school, but 11% have had mental health service providers contacted on their behalf; 5% of students have supported living assistance identified as a service need, and contacts with providers of supervised residential support are reported for the same percentage. Less positively, schools do not appear to be doing all they can to help equip parents to access services for youth after high school; for even the oldest students with disabilities, schools have not provided one-fourth of parents with information about service options after high school.

Students' goals. Students' transition goals heavily emphasize employment and postsecondary education, and the transition planning process appropriately reflects those emphases. Postsecondary education accommodations are identified as postschool service needs for about half of youth, and vocational training or employment services are needs identified for more than one-third. Contacts with outside organizations as part of the transition planning process are made primarily with postsecondary education institutions and employers or vocational training programs.

Supports for transition. Regardless of who participates in the transition planning process and the contacts made on students' behalf, the process will be effective only if students' school programs help them achieve their transition goals. Although approximately 74% of students are reported to have IEPs that specify a course of study intended to help them meet their transition goals, school staff report that about 40% of students have programs that are very well suited to prepare them to meet their transition goals, with a similar percentage reported to have programs fairly well suited for that purpose. Most worrisome, is the 18% of secondary school students with disabilities who are reported to have programs that are only somewhat well suited or not at all well suited to meet their transition goals.

The Transition Planning Process Develops over Time

The transition planning process is not a uniform experience for students as they age; several aspects of the process are different for older students. Some of the differences, such as the role youth take in the process, may occur because of the increased maturity that comes with age. Other differences may reflect an increasing sense of urgency on everyone's part as high school exit approaches.

Initial transition planning. The mean age for the initiation of transition planning is 14.4 years. Three-fourths of 14-year-olds have had transition planning started, and the process is increasingly likely to occur for older students. By the time students are 17 or 18 years old, 96% have had transition planning, reflecting a 20-percentage point increase over 14-year-olds.

Participants in transition planning. Older students may possess greater responsibility, self-determination, skills, and clarity regarding postschool goals relative to younger peers, which may partly explain their greater likelihood of participating actively in transition planning. One-third of 14-year-old students with disabilities are present for transition planning but do not participate—a passive role taken by only one-fifth of 17- and 18-year-olds. Providing active input into planning increases for older students, with more than 60% of 17- and 18-year-olds providing input, compared with 45% of younger students. Student leadership of the transition planning process also is more likely among older students; more than 15% of 17- and 18-year olds take this role.

The participation of a variety of school staff in transition planning also differs for students of different ages. For example, although a special education teacher is almost always involved in the process, regardless of the student's age, the likelihood of general education vocational teachers' being involved is greater for older students; this difference reflects the increased likelihood of older students' taking vocational education courses (Wagner, 2003) and the approach of students' transition to postsecondary vocational training and employment. About 40% of 17- and 18-year-old students have a general education vocational teacher involved in their transition planning, twice as many as among 14-year-olds.

Consistent with the increasing emphasis on vocational goals and services for older students, the participation of a state VR counselor is more common for older students. One in four 17- and 18-year-old students have such an individual involved in their transition planning, compared with one in ten 14-year-olds. Similarly, the active participation of representatives from a variety of other outside organizations increases as early adulthood approaches, from one in ten 15-year-olds to one in five 17- and 18-year-old students, and a variety of services may be needed to ease the transition for some students.

Supports for transition. Instruction focused specifically on transition planning (e.g., a specialized curriculum designed to help students assess options and develop strategies for leaving secondary school and transitioning to adult life) is one way to help students reach their goals. However, only 64% of students have received such instruction. Older students are more likely than younger students to have had it. Of concern is that instruction regarding transition planning is not provided to all students, nor is it commonly provided when transition planning begins.

Generally, more post-high-school service needs are identified as part of transition planning as students approach the transition to adult service systems. Most notably, vocational training and employment service needs are more commonly identified for older students than for younger peers. Parents of older students are more likely to receive information from the schools about adult services, and school contacts with many kinds of outside organizations on behalf of students with disabilities intensify as school exit nears.

Transition Planning Reflects a Diversity of Needs and Abilities

Although the abilities and limitations of students who share a disability category are tremendously diverse, that category serves as a “shorthand” way of depicting key aspects of the disability-related challenges students face. Thus, the goals and needs specified in students' transition plans, the participants in the planning process, and many transition-related activities differ markedly across the categories.

Students' goals. Students with disabilities have multiple goals that reflect their future plans. That the various transition goals are shared by some students in all disability categories masks a large range across categories in the percentages of students who have each goal. For example, although about half of students with disabilities overall plan to go to college, that plan varies from 10% of students with mental retardation to more than 70% of students with visual impairments. Postsecondary vocational training is planned for about 40% of students with disabilities overall; however, almost 60% of students with other health impairments have this goal, compared with about 20% of students with visual impairments. Supported employment is the transition goal for fewer than 10% of students with disabilities overall, but it is the goal of almost 40% of students with autism.

Supports for transition. NLTS2 investigated a number of supports to assist students in making progress toward their transition goals: a course of study students should pursue to meet their transition goals, instruction focused on transition planning skills, and a list of postschool service needs consistent with their goals. The percentages of students for whom these supports are in place vary with students' disability category. Specification of the students' course of study in the IEP relative to transition goals varies from 65% of students with hearing impairments to 75% of students with learning disabilities. Instruction for transition planning designed to assist students in assessing their options and developing strategies for transition is received by 55% to 70% of students across categories. Students with autism or multiple disabilities are the most likely to receive this type of instruction; students with other health impairments are the least likely to do so.

Students' transition plans also identify a wide variety of service and program needs for the post-high-school period. The transition plans for students with learning disabilities or hearing, orthopedic, or other health impairments are the most likely to specify postsecondary education accommodations. The plans for students with autism, multiple disabilities, or deaf-blindness typically specify a constellation of postschool services, including vocational training, supported living arrangements, and behavioral interventions, as well as transportation, social work, mental health, and communication services. The plans for students with mental retardation often identify some, but not all, of these services, particularly vocational training, supported living arrangements, transportation assistance, and social work services. The plans for students with emotional disturbances are very likely to specify behavioral interventions and mental health services. For students with specific sensory or physical disabilities, the plans typically suggest other types of services, such as audiology, vision, and mobility services and occupational and physical therapy.

The types of organizations and agencies that schools contact regarding programs or employment for students when they leave high school reflect both the students' postschool goals and identified needs. Schools typically make more contacts for students in the disability categories that have more identified needs. Schools also are more likely to provide parents of students in the disability categories that have multiple identified service needs with information about appropriate services than they do for students in disability categories with fewer identified needs.

Perceptions of the transition planning process. Parents and school staff of students in each disability category hold a range of views regarding transition planning and the school programs designed to meet students' transition goals. For example, school staff report that more

than half of students with visual impairments have programs that are very well suited to help them achieve their transition goals. In contrast, only one-third of students with emotional disturbances have such highly rated school programs; they also are the most likely to have parents who report that transition planning is not very or not at all useful for their children. On the other hand, more than 4 in 10 students with mental retardation or visual impairments have parents who report that the transition planning process is very useful.

The Transition Planning Process Reflects Income and Racial/Ethnic Differences

The characteristics of the transition planning process that are associated with students' demographic characteristics are limited largely to some transition goals, parents' and youth's participation in the transition planning process, and parents' perceptions of that process.

Students' goals. Income is strongly associated with the likelihood of students' having a transition goal of attending a 2- or 4-year college. Consistent with this finding, students from upper-income households are more likely than those from lower-income households to plan on attending a college or university, have postsecondary education accommodations identified as part of transition planning, and have schools make contacts with colleges and universities on their behalf. Although no differences are associated with income or race/ethnicity in attending a vocational training program or employment as postschool transition goals, low-income and African-American students are more likely to have vocational training, placement, or support identified as postschool needs than are their upper-income and white peers. Schools also make more contacts with vocational schools for African-American students than for their white peers. In addition, racial/ethnic differences are associated with the likelihood of students' having independent living or enhancement of social/interpersonal relationships as transition goals. Larger proportions of African-American students than of their white peers have these goals.

Participants in transition planning. Household income and racial/ethnic differences are strongly associated with the participation of parents in the transition planning process. Parents of white students and those from upper-income households are much more likely to attend transition planning meetings than parents of culturally diverse students or those from low-income households. School staff report that the quality of student participation in transition planning varies by student characteristics, with more passive participation by African-American students, who also assume leadership roles less frequently than do their white or Hispanic peers.

It is encouraging to note that no differences exist between income or racial/ethnic groups regarding the participation of school staff in the transition planning process. However, participants in transition planning from outside organizations (other than VR) are more likely to be involved with planning for students in low-income households.

Perceptions of the transition planning process. An interesting relationship exists between parents' satisfaction with their level of involvement in the transition planning process and how useful they perceive that process to be. The parents of students from diverse backgrounds and from low-income households tend to be less satisfied with their level of involvement, but are more likely to perceive the transition planning process as useful, compared with parents of white students and those from more affluent families. Perhaps the lower level of involvement of these parents is not a reflection of the value they place on the process but more an indicator of their availability to participate, their comfort with school staff or procedures, or their cultural views of authority.

This national picture of the transition planning process is only the first step in the NLTS2 exploration of this aspect of students' secondary school experiences. Later NLTS2 reports will address the question of whether or not differences in students' transition planning relate to their achievements in postsecondary education, employment, and independence during early adulthood.

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Appendix A

NLTS2 SAMPLING, DATA COLLECTION, AND ANALYSIS PROCEDURES

This appendix describes several aspects of the NLTS2 methodology relevant to the Wave 1 data reported here, including:

- Sampling of local education agencies (LEAs) and students
- Data sources and response rates
- Combination of data from multiple sources
- Weighting of the data
- Estimation and use of standard errors
- Unweighted and weighted sample sizes
- Calculation of statistical significance
- Measurement and reporting issues.

NLTS2 Sample Overview

The NLTS2 sample was constructed in two stages. A stratified random sample of 3,634 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 77 state-supported special schools that primarily serve students with hearing and vision impairments and multiple disabilities were invited to participate in the study, with the intention of recruiting 497 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; 501 LEAs and 38 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 LEA¹ 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 11,276 students were selected and eligible to participate in NLTS2.

Details of the LEA and student samples are provided below.

¹ LEAs were instructed to include on the roster any student for which 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.

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 12,435 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. 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 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** (estimated² enrollment greater than 14,931 in grades 7 through 12)
- **Large** (estimated enrollment from 4,661 to 14,930 in grades 7 through 12)
- **Medium** (estimated enrollment from 1,622 to 4,660 in grades 7 through 12)
- **Small** (estimated enrollment from 11 to 1,621 in grades 7 through 12).

² 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.

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% of the student population in grades 7 through 12:

- **High** (0% to 13% Orshansky)
- **Medium** (14% to 24% Orshansky)
- **Low** (25% to 43% Orshansky)
- **Very low** (more than 43% 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, 497 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 3,635 LEAs was invited to participate, from which 497 participating LEAs might be recruited. A total of 501 LEAs actually provided students for the sample, 101% of the target number needed and 14% of those invited. Analyses of the region, size, and wealth of the LEA sample, both weighted and unweighted, confirmed that that the weighted LEA sample closely resembled the LEA universe with respect to those variables.

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 college-bound students, and overrepresented Hispanic students and LEAs in rural areas. Thus, in addition 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.

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.

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%, except for the low-incidence categories of traumatic brain injury and deaf-blindness. Thus, by sampling 1,250 students per disability category (with the two exceptions noted) 402 students per category were expected to have a parent or youth interview in year 9. Assuming a 50% sampling efficiency (which is likely to be exceeded for most disability categories), 402 students would result in a standard error of estimate of slightly less than 3.6%. 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% 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.³ 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 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.

³ Students who were designated as being in ungraded programs also were sampled if they met the age criteria.

Data Sources

Data reported here are drawn from a survey of parents of NLTS2 youth, conducted by telephone and mail, and mail surveys of staff in schools attended by NLTS2 sample members.

Parent Interview/Survey

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), 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. Thus, parents/guardians of NLTS2 sample members were interviewed by telephone or surveyed by mail in 2001 as part of Wave 1 data collection.

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 student was required to have a working telephone number and an accurate address to be eligible for the parent interview sample.

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% 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. Exhibit A-1 reports the responses to the telephone and mail surveys.

Overall, 91% of respondents reported that they were parents of sample members (biological, adoptive, or step), and 1% were foster parents. Six percent were relatives other than parents, 2% were nonrelative legal guardians, and fewer than 1% reported other relationships to sample members.

**Exhibit A-1
RESPONSE RATES FOR NLTS2
PARENT/GUARDIAN TELEPHONE
INTERVIEW AND MAIL SURVEY**

	<u>Number</u>	<u>Percentage</u>
Total eligible sample	11,276	100.0
Respondents		
Completed telephone interview	8,672	76.9
Partial telephone interview completed	300	2.7
Complete mail questionnaire	258	2.3
Total respondents	9,230	81.9
Nonrespondents		
Refused	738	6.5
Language barrier	138	1.2
No response	1,170	10.4
Total nonrespondents	2,046	18.1

School Data Collection

Data sources for the findings reported here also include a mail survey of the school staff who was most knowledgeable about a student's programs. The NLTS2 conceptual framework holds that classroom context, curriculum, instruction, accommodations, and assessment are crucial to student outcomes and are most amenable to intervention. Further, because students' school experiences extend beyond the classroom, related services, IEP goals, participation in district/state assessments all have a place in students' school experiences. These data are best provided by school staff who are most knowledgeable about the student's school programs.

The first step in the school data collection process was to identify the school 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., 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 school program questionnaire for each sample member among other surveys for school staff to complete. A second packet was sent in April 2002. Additional mailings were conducted to individual teachers in May 2002. By the end of the survey period, school program surveys were returned for 6,038 students, or 59% of eligible sample members.

Weighting Wave 1 Data

The percentages and means reported in the data tables throughout this report are estimates of the true values for the population of youth with disabilities in the NLTS2 age range. The estimates are calculated from responses of parents of NLTS2 sample members and knowledgeable school staff. 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.

Exhibit A-2 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% participating. However, that percent 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%. The percentages in all NLTS2 tables are similarly weighted population estimates, whereas the sample sizes are the actual number of cases on which the weighted estimates are based (similar to the 10 cases in Exhibit A-2

**Exhibit A-2
EXAMPLE OF A WEIGHTED PERCENTAGE CALCULATION**

Disability Category	A Number in Sample	B Participated in Group Activities	C Example Weight for Category	D 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% (Column B total, divided by Column A total)		Weighted population estimate = 87% (Column D total, divided by Column C total)	

The students in LEAs and state schools with data for each survey were weighted to represent the universe of students in LEAs and state schools 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 participating LEAs in that cell, divided by the number of students in all LEAs in that cell in the universe of LEAs. 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 geographical and wealth cells of each size stratum. The adjustments were typically small and essentially served as a nonresponse adjustment. However, the adjustments could become substantial when interviewees 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 interviewees, and it was necessary to adjust the weights of other interviewees 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 strata 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 Office of Special Education Programs (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% to 67.4%; the largest increases in sampling efficiency occurred for youth with emotional disturbances (from 44.4% to 81.0%) and for those with multiple disabilities (from 32.1% to 56.8%). 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% in the smallest size stratum to 11.6%) and those with autism (decreasing

from 21.3% in the smallest size stratum to 17.5%). All other changes in the size distribution were 1.5% or less, and the average absolute change was only 0.4%. The largest bias in wealth distribution was for those with multiple disabilities (from 22.2% in wealth stratum 3 to 16.6%, and from 18.3% in wealth stratum 4 to 22.0%). All other changes were 2.1% or less, and the average absolute change was only 0.6%. All biases in regional distribution were 2.1% or less, and the average absolute change was only 0.5%. 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 data. For example, small LEAs had only 21 students with visual impairments with data, requiring that they represent an estimated 1,701 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% of the time. For example, if the estimate for youth's having transition planning is 88.8%, with a standard error of 1.4 (as reported in Exhibit 2-1), one can be 95% confident that the true percentage of receipt of transition planning for the population is between 87.4% and 90.2%.

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 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 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 using 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 using 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

$$N_{eff} = N \left(\frac{E^2[W]}{E^2[W] + V[W]} \right)$$

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% of the categorical responses and 89% 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% 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%, 4.9%, and 3.5%, respectively, for dichotomous variables.

Unweighted and Weighted Sample Sizes

As indicated above, standard errors accompany all estimates reported in the descriptive data tables. How close an estimate comes to a true population value is influenced by the size of the sample on which the estimate is based. Larger samples yield estimates with smaller standard errors, indicating that those estimates are closer to true population values than estimates with larger standard errors based on smaller samples.

Appendix C provides the actual, or “unweighted,” sample sizes for each variable reported in the descriptive data tables. However, some readers may be interested in determining the number of youth in the nation represented by a particular estimate (e.g., if 22% of youth are employed at a given time, how many youth in the country are employed?). A first step in determining these “weighted” sample sizes involves multiplying the percentage estimate by the actual number of youth in the nation represented by that estimate (see the example below). However, 95% of the time, the true population value is likely to diverge from that estimate by as much as the amount of the standard error. Therefore, it is more appropriate to use the standard error to calculate a range in the number of youth represented by an estimate, rather than relying on the single value resulting from multiplying the estimate by the size of the population it represents.

Consider the example depicted in Exhibit A-3. NLTS2 findings indicate that 54.3% of youth with learning disabilities plan to attend a 2- or 4-year college. The standard error accompanying that estimate is 3.5, indicating that the true current employment rate for the population is likely to fall between 50.8% and 57.8%. In the NLTS2 age range there are 1,130,539 youth with learning disabilities. Multiplying the percentages by this population size yields a single-point estimate of 613,883 and a range of 574,314 to 653,452, within which the actual population size will fall, with 95% confidence.

Exhibit A-3
EXAMPLE OF CALCULATING WEIGHTED SAMPLE SIZES

A	B	C	D	E	F
Percentage Estimate	Standard Error	Range around Estimate (Column A, plus or minus Column B)	Population Size	Single-point Weighted Population Affected (Column A times Column D)	Range in Weighted Population Affected (Column C times Column D)
54.3	3.5	50.8 to 57.8	1,130,539	613,883	574,314 to 653,452

Source: NLTS2 (SRI International, 2000).

Because percentage estimates are provided not only for the full sample of youth with disabilities, but also for youth who differ in primary disability category, readers must have the actual population size for each of these subgroups to calculate weighted sample sizes for some estimates. Exhibit A-4 presents these population sizes.

Exhibit A-4
POPULATION SIZES OF GROUPS REPRESENTED BY NLTS2

Groups	Number
All youth with disabilities	1,838,848
Disability category:	
Learning disability	1,130,539
Speech/language impairment	76,590
Mental retardation	213,552
Emotional disturbance	203,937
Hearing impairment	22,001
Visual impairment	8,013
Orthopedic impairment	21,006
Other health impairment	98,197
Autism	14,637
Traumatic brain injury	6,379
Multiple disabilities	34,865
Deaf-blindness	340

Source: US Department of Education, 2001.

Calculating Significance Levels

In general, references in the text of the report to differences among groups highlight only those differences that are statistically significant with at least 95% confidence (denoted as $p < .05$). In addition to the differences highlighted in the text, readers may want to compare percentages or means for specific subgroups to determine, for example, whether the difference in the percentage of students who are male between students with learning disabilities and those with hearing impairments is greater than would be expected to occur by chance. To calculate whether or not the difference between percentages is statistically significant, the squared difference between the two percentages of interest is divided by the sum of the two squared standard errors. If this product is larger than 3.84, the difference is statistically significant at the .05 level (i.e., it would occur by chance fewer than 5 times in 100). Presented as a formula, a difference in percentages is statistically significant at the .05 level if:

$$\frac{(P_1 - P_2)^2}{SE_1^2 + SE_2^2} > 1.96^2$$

where P_1 and SE_1 are the first percentage and its standard error, and P_2 and SE_2 are the second percentage and the standard error. If the product of this calculation is 6.63 to 10.79, the significance level is .01; products of 10.8 or greater are significant at the .001 level.

Measurement and Reporting Issues

The chapters in this report provide information on specific variables included in analyses. However, as they consider the findings reported here readers need to understand several points about NLTS2 measures that are used repeatedly in analyses.

Categorizing 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. In the data tables in this report, 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 (Exhibit A-5), 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 & 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.

Exhibit A-5 DEFINITIONS OF DISABILITIES⁴

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.

Deafness: A hearing impairment so severe that the child cannot understand what is being said even with a hearing aid.

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.

Emotional Disturbance:⁵ 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: An impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance, but that is not included under the definition of deafness given above.

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.

⁴ From ERIC Digests (1998).

⁵ 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."

Exhibit A-5
DEFINITIONS OF DISABILITIES (Concluded)

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.⁶

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.

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 3,196 students with deaf-blindness who were ages 12 to 17 in 1999 (National Technical Assistance Center, 1999), whereas the federal child count indicated that 681 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 districts⁷ reported as having both a hearing and a visual impairment were assigned to the deaf-blindness

⁶ 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).

⁷ 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.

category for purposes of NLTS2 reporting, regardless of the primary disability category assigned by the school or school district. This increased the number of youth with deaf-blindness for whom parent data were collected from 24 who were categorized by their school or district as having deaf-blindness as a primary disability to 166. Exhibit A-6 indicates the number of students reassigned to the deaf-blindness category and their original designation of primary disability.

Exhibit A-6 ORIGINAL PRIMARY DISABILITY CATEGORY OF YOUTH ASSIGNED TO DEAF-BLINDNESS CATEGORY FOR NLTS2 REPORTING PURPOSES	
Original Primary Disability Category	Number
Deaf-blindness	24
Visual impairment	46
Hearing impairment	43
Multiple disabilities	31
Orthopedic impairment	7
Mental retardation	6
Traumatic brain injury	4
Other health impairment	3
Speech/language impairment	1
Autism	1
TOTAL	166

Comparisons with the general population of students. In cases in which databases for the general population of youth are publicly available (e.g., the National Household Education Survey), comparisons have been calculated from those databases for youth who match in age to those included in NLTS2. However, some comparisons have been made using published data. For some of these comparisons, differences in samples (e.g., ages of students) or measurement (e.g., question wording on surveys) reduce the direct comparability of NLTS2 and general population data. When these limitations affect the comparisons, they are pointed out in the text, and their implications for the comparisons are noted.

Reporting statistics. Statistics are not reported for groups with fewer than 35 members. Statistics with a decimal of .5 are rounded to the nearest even number.

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Appendix B

DEMOGRAPHIC CHARACTERISTICS OF YOUTH WITH DISABILITIES AND THEIR HOUSEHOLDS

Understanding the characteristics of youth with disabilities is a crucial foundation for serving them well. Youth bring to their educational experiences a complex history and background that are shaped by demographic characteristics, such as age, gender, and ethnicity; by family background and circumstances, such as parents' education and household income; and by the nature of the students' disabilities. These factors help structure the involvement of youth at home, at school, and in the community, as well as the ways in which they, their parents, school staff, and other service personnel work together toward positive results for youth. Thus, individual and household characteristics are essential elements of the context for many major life experiences of youth, and understanding that context will inform how these experiences are interpreted.

A brief summary of selected individual characteristics and household risk factors of youth with disabilities is presented below.¹

Individual Characteristics

For youth, age is a major determinant of development that influences their competence and independence. Yet, the rate of maturation among teens varies considerably, resulting in sizable differences in abilities and activities among youth of the same age. Gender is a defining human characteristic, and during adolescence, when young people are exploring their sexuality and gender roles, it can shape their experiences and choices in powerful ways. In addition, racial/ethnic and language background can be associated with rich cultural traditions, patterns of relationships within families and communities, and strong group identification, which can generate important differences in values, perspectives, expectations, and practices.

The importance of understanding the demographic makeup of the population of youth with disabilities is crucial in interpreting NLTS2 findings for the group as a whole and for youth with particular disability classifications. That makeup also serves a foundation for interpreting comparisons between youth with disabilities and those in the general population.

The primary disability classifications among youth with disabilities are reported below, and other traits that are important to their experiences are described. These classifications and traits are presented for youth with disabilities as a whole, compared with the general population when possible, and then described as they vary for youth with different primary disability classifications.

¹ A more detailed discussion of these characteristics can be found in Levine, Wagner, & Marder (2003) and Levine, Marder, Wagner, & Cardoso (2003).

Primary Disabilities of Youth

In the 2000-01 school year, students who received special education constituted 13% of all 13- to 16-year-olds who were enrolled in school.² Exhibit B-1 depicts the primary disability classifications assigned by schools to those students (Office of Special Education Programs, 2002). Overall, 62% of students receiving special education in this age group were classified as having a learning disability. Youth with mental retardation and emotional disturbances accounted for 12% and 11% of students, respectively. Another 5% of youth were classified as having other health impairments, and 4% were identified as having speech impairments. The 7 remaining disability categories each comprised 1% or less of the total child count or, taken together, about 5% of youth with disabilities. Thus, when findings are presented for youth with disabilities in this age group as a whole, they represent largely the experiences of those with learning disabilities.

Primary Disability Classification	Federal Child Count ³		NLTS2 Weighted Percentage
	Number	Percentage	
Specific learning disability	1,130,539	61.8	62.0
Speech/language impairment	76,590	4.2	4.0
Mental retardation	213,552	11.7	12.2
Emotional disturbance	203,937	11.2	11.4
Hearing impairment	22,001	1.2	1.3
Visual impairment	8,013	0.4	0.5
Orthopedic impairment	21,006	1.2	1.2
Other health impairment	98,197	5.4	4.6
Autism	14,637	0.8	0.7
Traumatic brain injury	6,379	0.2	0.3
Multiple disabilities	34,865	1.2	1.8
Deaf-blindness	340	<0.1	0.2
TOTAL	1,838,848	100.0	100.0

Note that, although students receiving special education often are referred to as “students with disabilities,” the population of students with disabilities is larger than those receiving special education. For example, parents of 6% of the general population of children under age 18 report that their children have a visual impairment, 13% have a hearing impairment, and almost 16% report that their children have a speech impairment (National Center for Health Statistics, 2001). Yet, the number of students who receive special education services primarily for those

impairments combined constitute fewer than 3% of all students under age 18 (Office of Special Education Programs, 2002). This difference illustrates that many children and youth experience some degree of disability that does not require specially designed instruction.

Exhibit B-1 demonstrates that the weighted distribution of NLTS2 youth very closely approximates that of youth with disabilities in the nation. Thus, weighted findings from NLTS2 provide an accurate picture of the characteristics, experiences, and achievements of youth with the range of disabilities highlighted in Exhibit B-1.

² General student enrollment is available by grade level rather than age. Grades 7 through 10 were used in calculating the general student enrollment (National Center for Education Statistics, 2001).

³ Data are for youth ages 13 through 16 who were receiving services under IDEA '97, Part B, in the 2000-01 school year in the 50 states and Puerto Rico (Office of Special Education Programs, 2002).

Age. Although the youth included in NLTS2 were ages 13 through 16 when they were selected, by the time data were collected from parents in 2001, some of the 13-year-olds were 14 and some 16-year-olds were 17; by the time school data were collected in the 2001-02 school year, only 17% of youth were 14 and 38% were 17 or 18. Therefore, findings are reported here for youth who are 14 through 18 (Exhibit B-2). The youngest and oldest cohorts, 13 and 17 or 18, are smaller than others because of the aging of youth between sample selection and interviews.

Each successive age cohort includes youth who were identified as eligible for special education services at that age, as well as those identified earlier who still are receiving special education. However, each age cohort does not include students who left school or special education at earlier ages. Thus, the disability mix shifts across the age cohorts because some disabilities are more prevalent among younger students whereas others do not emerge until later, and because school-leaving disproportionately affects some disability categories.

Youth in each disability category are distributed across the age groups in a similar pattern, with one exception: Almost one-fourth (24%) of youth with speech impairments are age 14, and a similar percentage are 17 or 18, making them significantly younger, on average, than those in almost every other disability category ($p < .05$ to $p < .001$).

Exhibit B-2
YOUTH'S AGE ON MARCH 15, 2002, BY DISABILITY CATEGORY

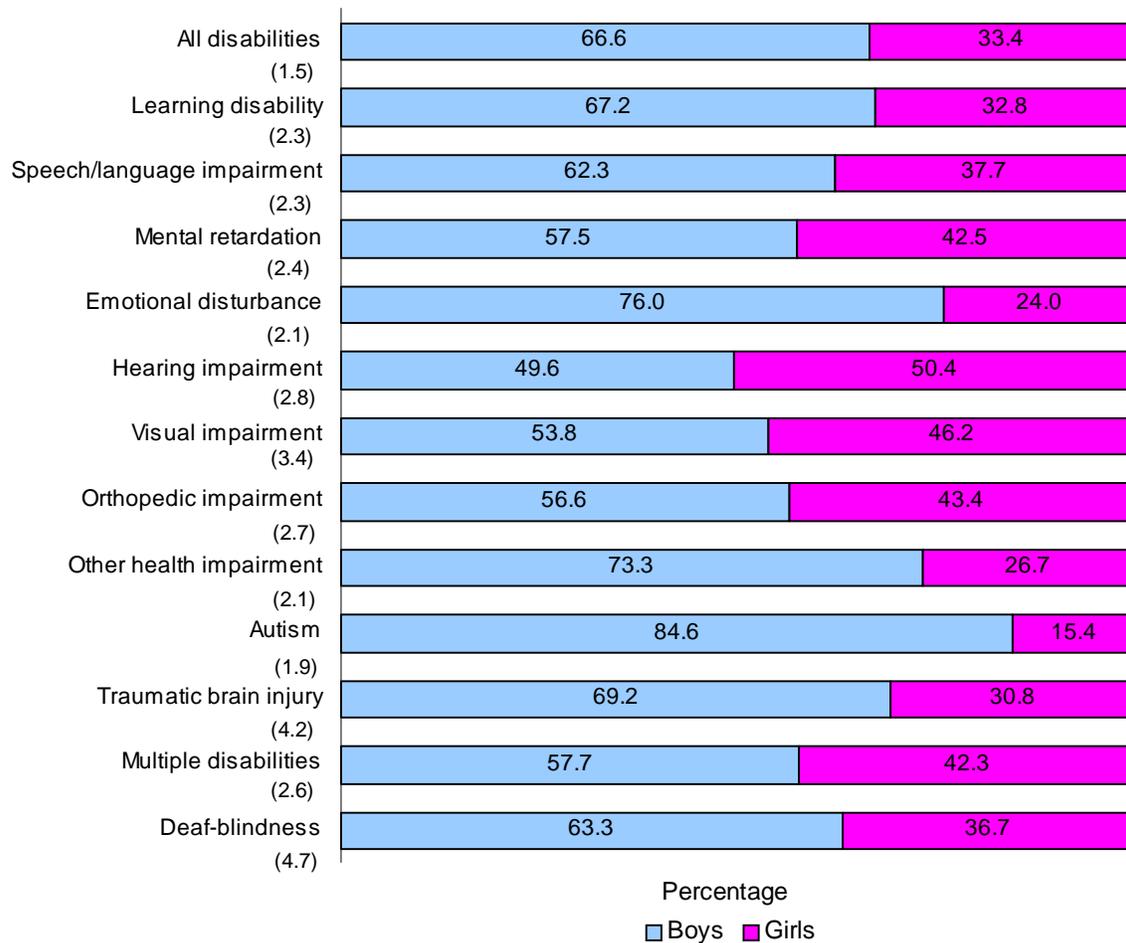
Age	All Youth	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
14	17.2 (1.5)	18.5 (2.4)	23.5 (2.7)	12.9 (2.2)	15.9 (2.9)	14.4 (2.7)	15.6 (3.4)	9.1 (1.9)	14.2 (2.1)	17.1 (2.5)	9.6 (3.4)	13.9 (2.6)	14.4 (4.4)
15	21.7 (1.7)	20.9 (2.5)	26.5 (2.9)	22.0 (2.7)	24.7 (3.4)	22.4 (3.2)	17.7 (3.6)	24.5 (2.9)	22.5 (2.6)	21.4 (2.7)	22.8 (4.9)	16.7 (2.7)	24.8 (5.4)
16	23.5 (1.7)	23.9 (2.6)	23.9 (2.8)	23.3 (2.7)	20.2 (3.2)	19.8 (3.1)	24.0 (4.0)	27.4 (3.0)	25.9 (2.7)	25.3 (2.9)	21.6 (4.8)	23.0 (3.1)	23.8 (5.3)
17 or 18	37.6 (2.0)	36.7 (3.0)	26.1 (2.8)	41.9 (3.2)	39.3 (3.9)	43.3 (3.8)	42.7 (4.6)	39.0 (3.3)	37.5 (3.0)	36.2 (3.2)	46.0 (5.8)	46.4 (3.7)	37.0 (6.0)
Mean	15.9 (.1)	15.9 (.1)	15.6 (.1)	16.0 (.1)	15.9 (.1)	16.0 (.1)	16.1 (.1)	16.0 (.1)	15.9 (.1)	15.9 (.1)	16.1 (.1)	16.1 (.1)	15.9 (.1)

Source: NLTS2 Wave 1 parent interviews.
Standard errors are in parentheses.

Gender. Two-thirds of youth with disabilities in the NLTS2 age range are boys (Exhibit B-3). The 2:1 ratio among children with disabilities has been found among infants and toddlers (Hebbeler et al., 2001), as well as among elementary and middle school students (Marder & Wagner, 2002).

Boys make up between 58% and 77% of youth in most disability categories, but among youth with autism, 85% are boys. In contrast, among youth with hearing or visual impairments, the percentages come close to the distribution of boys in the general population (50% and 54%). Thus, youth with different disability classifications can be expected to differ in their experiences and achievements because of their gender composition, as well as their disability differences.

**Exhibit B-3
STUDENT GENDER, BY DISABILITY CATEGORY**



Source: NLTS2 Wave 1 parent interviews.
 Standard errors are in parentheses.

Race/Ethnicity. Although white students make up approximately the same percentage of youth with disabilities as they do of the general population, differences are apparent between the two populations for youth of color, particularly African-American youth (Exhibit B-4). They constitute almost 21% of youth with disabilities, compared with 17% of youth in the general population ($p < .01$; National Center for Education Statistics, 2002). This finding is consistent with research that has demonstrated that disability is most prevalent among African-Americans across the age range (Bradsher, 1995). Small differences between youth with disabilities and youth in the general population in other racial/ethnic groups are not statistically significant.

Exhibit B-4
RACIAL/ETHNIC BACKGROUNDS OF YOUTH, BY DISABILITY CATEGORY

	All Youth	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Percentage whose race/ethnicity is:													
White	62.1 (1.5)	62.3 (2.3)	64.7 (2.3)	54.8 (2.4)	61.4 (2.4)	59.9 (2.8)	62.1 (3.4)	64.3 (2.6)	76.6 (2.0)	62.0 (2.6)	68.5 (4.2)	65.6 (2.5)	62.4 (4.7)
African-American	20.7 (1.3)	18.4 (1.9)	17.7 (1.8)	33.3 (2.3)	25.0 (2.2)	17.5 (2.1)	20.1 (2.8)	15.5 (2.0)	13.3 (1.6)	23.7 (2.3)	17.9 (3.5)	18.4 (2.1)	14.7 (3.4)
Hispanic	14.1 (1.1)	16.2 (1.8)	14.2 (1.7)	9.6 (1.4)	10.2 (1.5)	17.3 (2.1)	14.0 (2.4)	16.4 (2.0)	7.7 (1.2)	8.9 (1.5)	10.0 (2.7)	11.6 (1.7)	19.5 (3.9)
Asian/Pacific Islander	1.3 (.4)	1.0 (.5)	2.1 (.7)	1.2 (.5)	1.4 (.6)	4.1 (1.1)	3.0 (1.2)	3.2 (1.0)	1.2 (.5)	4.0 (1.0)	2.3 (1.4)	1.8 (.7)	2.9 (1.6)
American Indian/Alaska Native	1.2 (.3)	1.3 (.5)	0.9 (.5)	0.5 (.3)	1.6 (.6)	1.2 (.6)	0.3 (.4)	0.4 (.3)	0.7 (.4)	0.7 (.4)	1.2 (1.0)	2.3 (.8)	0.0 (.0)

Source: NLTS2 Wave 1 parent interviews.
Standard errors are in parentheses.

The disproportionality of African-Americans among youth with disabilities is concentrated in a few categories. Whereas the racial/ethnic composition of youth with learning disabilities; speech, hearing, or orthopedic impairments, or multiple disabilities resembles the general population, African-Americans comprise significantly larger percentages of youth with mental retardation (33%) and emotional disturbances (25%). The percentage of Hispanic youth is particularly small among those with other health impairments (8%) or autism (9%). These racial/ethnic differences among disability categories may contribute to differences in the experiences of youth, apart from their differences in disability.

Household Risk Factors

A child's household is his or her first educational setting. At home, children form their first emotional attachments, achieve their early developmental milestones, and acquire the foundation for their subsequent growth and learning. During adolescence, the family can be the context within which a youth wrestles with his or her desire for independence and separation, and the need to stay connected to family and home. Thus, as children mature, what they need from their families and others who share their households may change, but children and youth continue to have their values, expectations, and preferences shaped by their experiences at home.

This section examines several aspects of households that can be risk factors in children's development: living with other than two parents, having a poorly educated or unemployed head of household, or living in a low-income household (e.g., see Duncan & Brooks-Gunn, 1997). These factors are described for youth with disabilities as a whole compared with the general population, and then for youth who differ in their primary disability classification.

**Exhibit B-5
HOUSEHOLD CHARACTERISTICS OF YOUTH
WITH DISABILITIES AND YOUTH
IN THE GENERAL POPULATION**

	Youth with Disabilities	Youth in the General Population
Percentage living:		
With two parents	61.4 (1.6)	73.8 ^a (1.0)
With one parent	31.1 (1.5)	22.5 ^a (1.0)
With relative(s)	5.3 (.7)	3.2 (.4)
With a legal guardian/not a relative	1.1 (.3)	^b
In foster care	1.0 (.3)	^b
In another arrangement	.3 (.1)	.5 (.2)
Percentage with:		
Head of household who is not a high school graduate	21.0 (1.3)	10.0 ^c (.6)
Unemployed head of household	17.0 (1.2)	11.0 ^c (.6)
Percentage with annual household income of:		
\$25,000 or less	36.6 (1.6)	19.7 ^d
\$25,001 to \$50,000	30.0 (1.5)	25.5
More than \$50,000	33.4 (1.5)	54.6
Percentage in poverty	23.5 (1.4)	16.3 ^e

Source: NLTS2 Wave 1 parent interviews.

^a Computed using data for 13- to 17-year-olds from the National Longitudinal Study of Adolescent Health, 1999.

^b Youth living with a legal guardian, in foster care, or in residential school or institution are included in the "other arrangement" category.

^c Computed using data for 13- to 17-year-olds from the National Household Education Survey, 1999.

^d Data are for youth 12 through 17 years old (U.S. Census Bureau, 2002a).

^e U.S. Census Bureau (2002b).

Standard errors are in parentheses.

Household Risk Factors for Youth with Disabilities and the General Population

Like youth in the general population, a majority of youth with disabilities (61%) live in households with two parents (biological, step, or adoptive parents; Exhibit B-5). This is substantially below the 74% of youth in the general population who do so ($p < .001$). Another 31% live with one parent. Thus, 92% of youth with disabilities live with a parent. Five percent of youth live with other adult family members in households that do not include one of their own parents, and 1% live with a legal guardian who is not a family member. One percent of youth with disabilities live in foster care; few youth live at a residential school or institution.⁴

The heads of household of youth with disabilities tend to have lower levels of education than parents of the general population of youth. In the general population, 10% of heads of household are not high school graduates, whereas more than twice as many heads of household of youth with disabilities have not graduated from high school ($p < .001$). Similarly, heads of households of youth with disabilities are more likely to be unemployed (17%) than those in the general population (11%, $p < .001$).

Consistent with lower education levels and rates of employment, youth with disabilities are more likely than others to be poor. Almost one-fourth of them live in poverty, compared with about 16% of youth in the general population ($p < .001$). Poverty has been shown to have negative impacts on children and youth with disabilities and their families in multiple domains, including

health, productivity, physical environment, emotional well-being, and family interaction (Park, Turnbull, & Turnbull, 2002).

⁴ These include residential or boarding schools, hospitals, mental health facilities, group homes, and correctional facilities.

Disability Differences in Household Risk Factors

The prevalence of risk factors among households of youth with different disabilities ranges widely (Exhibit B-6). Most striking, youth with mental retardation are more likely than others to experience high levels of each kind of risk, as are youth with emotional disturbances to a somewhat lesser degree. These youth are the least likely to live with two parents and among the most likely to live in foster care. They also are the most likely to come from households in poverty and those with heads of household who are not employed.

In contrast, youth with other health impairments have the lowest rates of some kinds of risk factors. For example, they are among the least likely to be living in poverty or in a household where the head of household is unemployed, and most likely to be living with two parents. In fact, they are somewhat less likely to experience some of these risk factors than youth in the general population. Youth with physical and sensory impairments are in the mid-range among the disability categories on many risk factors.

Exhibit B-6
HOUSEHOLD CHARACTERISTICS, BY DISABILITY CATEGORY

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Living:												
With both parents	63.3 (2.4)	69.7 (2.3)	54.8 (2.6)	48.7 (2.6)	65.8 (2.8)	61.0 (3.5)	66.9 (2.7)	71.9 (2.2)	67.5 (2.5)	61.2 (4.5)	63.6 (2.6)	60.3 (5.2)
With one parent	30.6 (2.3)	24.8 (2.2)	34.5 (2.5)	38.1 (2.6)	26.0 (2.6)	30.7 (3.3)	27.4 (2.5)	22.2 (2.0)	27.0 (2.4)	30.3 (4.2)	24.9 (2.4)	35.7 (5.1)
With relative(s)	5.0 (1.1)	3.5 (.9)	6.2 (1.3)	7.9 (1.4)	5.3 (1.3)	5.8 (1.7)	3.6 (1.1)	2.8 (.8)	2.3 (.8)	5.7 (2.1)	4.3 (1.1)	3.4 (1.9)
With a legal guardian (not a relative)	0.6 (.4)	0.6 (.4)	2.3 (.8)	2.2 (.8)	2.5 (.9)	2.0 (1.0)	1.1 (.6)	1.0 (.5)	1.1 (.6)	1.6 (1.2)	2.3 (.8)	0.0 (.0)
In foster care	0.5 (.4)	1.2 (.5)	1.8 (.7)	2.8 (.9)	0.3 (.3)	0.1 (.2)	0.5 (.4)	1.7 (.6)	1.7 (.7)	0.9 (.9)	2.6 (.9)	0.0 (.0)
In another arrangement	0.1 (.2)	0.1 (.2)	0.4 (.3)	0.4 (.4)	0.2 (.4)	0.3 (.4)	0.4 (.5)	0.3 (.4)	0.4 (.4)	0.2 (.6)	2.3 (.9)	0.7 (.9)
With head of household who is:												
Not a high school graduate	20.3 (2.0)	19.7 (2.0)	32.3 (2.4)	19.5 (2.1)	18.3 (2.3)	15.1 (2.6)	14.9 (2.0)	13.3 (1.6)	11.2 (1.7)	15.1 (3.4)	14.2 (1.9)	18.4 (3.9)
Not employed	14.0 (1.7)	14.8 (1.8)	28.2 (2.3)	24.0 (2.3)	14.2 (2.1)	17.5 (2.8)	16.3 (2.1)	12.5 (1.6)	16.0 (2.0)	17.0 (3.6)	20.1 (2.2)	19.4 (4.0)
In poverty	22.1 (2.1)	19.2 (2.1)	41.4 (2.6)	29.8 (2.4)	20.2 (2.4)	19.7 (2.9)	20.4 (2.4)	15.0 (1.8)	15.0 (1.8)	18.8 (3.6)	24.0 (2.5)	24.3 (4.7)

Source: NLTS2 Wave 1 parent interviews.
Standard errors are in parentheses.

Summary

Youth with disabilities constitute 13% of all 13- to 16-year-olds who were enrolled in school in the 2000-01 school year. Although they include students with 12 different primary disability classifications, 85% are classified as having learning disabilities, mental retardation, or emotional disturbances as their primary disabilities.

NLTS2 youth were 13 to 17 years old when parent interview data were collected and 13 to 18 years old when school survey data were collected. Youth with speech/language impairments have a larger proportion of younger students, whereas visual impairment is a category that has a larger proportion of older students.

Almost two-thirds of youth with disabilities are boys. Boys account for slightly more than half of youth with sensory impairments, but they account for about three-fourths of youth with emotional disturbances and other health impairments and for more than 80% of youth with autism.

African-American youth constitute a larger proportion of youth with disabilities than the general population. This difference between the two populations of youth is consistent with patterns found among infants and toddlers with disabilities or developmental delays, as well as among elementary- and middle-school-age students receiving special education. However, disproportionality is concentrated among youth in a limited number of disability categories. African-Americans make up particularly large proportions of those with mental retardation or emotional disturbances. The percentage of Hispanic youth is particularly small among those with other health impairments or autism.

The households of youth with disabilities also differ significantly from the general population in the prevalence of several risk factors for poor outcomes. Of particular note is the significantly higher rate of low-income households among youth with disabilities, probably a reflection, in part, of the overall lower levels of education and employment among heads of households of youth with disabilities. Several risk factors are particularly prominent among youth with mental retardation and emotional disturbances.

Awareness of these important differences between youth with disabilities and those in the general population, and of the highlighted differences between youth with different primary disability classifications, is an important foundation for understanding the experiences described in this report.

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Appendix C

UNWEIGHTED SAMPLE SIZES

Exhibit C-1 TOTAL N'S

	N
Exhibit 2-2 Age transition plan began	4,157
Exhibit 2-3 Students' post high school goals	4,193
Exhibit 2-6 Decision-making at IEP meetings	8,118
Exhibit 3-1 Parent perception of involvement	7,588
Exhibit 3-2 Parent perception of usefulness	4,633
Exhibit 3-3 Teacher perception of suitability	4,250

Exhibit C-2 DISABILITY N'S

	Learning Disability	Speech/Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Exhibit 2-12 Post high school goals	417	280	446	270	454	369	418	452	437	166	406	78
Exhibit 2-13 Active participants	426	286	449	275	458	380	433	456	441	163	417	79
Exhibit 2-13 Students' role	408	273	440	267	445	371	416	436	434	160	392	77
Exhibit 2-14 Courses of study	392	266	418	255	431	365	394	428	416	148	391	74
Exhibit 2-14 Received transition instruction	387	254	426	249	426	352	402	428	421	151	384	75
Exhibit 2-14 Identified service needs	392	266	418	255	431	365	394	428	416	148	391	74
Exhibit 2-16 Information provided	358	199	417	225	402	346	380	357	420	132	391	73
Exhibit 3-4 Involvement	684	572	692	646	728	590	787	798	838	325	802	126
Exhibit 3-4 Usefulness	455	335	458	401	485	390	458	464	472	199	443	73
Exhibit 3-5 Program suitability	425	289	451	274	459	372	423	455	440	167	416	79

Exhibit C-3 HOUSEHOLD INCOME AND RACE/ETHNICITY N'S

	Income			Race/Ethnicity		
	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000	White	African American	Hispanic
Exhibit 2-17 Post high school goals	1,106	1,045	1,196	2,753	839	435
Exhibit 2-18 Active participants	1,121	1,071	1,214	2,802	838	452
Exhibit 2-18 Students' role	1,091	1,035	1,170	2,712	807	436
Exhibit 3-6 Involvement	2,307	2,117	2,536	4,749	1,453	938
Exhibit 3-6 Usefulness	1,547	1,294	1,419	2,736	987	639

**Exhibit C-4
AGE N'S**

	All	14	15	16	17/18
Exhibit 2-1 Had transition plan	4,944	790	1,161	1,326	1,667
Exhibit 2-4 Active participants	4,263	579	941	1,175	1,568
Exhibit 2-7 Plan specifies course of study	4,241	581	933	1,171	1,556
Exhibit 2-7 Received instruction	3,955	536	872	1,087	1,460
Exhibit 2-7 Identified service needs	3,978	528	871	1,085	1,494
Exhibit 2-11 Information provided to parents	3,700	476	822	1,017	1,385

**Exhibit C-5
N'S FOR EXHIBIT 2-5
STUDENTS' ROLE IN TRANSITION PLANNING, BY ABILITY TO ASK FOR WHAT THEY NEED**

Had transition plan:	Student asks for what they need	
	Not well	Well
	1,558	2,362

**Exhibit C-6
N'S FOR EXHIBIT 2-8
POSTSCHOOL SERVICE NEEDS SPECIFIED IN TRANSITION PLANNING,
BY STUDENTS' POSTSCHOOL GOALS**

Identified needs for the following after high school:	Students with goals:					
	2- or 4-year college		Vocational training		Competitive employment	
	No	Yes	No	Yes	No	Yes
	2,273	1,634	2,721	1,186	2,361	1,546

**Exhibit C-6
N'S FOR EXHIBIT 2-8
POSTSCHOOL SERVICE NEEDS SPECIFIED IN TRANSITION PLANNING,
BY STUDENTS' POSTSCHOOL GOALS (Concluded)**

Identified needs for the following after high school:	Students with goals:									
	Supported employment		Sheltered employment		Enhanced social interpersonal relationships		Living independently		Maximized functional independence	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
	3,208	699	3,317	590	2,499	1,408	2,194	1,713	2,531	1,376

Exhibit C-7
N'S FOR EXHIBIT 2-9
CONTACTS MADE BY SCHOOLS ON BEHALF OF STUDENTS WITH TRANSITION PLANS

	All	14	15	16	17/18
Postsecondary education/training					
2- or 4-year college	2,247	300	499	601	847
Vocational schools	2,370	319	540	639	872
Employment					
Potential employers	2,629	349	583	721	976
Military	2,008	281	468	525	734
Job placement agencies	2,639	344	579	731	985
Other vocational training programs	2,583	333	595	701	954
Supported employment programs	2,307	307	506	657	837
Sheltered workshops	2,110	285	469	593	763
Other social service agencies/programs					
Mental health	2,045	284	451	563	747
Social Security Administration	2,176	294	479	589	814
State VR agency	2,740	315	587	748	1,090
Other social service agencies	2,116	301	454	609	752
Supervised residential support	1,888	272	410	532	674
Adult day programs	1,838	264	413	520	641
Congregate care	1,701	255	377	475	594

**Exhibit C-8
N'S FOR EXHIBIT 2-10
CONTACTS MADE BY SCHOOLS, BY STUDENTS' MOST COMMONLY NEEDED SERVICES**

Students had services identified

	Postsecondary education accommodations		Vocational training/employment		Supported living assistance		Behavioral intervention		Mental health services	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Postsecondary education/training										
2- and 4-year colleges	975	1,150	1,432	693	1,960	165	2,009	116	2,028	97
Vocational schools	1,143	1,117	1,376	884	2,063	197	2,108	152	2,149	111
Employment										
Potential employers	1,402	1,098	1,418	1,082	2,183	317	2,331	169	2,362	138
Military	1,016	881	1,156	741	1,722	175	1,775	122	1,794	103
Job placement agencies	1,438	1,081	1,401	1,118	2,170	349	2,329	190	2,370	149
Other vocational training programs	1,440	1,030	1,341	1,129	2,118	352	2,275	195	2,325	145
Supported employment programs	1,359	839	1,138	1,060	1,781	417	2,002	196	2,051	147
Sheltered workshops	1,297	719	1,058	958	1,610	406	1,815	201	1,872	144
Other service agencies/programs										
Mental health agencies	1,189	754	1,087	856	1,611	332	1,750	193	1,759	184
State VR agency	1,506	1,114	1,427	1,193	2,244	376	2,429	191	2,468	152
Supervised residential support	1,188	608	928	868	1,387	409	1,610	186	1,660	136
Adult day program	1,157	590	933	814	1,379	368	1,574	173	1,626	121

Exhibit C-9
N'S FOR EXHIBIT 2-15
CONTACTS MADE BY SCHOOLS ON BEHALF OF STUDENTS WITH
TRANSITION PLANNING, BY DISABILITY

	Learning Disability	Speech/Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Postsecondary education/training												
2- and 4-year colleges	284	169	168	177	271	210	242	300	169	85	135	37
Vocational schools	290	173	231	188	272	192	248	303	187	90	156	40
Employment												
Potential employers	274	169	293	204	278	212	274	311	244	97	220	53
U.S. Military	253	142	206	174	174	153	191	304	154	82	144	31
Job placement agencies	265	166	301	201	287	221	268	295	263	98	226	48
Other vocational training programs	265	167	303	186	267	205	253	296	259	96	237	49
Supported employment programs	193	132	294	153	222	192	237	240	281	86	226	51
Sheltered workshops	176	114	255	133	184	179	218	215	285	74	234	43
Other social service agencies/programs												
Mental health	183	119	236	159	184	174	200	227	248	72	203	40
Social Security Administration	190	116	247	145	243	203	226	221	238	77	218	52
State VR agency	275	162	316	186	312	243	293	295	269	98	238	53
Other social service agencies	177	112	271	125	182	192	201	195	285	70	260	46
Supervised residential support	152	93	250	106	154	173	183	173	264	61	239	40
Adult day programs	152	92	249	98	141	172	175	165	257	57	240	40
Congregate care	155	98	219	98	142	142	161	166	219	54	212	35