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Preparing for life after high school: The characteristics and experiences of youth in special education

Volume 2: Comparisons across disability groups

Findings from the National Longitudinal Transition Study 2012

Executive Summary

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NLTS 2012
National Longitudinal Transition Study

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This report is available on the IES website at website at https://ies.ed.gov/ncee/projects/evaluation/disabilities_nlts2012.asp.

Acknowledgment

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Disclosure of potential conflicts of interest

The research team for this study consists of key staff from Mathematica Policy Research and the Institute on Community Integration at the University of Minnesota. The organizations and the key staff members do not have financial interests that could be affected by findings from the study. No one on the Technical Working Group, convened by the research team to provide advice and guidance, has financial interests that could be affected by findings from the study.

Executive summary

It is widely recognized that the 12 percent of all youth in American public schools who have disabilities comprise a set of students with distinct capacities and needs. Federal legislation, including the most recent updates to the Individuals with Disabilities Education Act (IDEA) in 2004, identifies different disability groups and mandates that students in each group have access to a free and appropriate public education. How youths' characteristics, experiences, and challenges vary by disability group remains of interest, particularly given the changing educational, social, and economic landscape that might affect youth with different disabilities in different ways (Colby & Ortman, 2015; Dee, Jacob, & Schwartz, 2013; Oreopoulos & Petronijevic, 2013; Oreopoulos, von Wachter, & Heisz, 2012; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

The National Longitudinal Transition Study (NLTS) 2012 provides updated information on youth with disabilities in light of these changes, to inform efforts to address their needs. Sponsored by the U.S. Department of Education under a congressional mandate to study IDEA 2004 and the students it serves, the NLTS 2012 describes the backgrounds of secondary school youth and their functional abilities, activities in school and with friends, academic supports received from schools and parents, and preparation for life after high school. Through surveys in 2012 and 2013, the study collected data on a nationally representative set of nearly 13,000 students—mostly those with an individualized education program (IEP) and expected to receive special education services. The study also includes students without an IEP, who either have no identified disability or who have an impairment that does not qualify them for special education but allows them to receive accommodations through a 504 plan under the Rehabilitation Act, another federal law pertaining to the rights and needs of youth with disabilities.

This second volume of findings from the NLTS 2012 focuses on youth with an IEP only and the similarities or dissimilarities across 12 disability groups defined by IDEA 2004. The assessment of diversity among the disability groups in the decade following IDEA 2004 suggests several key points:

- **Youth with intellectual disability and emotional disturbance are the most socioeconomically disadvantaged groups and the most likely to attend lower-performing schools.** According to parents, 72 percent of youth with intellectual disability live in low-income households, which is 14 percentage points higher than youth with an IEP on average. Smaller proportions of youth with intellectual disability (71 percent) and emotional disturbance (73 percent) have an employed parent, compared with all youth with an IEP (80 percent). In addition, one-third of students in these two groups attend a lower-performing school, compared with 27 percent of all youth with an IEP. In contrast, youth with autism and speech or language impairments are less socioeconomically disadvantaged than youth with an IEP overall (for example, 37 and 49 percent live in low-income households versus 58 percent of all youth with an IEP) and less likely to attend a lower-performing school (22 and 19 percent versus 27 percent).

- **Difficulties with health, communication, and functioning independently are most prevalent among youth with autism, intellectual disability, multiple disabilities, and orthopedic impairments.** According to parents, youth in these four groups are most likely to have difficulty performing various activities of daily living without help, such as getting to places outside the home (43 to 60 percent can do so, versus 85 percent for all youth with an IEP). In addition, parents indicate that 37 to 53 percent have a chronic health condition, compared with 28 percent of youth with an IEP overall. At least half of youth in the first three groups have trouble communicating with and understanding others, as reported by parents. Youth with specific learning disabilities and speech or language impairments are less likely to have these difficulties.

- **The groups that most commonly face health and functional challenges are also less engaged with friends and in school activities, but youth with emotional disturbance are most likely to get into trouble.** Youth with autism, deaf-blindness, intellectual disability, multiple disabilities, and orthopedic impairments are 10 to 36 percentage points less likely than youth with an IEP overall (52 percent) to report getting together with friends weekly. In addition, those with intellectual disability and multiple disabilities are about 10 percentage points less likely to report participating in school sports and clubs, compared with all youth with an IEP (64 percent). Youth with emotional disturbance are, on average, suspended (65 percent), expelled (19 percent), and arrested (17 percent) at more than twice the rates of youth with an IEP, according to parents, and are the most likely group to report being teased (48 percent). In contrast, youth with speech or language impairments are less likely to face engagement challenges.

- **Youth with autism, intellectual disability, and multiple disabilities are most likely to receive academic modifications but least likely to receive some other forms of academic support.** Parents report that about two-thirds of youth in these groups take modified tests and more than half receive modified assignments. Yet those youth are 16 to 25 percentage points less likely than youth with an IEP on average (72 percent) to report receiving school-provided supplemental academic instruction outside of regular school hours. They are also 7 to 14 percentage points less likely than all youth with an IEP (73 percent) to indicate that they received guidance on courses to take. Moreover, parents of youth with autism and multiple disabilities, along with youth with emotional disturbance, are least likely to report providing their children with weekly homework help (54 percent for all three groups, compared with 62 percent across all youth with an IEP).

- **The same three groups—youth with autism, intellectual disability, and multiple disabilities—are least likely to take steps to prepare for college and employment.** For example, 16 to 29 percent of youth ages 16 and older with autism, intellectual disability, and multiple disabilities report having taken a college entrance test, compared with 42 percent of youth with an IEP on average. Youth in these groups are also about half as likely as youth with an IEP overall to have had a paid job while in high school (22 to 23 percent versus 40 percent). In addition, their parents are less likely than parents of other youth with an IEP to expect them to obtain postsecondary education (32 to 53 percent versus 61 percent) and live independently as adults (35 to 49 percent versus 78 percent).

These findings highlight some differences in the challenges that youth with an IEP faced in the decade after IDEA 2004, depending on their disability. Although the characteristics and experiences described capture only a subset of those discussed in this volume, prior research suggests that they could be important indicators of students' later outcomes (see, for example, Mazzotti et al. [2016]; Zablocki & Krezmien [2012]). Youth in disability groups that are less likely to perform typical daily living tasks; engage with friends and in school activities; or prepare for college, careers, and independent living might be at higher risk for not making the kinds of postsecondary transitions that IDEA 2004 promotes.

Youth in two groups—intellectual disability and multiple disabilities—appear to be at the highest risk or face the greatest challenges. They are less likely than all youth with an IEP to have six of the seven key high school experiences or indicators linked to success after high school, shown in table ES1. Youth with autism, deaf-blindness, and orthopedic impairments are also at higher risk than all youth with an IEP, based on at least three of these indicators. In contrast, youth in other groups are either similar to youth with an IEP on average or at lower risk. It is important to acknowledge that these assessments are based on averages calculated for each disability group, though diversity in students' characteristics and experiences exists even within groups. Therefore, any estimation of risk does not apply to every youth with a particular disability.

Table ES1. Disability groups that are more (+) or less (–) likely than all youth with an IEP, on average, to have key experiences that are linked with post-high school outcomes

Disability group	Performs activities of daily living well	Gets together with friends weekly	Participates in a school sport or club	Never suspended	Has taken a college entrance or placement test	Has recent paid work experience	Parent expects youth to live independently
Autism	–	–		+	–	–	–
Deaf-blindness	–	–	+			–	
Emotional disturbance		+		–			
Hearing impairment	+			+			+
Intellectual disability	–	–	–	+	–	–	–
Multiple disabilities	–	–	–	+	–	–	–
Orthopedic impairment	–	–		+	–	–	–
Other health impairment		+		–			+
Specific learning disability	+				+		+
Speech or language impairment	+		+	+	+		+
Traumatic brain injury	–						
Visual impairment				+			

Note: Cells containing a plus sign (+) indicate that youth in the disability group are more likely than youth with an IEP overall to have the experience, by an amount that is both statistically significant at the .05 level and at least 5.0 percentage points. Cells containing a minus sign (–) indicate that youth in the disability group are less likely than youth with an IEP overall to have the experience, by an amount that is both statistically significant at the .05 level and at least 5.0 percentage points. Blank cells indicate that youth in the disability group are not more or less likely than youth with an IEP overall to have the experience, by an amount that is both statistically significant at the .05 level and at least 5.0 percentage points.

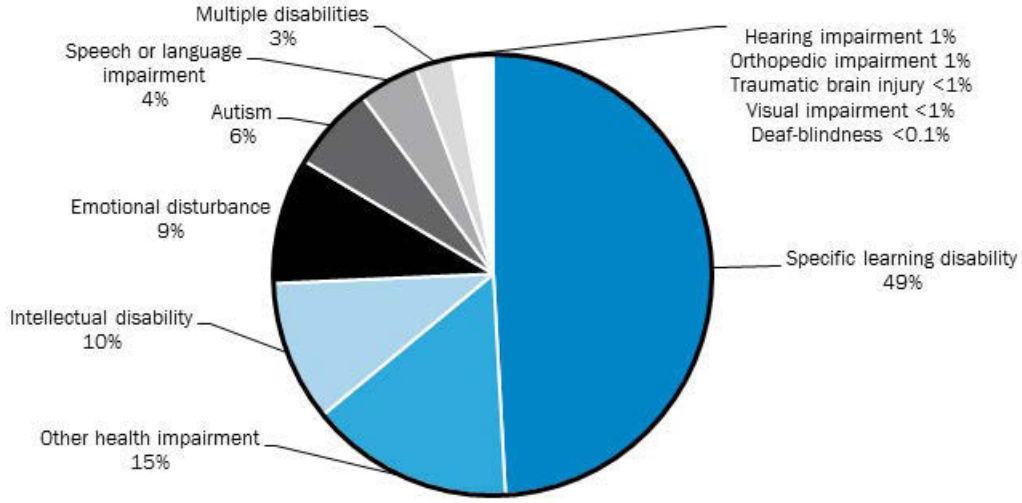
Chapter 3 provides more detail on the activities of daily living measure. The reference period for participation in a school sport or club, getting together with friends weekly, and recent paid work experience is the past year. Parents' expectations about their children living independently are by age 30. Information on college entrance or placement tests comes from youth ages 16 and older.

Source: National Longitudinal Transition Study 2012, data for most measures are from youth survey respondents. Data on activities of daily living, youth suspensions, and whether their parents expect them to live independently are from parent survey respondents.

Study design and research questions

The NLTS 2012 is a national study of nearly 13,000 youth with and without an IEP. These students were chosen to represent all students with and without an IEP in the United States in grades 7 through 12 (or secondary ungraded classes). Among the youth with an IEP are students who represent each of 12 disability categories recognized by IDEA 2004: autism, deaf-blindness, emotional disturbance, hearing impairment (which includes deafness), intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment (figure ES1). Among the youth without an IEP are students who represent those with no identified disability and those who receive disability accommodations through Section 504 of the Rehabilitation Act (but not IDEA special education services). The study surveyed youth and their parents in 2012 or 2013 when the vast majority (97 percent) of the youth were 13 to 21 years old.[1] It spans multiple ages and grades to provide a broad view of students' school experiences at a point in time.

Figure ES1. Percentages of youth ages 13 to 21 in special education in 2012, by disability group



Source: U.S. Department of Education, Office of Special Education Programs, IDEA Data Center.

This volume focuses on youth with an IEP who were enrolled in school in the year they were surveyed. The analysis uses data from 9,549 parent surveys and 8,167 youth surveys, and excludes more than 3,000 youth who either were no longer enrolled in school in the year in which they were surveyed or did not have an IEP.[2] The findings are based on comparisons of averages for all youth with an IEP and 12 disability groups of youth with an IEP, as a way to assess the extent of variation across the groups. Differences that are statistically significant

[1] Youth were ages 12 to 23 when interviews took place. Less than two percent were 12 years old, and less than one percent were 22 or 23 years old. All students were enrolled in grades 7 through 12 or a secondary ungraded class when sampled for the study.

[2] Parent survey respondents provided proxy responses for youth who were unable to self-report even with accommodations offered by the study (16 percent of youth respondents overall; 19 percent of those with an IEP). Proxy responses were not obtained for questions that depended on the youth's perspective.

(not due to chance) and at least 5 percentage points are highlighted to call attention to the variation that is substantive and policy relevant.[3]

The volume addresses the following five research questions:

1. What are the background characteristics of youth and the schools they attend?
2. What challenges do youth face relating to health, functional abilities, and independence?
3. How engaged are youth in school and with friends?
4. What academic and special education supports do youth receive?
5. How are youth preparing for life after high school?

Detailed findings

Volume 2 from the NLTS 2012 provides comprehensive information to address the research questions, beyond the key findings summarized earlier.

What are the background characteristics of youth and the schools they attend?

It has long been known that the characteristics of students, their families, and the schools they attend are related to—though do not necessarily determine—the supports students need and their later success (Fryer & Katz, 2013; Newman et al., 2011). These characteristics may vary across the disability groups in ways that make transitioning to college, employment, and self-sufficiency more or less difficult, as suggested in previous research (Newman et al., 2011; Wagner, Marder, Levine, et al., 2003; Wagner, Newman, & Javitz, 2014). For example, a decade ago, youth with intellectual disability and emotional disturbance were at least twice as likely as those with autism and other health impairments to live in poverty (Wagner, Marder, Levine, et al., 2003). Since then, the economic and demographic characteristics of students overall have changed. For example, the shares of students who are eligible for free or reduced-price lunches and who are Hispanic have risen (U.S. Department of Education, National Center for Education Statistics, 2014, 2016). Updated information on background characteristics for youth with different disabilities is important given the link between background characteristics and outcomes, the changing demographics of the student population nationally, and the recent economic recession.

- **Youth with intellectual disability and emotional disturbance are the most socioeconomically disadvantaged disability groups and most likely to attend lower-performing schools.** Youth in these two groups are more socioeconomically disadvantaged than youth with an IEP overall based on several parent-reported indicators, including parents' income, education, employment, and marital status (figure ES2 and table ES2). For example, 72 percent of youth with intellectual disability live in low-income households, which is 14 percentage points higher than youth with an IEP, on average. In addition, youth with intellectual disability and emotional disturbance are nearly 10 percentage points less likely to have an employed parent (80 percent for youth with an IEP overall). One-third of students in these groups attend a lower-performing school, compared with 27 percent of all youth with an IEP (figure ES3). In contrast, youth with autism and

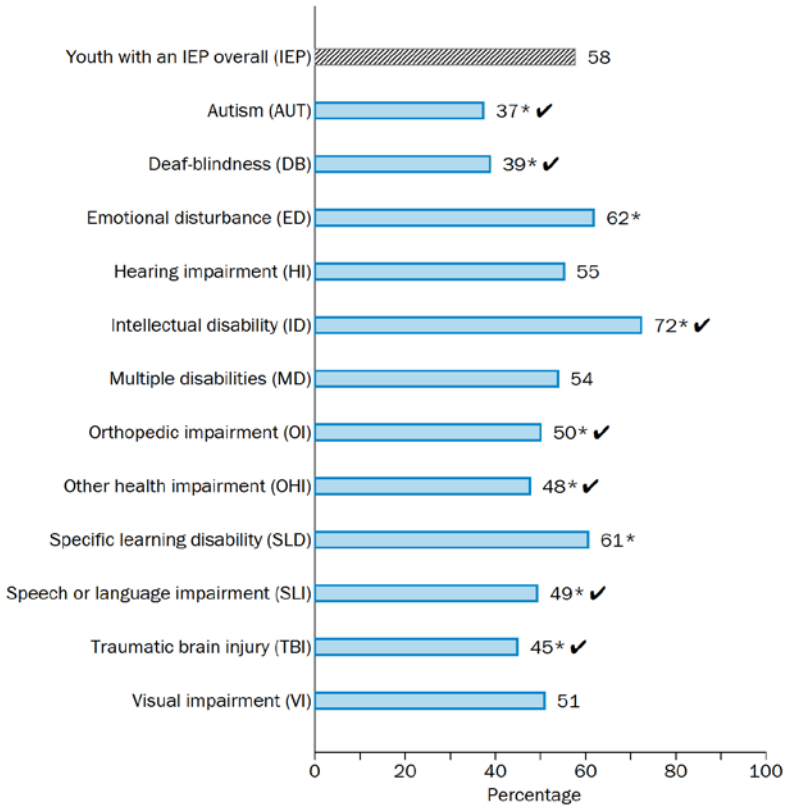
[3] The study team selected this level in consultation with the U.S. Department of Education's Institute of Education Sciences and content experts, judging differences of less magnitude not large enough to inform policy, practice, or the targeting of technical assistance. The 5 percentage point level was not empirically derived or based on an external standard. Some statistically significant differences in the report appear to be 5 percentage points because of rounding but are actually smaller. The discussion does not typically highlight these differences.

speech or language impairments are less socioeconomically disadvantaged (for example, 37 and 49 percent live in low-income households) and less likely to attend a lower-performing school (22 and 19 percent) than all youth with an IEP.

- **Three disability groups have the highest concentrations of students older than 18—youth with deaf-blindness, intellectual disability, and multiple disabilities.** On average, only 5 percent of youth with an IEP are older than18 and still enrolled in high school, but the proportions are more than three times larger among the three disability groups (16 to 19 percent) (table ES3). The additional time many of these youth need to complete high school might reflect the severity of their disabilities and the additional challenges they face.

- **Males represent a majority of youth in every disability group, though racial and ethnic backgrounds vary.** More than half of youth in each disability group are male, with the largest proportions among youth with autism (84 percent) and emotional disturbance (75 percent) (table ES3). The shares of youth who are Black range from slightly more than 10 percent among youth with autism and orthopedic impairments to about one-quarter among those with emotional disturbance and intellectual disability. Youth with autism also have the smallest share of Hispanic youth (16 percent), but youth with orthopedic impairments have the largest (29 percent).

Figure ES2. Percentages of youth who live in low-income households, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Parent survey respondents were asked to indicate their income and household size in the previous year. Data for a small number of observations were imputed when not available from either the parent survey or the sample information. Low household income is household income below 185 percent of the federal poverty level, which was $42,643 for a family of four living in the continental United States in 2012. This figure also appears as figure 2.

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. Appendix B provides more information.

Table ES2. Percentages of youth with specified socioeconomic characteristics, by disability group

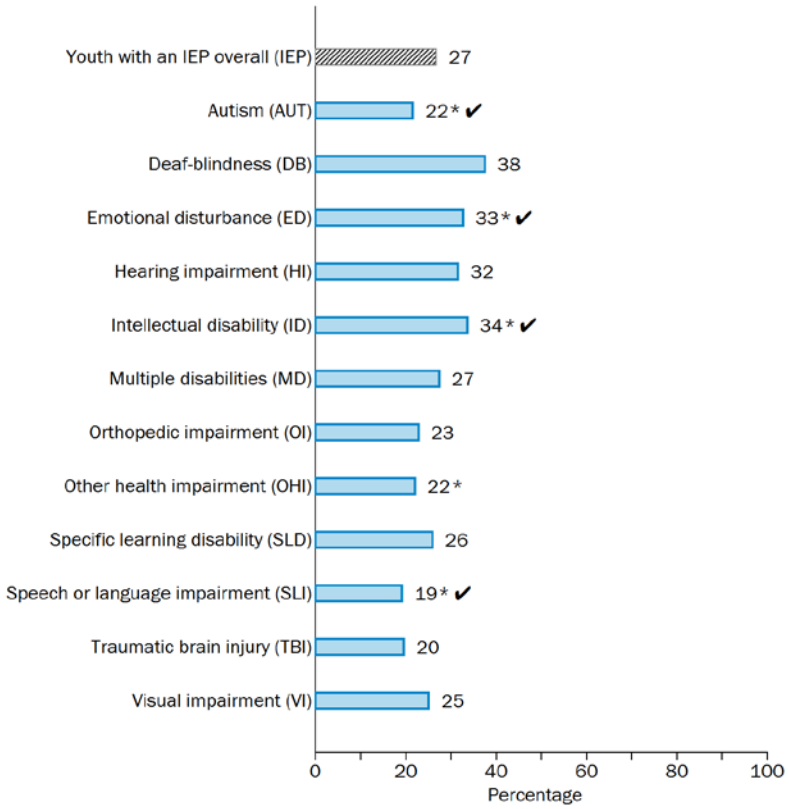
Disability group	Parent (or parent's spouse) has a four-year college degree or higher	Parent (or parent's spouse) has a paid job	Parent is married or in a marriage-like relationship
Youth with an IEP overall	**26**	**80**	**63**
Autism	43*✓	82	72*✓
Deaf-blindness	35	80	68
Emotional disturbance	22*	73*✓	50*✓
Hearing impairment	30	83	66
Intellectual disability	17*✓	70*✓	58*
Multiple disabilities	30	74*✓	62
Orthopedic impairment	34*✓	80	65
Other health impairment	35*✓	81	64
Specific learning disability	23*	82*	64
Speech or language impairment	35*✓	86*✓	71*✓
Traumatic brain injury	41*✓	83	60
Visual impairment	33	88*✓	72*✓

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents provided information for all measures in the table. This table summarizes data presented in figures 4, 5, and 6.

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. Appendix B provides more information.

Figure ES3. Percentages of youth who attend a lower-performing school, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Lower-performing schools are schools with an average math and reading proficiency rate in the lowest 25 percent of schools in the same state. Math and reading proficiency rates are standardized within each state, and then averaged within each school. This figure also appears as figure 7.

Sources: National Longitudinal Transition Study 2012 and ED*Facts* data. The universe is all youth. Appendix B provides more information.

Table ES3. Percentages of youth with specified demographic characteristics, by disability group

Disability group	Older than 18	Male	Black (not Hispanic)	Hispanic
Youth with an IEP overall	**5**	**67**	**19**	**24**
Autism	11*✓	84*✓	12*✓	16*✓
Deaf-blindness	18!*✓	56	18	23!
Emotional disturbance	4	75*✓	25*✓	18*✓
Hearing impairment	6	54*✓	14*✓	28
Intellectual disability	16*✓	59*✓	27*✓	21
Multiple disabilities	19*✓	62*	17	19
Orthopedic impairment	11*✓	61*✓	11*✓	29*✓
Other health impairment	3*	71*	17	17*✓
Specific learning disability	2*	64*	19	27*
Speech or language impairment	2*	67	14*✓	26
Traumatic brain injury	9*	64	15	17
Visual impairment	7	55*✓	14	26

*=$p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: Parent survey respondents provided information for all measures in the table. Black includes African American. Hispanic includes Latino. This table summarizes data presented in figures 9 and 10, and table 3.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix B provides more information.

What challenges do youth face relating to health, functional abilities, and independence?

Students' health and other capacities can be important factors in their development and transitions after high school (Carter, Austin, & Trainor, 2012; Currie, Stabile, Manivong, & Roos, 2010; Wagner, Newman, Cameto, Garza, & Levine, 2005). Recognizing this, IDEA 2004 requires that IEPs take into account students' functional (not just academic) performance, as well as their preferences, interests, and strengths. These requirements reflect a desire for special education to foster the concept of self-determination (combining an ability to act independently with a sense of self-direction), which research has associated with both higher achievement in high school and better post-high school outcomes (Berry, Ward, & Caplan, 2012; Shogren & Shaw, 2016; Zheng, Erickson, Kingston, & Noonan, 2014). Prior research also suggests that health, functional abilities, and independence are likely to vary across disability groups (Wagner, Marder, Levine, et al., 2003; Chou, Wehmeyer, Palmer, & Lee, 2016); documenting current differences provides one key perspective on the particular challenges some youth with an IEP might face.

- **Most youth in every group are healthy, but those with intellectual disability, multiple disabilities, and orthopedic impairments are most likely to have poor health and chronic conditions.** At least 40 percent of youth in these groups do not have very good or excellent general health according to parents, compared with 30 percent of youth with an IEP overall (table ES4). Parents also report that youth in these same three groups, along with five others, are more likely than average to have chronic physical and mental health conditions (37 to 53 percent versus 28 percent). Parents indicate that prescription behavioral medicines are used most by youth with autism, emotional disturbance, and other health impairments (43 to 51 percent versus 27 percent for youth with an IEP overall). Youth with specific learning disabilities and speech or language impairments are less likely than average to have chronic health conditions (17 percent each) and to use behavioral medicine (16 and 12 percent).

- **Youth with autism, deaf-blindness, intellectual disability, and multiple disabilities most commonly have trouble with communication and understanding.** Parents report that at least half of youth in these groups have trouble communicating and at least 60 percent have trouble understanding others, compared with 29 and 44 percent of youth with an IEP overall (table ES4). Youth with visual impairments are the least likely to have trouble with communicating and understanding others (13 and 20 percent, respectively).

- **Youth in four groups who are more likely to have poorer general health or difficulty communicating are also less prepared to function independently.** Based on parents' assessments of their children, youth with autism, intellectual disability, multiple disabilities, and orthopedic impairments are more likely than youth with an IEP overall to have difficulty performing various activities of daily living, such as getting to places outside the home (figure ES4). Youth with autism and intellectual disability also are less likely to report undertaking activities that demonstrate their autonomy, such as choosing what to do with friends (45 and 48 percent versus 56 percent for all youth with an IEP) (table ES5). Moreover, youth with autism report a weaker sense of self-direction: for example, three-quarters indicate knowing how to make friends, compared with about 9 in 10 youth with an IEP on average.

Table ES4. Percentages of youth who have health and communication needs, by disability group

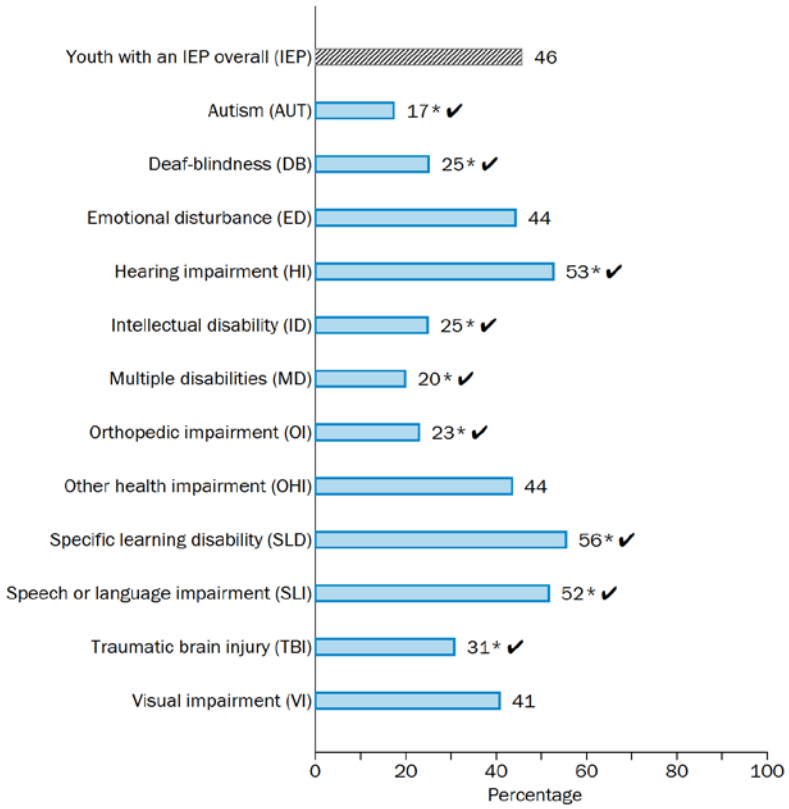
Disability group	Does not have very good or excellent general health	Has a chronic physical or mental health condition	Uses prescription behavior medicine	Has trouble communicating by any means	Has trouble understanding what other people say to him or her
Youth with an IEP overall	**30**	**28**	**27**	**29**	**44**
Autism	27	43*✓	43*✓	50*✓	70*✓
Deaf-blindness	37	39	15!*✓	75*✓	84*✓
Emotional disturbance	34*	46*✓	49*✓	17*✓	41
Hearing impairment	27	24	14*✓	44*✓	70*✓
Intellectual disability	40*✓	37*✓	25	60*✓	69*✓
Multiple disabilities	44*✓	53*✓	34*✓	62*✓	61*✓
Orthopedic impairment	40*✓	53*✓	24	41*✓	33*✓
Other health impairment	29	41*✓	51*✓	21*✓	46
Specific learning disability	27*	17*✓	16*✓	20*✓	35*✓
Speech or language impairment	19*✓	17*✓	12*✓	39*✓	35*✓
Traumatic brain injury	34	46*✓	35*✓	40*✓	53*✓
Visual impairment	32	38*✓	14*✓	13*✓	20*✓

*=$p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: Parent survey respondents provided information for all measures in the table. This table summarizes data presented in figures 12, 13, and 14 and table 4.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix C provides more information.

Figure ES4. Percentages of youth who perform activities of daily living well, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Performing activities of daily living well is based on having an index score on a seven-item activities of daily living index that is at or above the average index score for youth with an IEP. The components of the index include the parent-reported measures in table 6. Appendix A provides more information on how the index is constructed. This figure also appears as figure 15.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix C provides more information.

Table ES5. Percentages of youth who demonstrate autonomy and self-direction, by disability group

Disability group	Chooses activities to do with friends	Knows how to make friends
Youth with an IEP overall	**56**	**92**
Autism	45*✓	76*✓
Deaf-blindness	51	97
Emotional disturbance	60*	88*
Hearing impairment	56	91
Intellectual disability	48*✓	92
Multiple disabilities	53	91
Orthopedic impairment	61	95*
Other health impairment	57	94
Specific learning disability	57	93*
Speech or language impairment	57	95*
Traumatic brain injury	59	91
Visual impairment	61	90

*=$p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, provided information for all measures in the table. Choosing activities with friends to do is an activity that demonstrates autonomy. The percentages are for responses of every time or most of the time when they have a chance. The other response categories included sometimes and never. Knowing how to make friends is an indicator of self-direction and was presented to youth as a binary choice. This table summarizes data presented in tables 9 and 10.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix C provides more information.

How engaged are youth in school and with friends?

School engagement and positive peer relationships are crucial components of youth development that can have important academic and social benefits (Anderson, Christenson, Sinclair, & Lehr, 2004; Juvonen, Espinoza, & Knifsend, 2012; Wang & Eccles, 2012). Yet, prior research suggests that some groups of youth with an IEP in the past—for example, youth with emotional disturbance—were at greater risk of being disengaged in school and of experiencing negative events such as being picked on and suspended (Sullivan, Van Norman, & Klingbeil, 2014; Wagner, Cadwallader, et al., 2003).

IDEA 2004 promotes efforts to help youth stay engaged and avoid negative outcomes. For example, the law requires states to monitor the rates at which youth with an IEP are suspended and expelled from school, recognizing that these actions might not always be appropriate. In addition, the U.S. Department of Education has recently focused on the threat bullying can pose to youth with disabilities, clarifying that bullying has the potential to deny youth their rights under IDEA 2004 if it prevents youth from accessing school services and other opportunities (U.S. Department of Education, 2014). Current information on how engagement varies by disability group could help to inform ongoing policy in this area, as well as efforts to address these issues in districts and schools nationwide.

- **Although about 8 in 10 youth in each disability group feel positive about their school experiences, many, especially youth with intellectual disability, struggle academically.** The vast majority of youth in each group report feeling happy at school (table ES6). However, about half of youth in nearly all disability groups report facing academic challenges. These challenges are most common among youth with intellectual disability, two-thirds of whom find class work difficult and need more help from teachers. Youth with intellectual disability are also most likely to repeat a grade in school according to their parents (37 percent).

- **Youth in five groups are less likely to interact with friends and in two of these—intellectual disability and multiple disabilities—they are also less likely to participate in school sports and clubs.** Overall, 52 percent of youth with an IEP report getting together with friends weekly and 64 percent report participating in extracurricular school activities (table ES7). However, smaller proportions of youth with autism, deaf-blindness, intellectual impairments, multiple disabilities, and orthopedic impairments socialize with friends at least weekly (16 to 42 percent). Youth with intellectual disability and multiple disabilities are also less likely than youth with an IEP, on average, to participate in school activities (57 and 53 percent). In contrast, youth with emotional disturbance and other health impairments are more involved with friends (58 and 57 percent), and those with deaf-blindness and speech or language impairments have the highest participation rates in school sports and clubs (81 and 73 percent).

- **Youth with emotional disturbance are the most likely disability group to be suspended, expelled, arrested, and bullied.** The proportions of youth in this group who have been suspended (65 percent) or expelled (19 percent) according to their parents are more than twice those of all youth with an IEP (29 and 8 percent) (table ES8). And the proportion arrested (17 percent) is nearly three times greater (6 percent). In addition, youth with emotional disturbance are more likely than youth with an IEP overall to report being teased (47 versus 37 percent) (figure ES5). These negative events are rarer for youth in other groups, particularly those with hearing, orthopedic, speech or language, and visual impairments.

Table ES6. Percentages of youth with specified views about school and coursework, by disability group

Disability group	Happy to be at this school	Class work is hard to learn
Youth with an IEP overall	**83**	**54**
Autism	88*	57
Deaf-blindness	98*✓	58
Emotional disturbance	74*✓	48*✓
Hearing impairment	84	57
Intellectual disability	81	64*✓
Multiple disabilities	80	55
Orthopedic impairment	87	50
Other health impairment	84	57
Specific learning disability	84	53
Speech or language impairment	88*	47*✓
Traumatic brain injury	79	65*✓
Visual impairment	89*✓	53

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, provided information for all measures in the table. The percentages are for responses of agree a lot or agree a little. The other response categories were disagree a little and disagree a lot. This table summarizes data presented in tables 12 and 14.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. Appendix D provides more information.

Table ES7. Percentages of youth who are involved with friends and school activities, by disability group

Disability group	Got together weekly with friends	Participated in a school sport or club
Youth with an IEP overall	**52**	**64**
Autism	29*✓	59*
Deaf-blindness	16!*✓	81*✓
Emotional disturbance	58*✓	59*
Hearing impairment	47	68
Intellectual disability	42*✓	57*✓
Multiple disabilities	35*✓	53*✓
Orthopedic impairment	35*✓	59
Other health impairment	57*✓	63
Specific learning disability	56*	66*
Speech or language impairment	53	73*✓
Traumatic brain injury	48	63
Visual impairment	47	70

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: Youth survey respondents provided information for all measures in the table. The reference period is the past year. This table summarizes data presented in figures 17 and 18.

Source: National Longitudinal Transition Study 2012. The universe for column 1 is all youth. The universe for column 2 is youth who were not homeschooled. Appendix D provides more information.

Table ES8. Percentages of youth who have been suspended, expelled, or arrested, by disability group

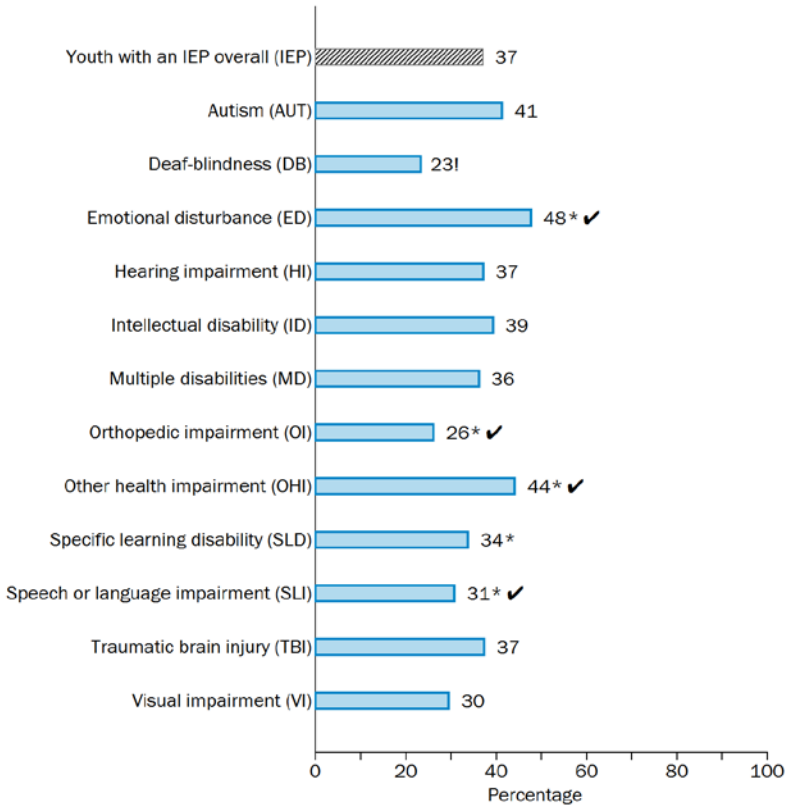
Disability group	Has been suspended	Has been expelled from school	Has been arrested in the past two years
Youth with an IEP overall	**29**	**8**	**6**
Autism	20*✓	5*	1!*
Deaf-blindness	‡	‡	‡
Emotional disturbance	65*✓	19*✓	17*✓
Hearing impairment	19*✓	6!	2*
Intellectual disability	22*✓	7	4
Multiple disabilities	17*✓	4*	3*
Orthopedic impairment	9*✓	‡	‡
Other health impairment	35*✓	11*	7
Specific learning disability	27*	7*	5*
Speech or language impairment	15*✓	4*	2*
Traumatic brain injury	26	3!*	3!*
Visual impairment	11*✓	2!*✓	‡

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate; ‡=reporting standards not met. The standard error represents more than 50 percent of the estimate.

Note: Parent survey respondents provided information for all measures in the table. This table summarizes data presented in figures 20, 21, and 22.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix D provides more information.

Figure ES5. Percentages of youth who are teased or called names, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Youth survey respondents, excluding proxies, were asked whether they experienced students teasing them or calling them names during the school year. This figure also appears as part of table 16.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. Appendix D provides more information.

What academic and special education supports do youth receive?

Schools and families play vital roles in supporting students' educational needs, and this support can be particularly important for youth in special education (Mazzotti et al., 2016; Test et al., 2009; Wagner et al., 2014). IDEA 2004 envisions that schools and families will work together to develop IEPs that meet students' particular educational needs and help them prepare for adult life. Schools are expected to provide appropriate academic programs and related services in accordance with IEP provisions.

Parents can offer other educational supports to their children at home and by participating in school activities. But studies of youth with an IEP a decade ago indicated that some kinds of school and parental help are less common for youth with certain disabilities (Newman, 2005; Wagner, Newman, Cameto, Levine, & Marder, 2003). Clarifying whether, how, and for whom these differences exist currently could help to refine technical assistance at the federal, state, and local levels.

- **At least half of youth in every disability group receive some accommodations and special services in school, but modified tests and assignments are the norm only for those with autism, intellectual disability, and multiple disabilities.** Most youth in each disability group except for speech or language impairments receive extra time to take tests, according to parents (table ES9). Extra time is most common among those with other health impairments (82 percent), the group that typically includes youth with attention deficit disorders. Most youth in three groups—autism, intellectual disability, and multiple disabilities—take modified tests (63 to 67 percent) and receive modified assignments (54 to 63 percent). Although most youth in all but two groups receive at least one therapeutic service, receipt varies greatly (from 30 percent of those with specific learning disabilities to 87 percent of those with deaf-blindness).

- **Youth with autism, intellectual disability, and multiple disabilities—the groups most likely to have modified tests and assignments—are the least likely to receive school-provided supplemental academic instruction and course guidance.** Overall, 72 percent of youth with an IEP in high school indicate receiving school-provided academic instruction outside of regular school hours, but the proportions are lower for youth with autism, intellectual disability, and multiple disabilities (47 to 56 percent) (figure ES6). Youth in these three groups also less commonly report receiving guidance on courses to take in high school (59 to 66 percent) than do youth with an IEP overall (73 percent).

- **Most parents of youth in each disability group attend IEP meetings and parent-teacher conferences, but parents in some groups are less likely to help with homework or attend school events.** More than three-quarters of parents in each group report attending an IEP meeting (83 to 95 percent) and a parent-teacher conference (77 to 87 percent) (table ES10). In contrast, smaller shares of parents of youth with an IEP report helping their children with homework weekly and attending a school event (62 and 58 percent overall). Youth with autism, emotional disturbance, and multiple disabilities are less likely than youth with an IEP overall to have their parents help them with homework (54 percent for each group). Youth with emotional disturbance and intellectual disability are less likely than youth with an IEP overall to have their parents attend a school event (46 to 47 percent versus 58 percent).

Table ES9. Percentages of youth who receive academic and special education supports, by disability group

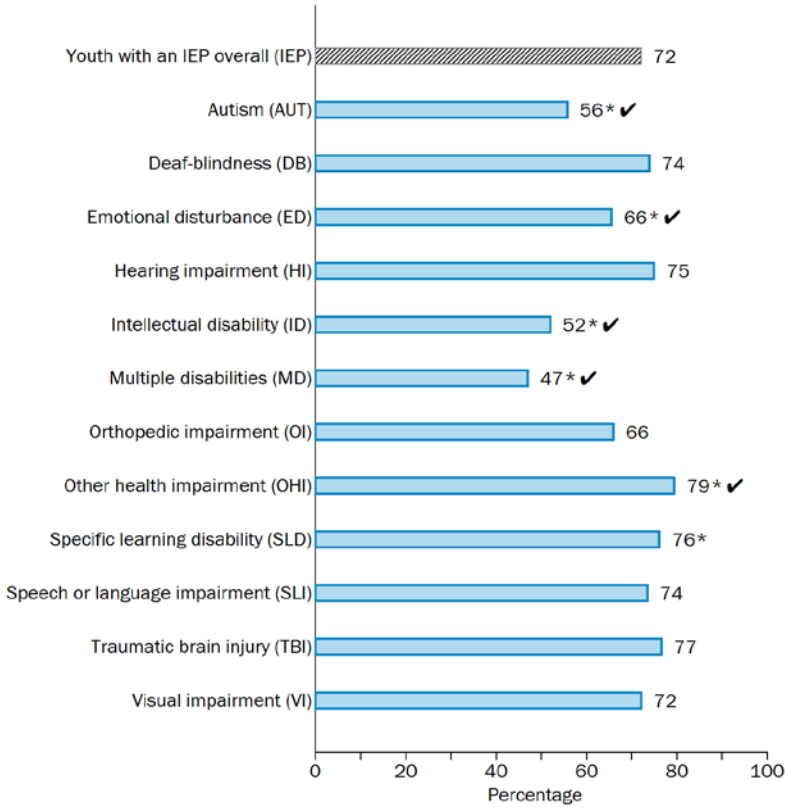
Disability group	Received additional time to take tests	Received modified or alternate tests or assessments	Received shorter or different assignments	Received a therapeutic service
Youth with an IEP overall	**72**	**52**	**41**	**45**
Autism	70	63*✓	54*✓	70*✓
Deaf-blindness	53*✓	51	33	87*✓
Emotional disturbance	65*✓	46*✓	39	58*✓
Hearing impairment	63*✓	46*✓	27*✓	74*✓
Intellectual disability	63*✓	67*✓	63*✓	65*✓
Multiple disabilities	58*✓	63*✓	55*✓	81*✓
Orthopedic impairment	69	50	41	73*✓
Other health impairment	82*✓	55	40	43
Specific learning disability	75*	49*	36*	30*✓
Speech or language impairment	46*✓	29*✓	23*✓	51*✓
Traumatic brain injury	69	53	43	59*✓
Visual impairment	77	61*✓	34	70*✓

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents provided information for the measures in the table. The reference period is during the past year. Therapeutic services include psychological or mental health counseling or services; speech and language therapy, or communication services; physical or occupational therapy; nursing care; orientation and mobility services; audiology services for hearing problems; and vision services, such as Braille instruction. This table summarizes data presented in figure 24 and tables 19 and 20.

Source: National Longitudinal Transition Study 2012. The universe is youth whose parents reported that they ever had a disability or a Section 504 plan. Appendix E provides more information.

Figure ES6. Percentages of youth who receive school-based academic help outside regular hours during the school year, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Youth survey respondents, excluding proxies, were asked whether school staff provided them with extra help before or after school or on weekends in academic subjects in this school year. This figure also appears as part of table 22.

Source: National Longitudinal Transition Study 2012. The universe is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 15 years old. Appendix E provides more information.

Table ES10. Percentages of youth whose parents (or another adult in the household) are engaged at home and in school in specified ways, by disability group

Disability group	Parent attended an IEP meeting in past two years	Parent attended a parent-teacher conference during the school year	Parent helped with homework at least weekly during the school year	Parent attended a school or class event during the school year
Youth with an IEP overall	**86**	**84**	**62**	**58**
Autism	93*✓	87	54*✓	60
Deaf-blindness	95*✓	82	54	67
Emotional disturbance	90*	85	54*✓	47*✓
Hearing impairment	88	82	64	63*✓
Intellectual disability	86	85	62	46*✓
Multiple disabilities	90*	84	54*✓	57
Orthopedic impairment	91*	83	63	62
Other health impairment	91*	87*	66*	62*
Specific learning disability	83*	84	64	60*
Speech or language impairment	80*✓	77*✓	61	65*✓
Traumatic brain injury	90	88	62	59
Visual impairment	94*✓	86	66	71*✓

*=$p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents provided information for all measures in the table. The percentages are for responses indicating they (or another household adult) did the activities listed in the table at least once during the reference period. This table summarizes data presented in figures 27 and 28 and table 23.

Source: National Longitudinal Transition Study 2012. The universe for column 1 is youth whose parents reported that they received special education services in the past year. The universe for columns 2, 3, and 4 is all youth. Appendix E provides more information.

How are youth preparing for life after high school?

High school is a time for students to gain experience and knowledge and to take steps that lay the foundation for their transition to adulthood. IDEA 2004 increased the emphasis on helping youth with an IEP prepare for the future through thoughtful, goal-oriented planning. Congress added a requirement that when school staff help youth with an IEP define postsecondary goals, they make sure these goals are measurable and thus well defined. In addition, transition planning must reflect not only students' preferences and interests, but also their strengths. The extent to which youth currently participate in goal-setting and planning can be important because research on youth with an IEP a decade ago showed variation by disability group (Cameto, Levine, & Wagner, 2004). In addition, students' participation in these activities and services might be linked with better post-high school outcomes (Mazzotti et al., 2016). The stakes for these plans and for students' preparation efforts could be higher now than in the past, given the literature associating paid work experience in high school with later adult employment (Mazzotti et al., 2016; Test et al., 2009) and the growing earnings premium in the U.S. economy for those with postsecondary education (Avery & Turner, 2012; Oreopoulos & Petronijevic, 2013).

- **Most youth in each disability group attend transition-planning meetings at school, but fewer provide input, particularly among those with autism, deaf-blindness, intellectual disability, and multiple disabilities.** Reflecting on their transition activities, 69 percent of youth ages 17 and older with an IEP, and more than half in each disability group, report attending a transition-planning meeting (table ES11). However, parents report that only 59 percent of youth in this age range with an IEP provide input during

their IEP and transition-planning meetings. The proportions providing input are even lower (25 to 42 percent) for youth with autism, deaf-blindness, intellectual disability, and multiple disabilities.

- **Youth with intellectual disability and multiple disabilities have lower educational expectations, and these groups are less likely to take college entrance tests.** More than three-quarters (76 percent) of all youth with an IEP expect to obtain postsecondary education, but only 50 percent of youth with intellectual disability and 60 percent of youth with multiple disabilities do (table ES12). In each disability group, parents' educational expectations for their children are lower than their children's own expectations. Parents' postsecondary education expectations are lowest for youth with intellectual disability and multiple disabilities (32 and 35 percent), the groups also least likely to report taking college entrance or placement tests (24 and 16 percent versus 42 percent of all youth ages 16 and older with an IEP) (figure ES7).

- **Compared to youth with an IEP overall, those with autism, deaf-blindness, intellectual disability, multiple disabilities, and orthopedic impairments are less likely to have paid jobs during high school and parents who expect them to live independently.** Fewer than half (40 percent) of all youth with an IEP report having had a paid job in the past year, but this is less common (20 to 32 percent) for youth in these four groups (table ES13). Schools appear to be filling part of the gap: youth with autism, intellectual disability, and multiple disabilities are more likely than youth with an IEP overall to have a paid or unpaid school-sponsored work activity (18 to 22 percent versus 12 percent). Three-quarters of parents expect their children with an IEP to live on their own by age 30, but this is true for smaller proportions (35 to 55 percent) of those with autism, intellectual disability, multiple disabilities, and orthopedic impairments (figure ES8).

Table ES11. Percentages of youth who attended and provided input during a transition-planning meeting, by disability group

Disability group	Youth have met with school staff to develop a transition plan	Youth provided at least some input in IEP and transition planning
Youth with an IEP overall	**69**	**59**
Autism	64	41*✓
Deaf-blindness	60	25!*✓
Emotional disturbance	66	65*✓
Hearing impairment	73	67*✓
Intellectual disability	67	42*✓
Multiple disabilities	55*✓	32*✓
Orthopedic impairment	60	53
Other health impairment	74	65*✓
Specific learning disability	71	67*✓
Speech or language impairment	60	61
Traumatic brain injury	60	57
Visual impairment	74	69

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: Youth survey respondents provided information for the first measure in the table; parent survey respondents provided information for the second measure. This table summarizes data presented in figure 29 and table 25.

Source: National Longitudinal Transition Study 2012. The universe for column 1 is youth who have an IEP according to their school district and are at least 17 years old. The universe for column 2 is youth whose parents reported that they received special education services in the past year, are at least 17 years old, and whose parent or another adult in the household attended an IEP or transition-planning meeting. Appendix F provides more information.

Table ES12. Percentages of youth and their parents with expectations for postsecondary education, by disability group

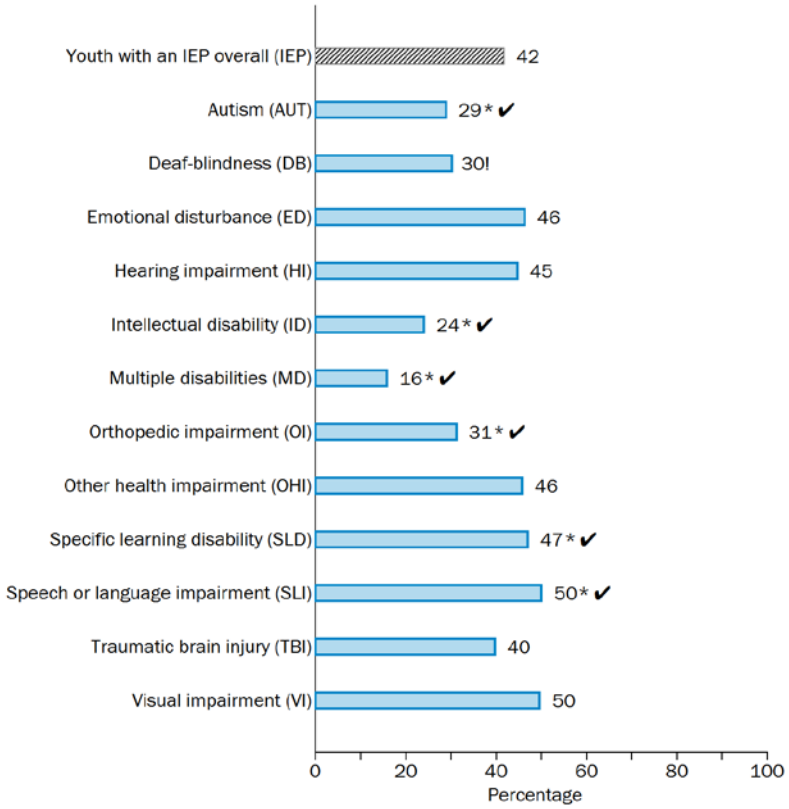
Disability group	Youth expects to obtain postsecondary education	Parent expects youth will obtain postsecondary education
Youth with an IEP overall	**76**	**61**
Autism	75	53*✓
Deaf-blindness	81	50
Emotional disturbance	75	58*
Hearing impairment	79	75*✓
Intellectual disability	50*✓	32*✓
Multiple disabilities	60*✓	35*✓
Orthopedic impairment	77	60
Other health impairment	78	67*✓
Specific learning disability	79*	67*✓
Speech or language impairment	86*✓	78*✓
Traumatic brain injury	66	61
Visual impairment	88*✓	79*✓

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, provided information for the first measure in the table; parent survey respondents, excluding proxies, provided information for the second measure. This table summarizes data presented in table 27.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix F provides more information.

Figure ES7. Percentages of youth who have taken a college entrance or placement test, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Youth survey respondents were asked whether they have taken any of the following college placement tests: the Preliminary Scholastic Assessment Test (PSAT); the American College Test (ACT); the Scholastic Assessment Test (SAT); or the placement test for a local college, such as Accuplacer or other tests used by community colleges. This figure also appears as figure 30.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 16 years old. Appendix F provides more information.

Table ES13. Percentages of youth with recent work experience, by disability group

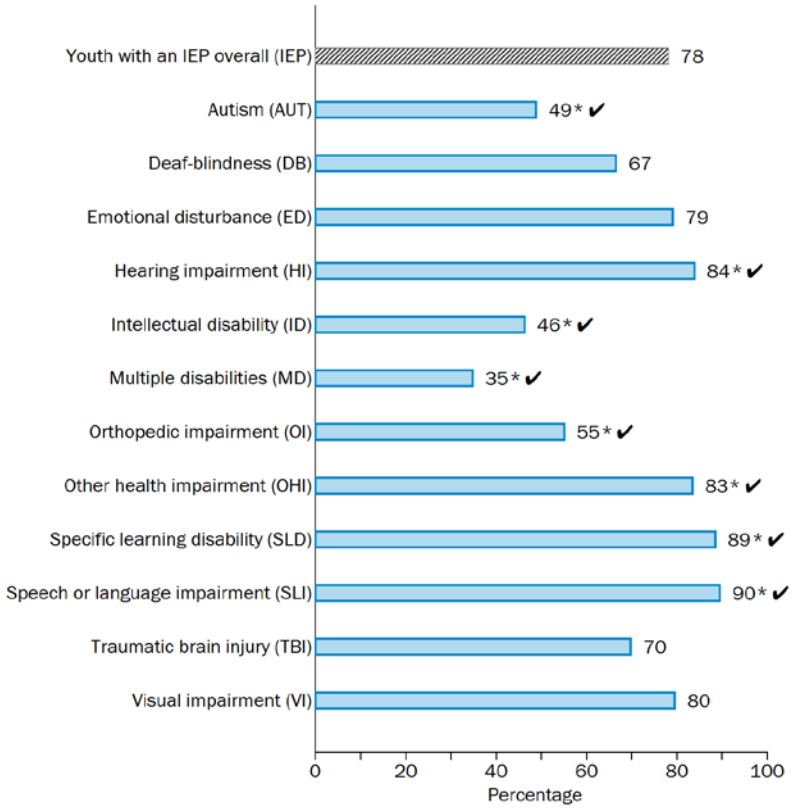
Disability group	Has had paid work experience in the past year	Has had paid or unpaid school-sponsored work activity in past year
Youth with an IEP overall	**40**	**12**
Autism	23*✓	18*✓
Deaf-blindness	23!*✓	15!
Emotional disturbance	42	10
Hearing impairment	38	12
Intellectual disability	32*✓	22*✓
Multiple disabilities	21*✓	19*✓
Orthopedic impairment	20*✓	12
Other health impairment	43	8*
Specific learning disability	44*	10*
Speech or language impairment	42	5*✓
Traumatic brain injury	40	13
Visual impairment	38	12

*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: Youth survey respondents provided information for all measures in the table. School-sponsored work activities include work-study or co-op jobs, internships, or work in a school-based business. This table summarizes data presented in figures 32 and 33.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix F provides more information.

Figure ES8. Percentages of youth whose parents expect them to live independently at age 30, by disability group



*=p < .05 for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: The bar graph compares youth in each disability category (blue bars) with youth with an IEP overall (gray bar). An asterisk next to the bar indicates whether the difference with youth with an IEP is statistically significant (at the .05 level), and a check mark notes a statistically significant difference of at least 5 percentage points.

Note: Parent survey respondents, excluding proxies, were asked where they think youth will be living at age 30. The response categories were on his or her own, at home with parents, with a relative, with friends, with a spouse or partner, in military housing, in a group home, in an institution, or some other place. Independent living refers to living in on his or her own, with friends, with a spouse or partner, or in military housing. This figure also appears as figure 34.

Source: National Longitudinal Transition Study 2012. The universe is all youth. Appendix F provides more information.

Additional publications and data collection

This volume is the second of three publications from the NLTS 2012 Phase I series reporting findings about youth in special education in 2012 and 2013. Volume 1 focuses on comparisons of youth with an IEP and youth without an IEP. Volume 3 focuses on comparisons of youth with an IEP across time. The volumes will be available on the Institute of Education Sciences website for the NLTS 2012 when published.

Later reports will examine outcomes for the youth described in Volumes 1 through 3, based on data collected in 2016 and beyond.

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