

#### 4. SERVICES RECEIVED BY YOUTH WITH DISABILITIES

Youth with disabilities may require a variety of support services in order to function in their daily life and perform in school. Some services are arranged for by families and provided by a variety of community-based organizations. In addition, students with disabilities who qualify for special education may receive related services to assist them to benefit from instruction, as prescribed in a student's Individualized Education Program (IEP). The related services provisions of special education make schools a major provider of many kinds of services for students with disabilities.

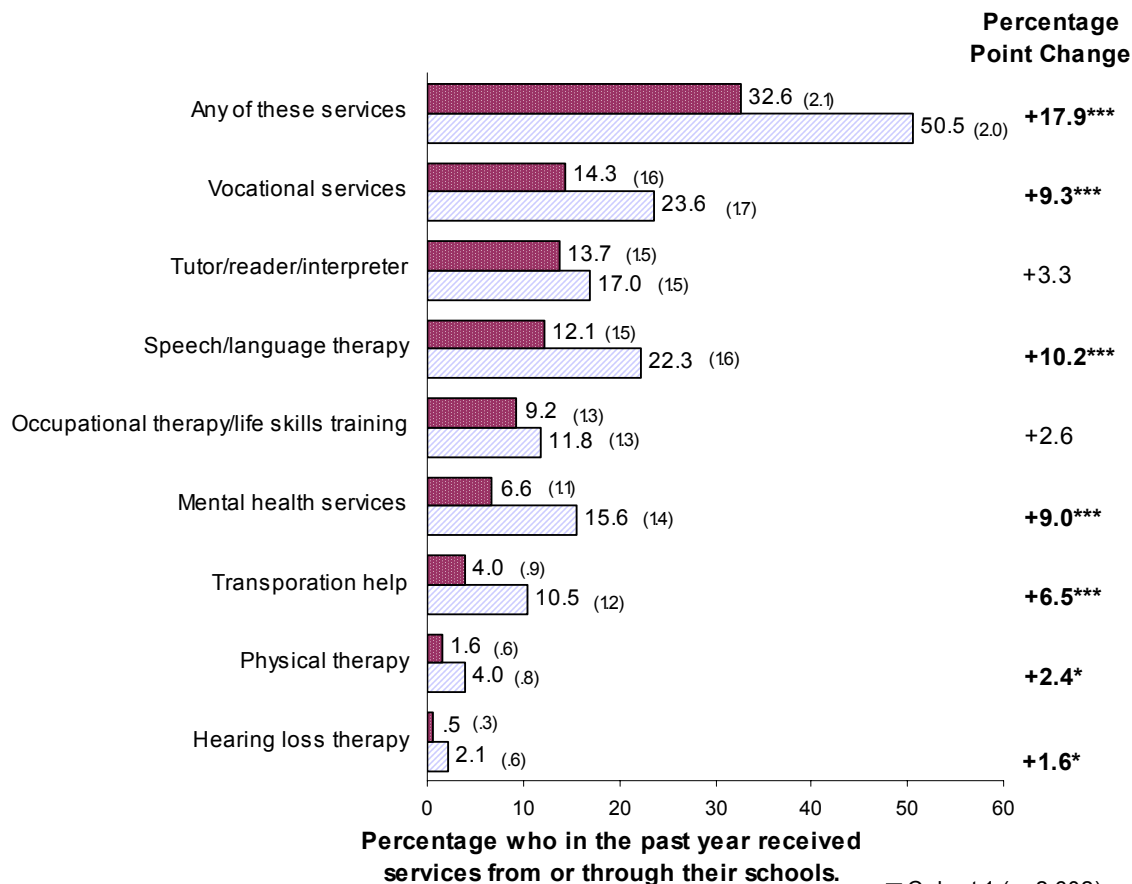
Comparisons of findings from NLTS and NLTS2 permits an assessment of changes in the extent to which the related and support services are provided to students with disabilities, and the variation in receipt of services for students who differed in disability category, gender, household income, and racial/ethnic background. Information on receipt of services was provided in both studies by parents, who were asked in telephone interviews whether students received any of the following types of services and, if so, whether the school provided the service:

- Help from a tutor, reader, or interpreter
- Speech therapy
- Occupational therapy/life skills training
- Personal counseling/therapy
- Transportation help
- Physical therapy
- Hearing loss therapy/audiology
- Job counseling/training.

According to parents' reports, significantly more youth with disabilities were receiving support services in 2001 than in 1987. In 2001, nearly three-fourths (72%) of youth with disabilities received at least one of the support services noted above, compared with 57% of youth in 1987—a 16 percentage point increase ( $p < .001$ ). This increase in receipt of services was entirely attributable to increases in services received from or through the schools attended by youth (Exhibit 4-1). In 1987, fewer than one-third of youth with disabilities received one or more of the designated support services from or through their school; by 2001, more than half were receiving such services ( $p < .001$ ).

Schools were reported to be providing almost all of the types of services to a significantly greater percentage of students with disabilities in 2001 than in 1987, with the exception of life skills training and tutoring. Vocational services, speech therapy, and mental health services experienced the greatest increases—about 10 percentage points ( $p < .001$ ). With these changes, job counseling and speech therapy were the services most often provided; almost one-fourth of cohort 2 students received these kinds of services from their schools.

**Exhibit 4-1**  
**CHANGES IN SERVICES RECEIVED BY YOUTH WITH**  
**DISABILITIES FROM OR THROUGH THEIR SCHOOLS**



Source: NLTS and NLTS2 Wave 1 parent interviews.

Standard errors are in parentheses.

Statistically significant difference in a two-tailed test at the following levels:

\* p<.05, \*\* p<.01, \*\*\* p<.001.

■ Cohort 1 (n=2,602)

□ Cohort 2 (n=5,728)

**Disability Differences in Changes in Services Received**

Youth with different primary disability classifications receive different types of support services from their schools, reflecting the nature of their disabilities and the kinds of support they require to benefit from their education. Some services meet very specific needs and are appropriate for youth with a specific disability. For example, physical therapy is a service provided many youth with orthopedic impairments, and interpreter services are appropriate for many youth with hearing impairments. In contrast, some services meet more general needs (e.g., job training and life skills training) and could be appropriate for many youth, regardless of the type of their disabilities.

Between 1987 and 2001, there were significant increases in reported receipt of services from schools by youth in every disability group (Exhibit 4-2). The largest increases were experienced by categories of youth who were among the least likely to have received support services from their schools in 1987. Specifically, in 1987, only about one-fourth to one-third of students with speech or visual impairments or emotional disturbances were receiving services. Increases of at least 30 percentage points meant that at least 60% of youth were receiving services from their

**Exhibit 4-2**  
**CHANGES IN SERVICES RECEIVED BY YOUTH WITH DISABILITIES FROM OR THROUGH THEIR SCHOOLS,**  
**BY COHORT AND DISABILITY CATEGORY**

|  | Learning Disability | Speech/<br>Language Impairment | Mental Retardation | Emotional Disturbance | Hearing Impairment | Visual Impairment | Orthopedic Impairment | Other Health Impairment | Multiple Disabilities |
|--|---------------------|--------------------------------|--------------------|-----------------------|--------------------|-------------------|-----------------------|-------------------------|-----------------------|
| Percentage who in the past year received from or through the school: |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Any of these services  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1   | 29.8<br>(3.1)       | 37.0<br>(4.3)                  | 40.3<br>(3.6)      | 25.0<br>(3.5)         | 58.4<br>(3.6)      | 31.7<br>(4.7)     | 58.5<br>(4.6)         | 32.7<br>(4.7)           | 61.6<br>(6.5)         |
| Cohort 2   | 40.9<br>(3.0)       | 67.1<br>(3.2)                  | 68.8<br>(2.9)      | 59.5<br>(3.0)         | 79.8<br>(2.7)      | 62.7<br>(4.2)     | 78.0<br>(2.9)         | 56.9<br>(2.6)           | 88.4<br>(2.1)         |
| Percentage point change  | <b>+11.1*</b>       | <b>+30.1***</b>                | <b>+28.5***</b>    | <b>+34.5***</b>       | <b>+21.4***</b>    | <b>+31.0***</b>   | <b>+19.5***</b>       | <b>+24.2***</b>         | <b>+26.8***</b>       |
| Vocational services  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1   | 15.3<br>(2.5)       | 7.8<br>(2.4)                   | 15.5<br>(2.7)      | 11.3<br>(2.6)         | 14.9<br>(2.6)      | 6.9<br>(2.5)      | 9.3<br>(2.7)          | 14.1<br>(3.5)           | 7.8<br>(3.6)          |
| Cohort 2   | 21.4<br>(2.6)       | 15.4<br>(2.5)                  | 28.7<br>(2.9)      | 28.6<br>(2.9)         | 26.2<br>(3.0)      | 29.2<br>(3.9)     | 25.0<br>(3.0)         | 24.8<br>(2.3)           | 34.2<br>(3.1)         |
| Percentage point change  | <b>+6.1</b>         | <b>+7.6*</b>                   | <b>+13.2***</b>    | <b>+17.3***</b>       | <b>+11.3**</b>     | <b>+22.3***</b>   | <b>+15.7***</b>       | <b>+10.7*</b>           | <b>+26.4***</b>       |
| Help from a tutor, reader, or interpreter                            |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1   | 15.4<br>(2.5)       | 9.2<br>(2.6)                   | 12.6<br>(2.5)      | 6.6<br>(2.0)          | 31.0<br>(3.4)      | 15.5<br>(3.6)     | 16.3<br>(3.4)         | 11.9<br>(3.3)           | 6.2<br>(3.3)          |
| Cohort 2   | 17.3<br>(2.4)       | 14.3<br>(2.2)                  | 13.9<br>(2.2)      | 16.5<br>(2.3)         | 47.7<br>(3.5)      | 27.3<br>(3.8)     | 15.5<br>(2.5)         | 15.1<br>(1.9)           | 18.6<br>(2.5)         |
| Percentage point change  | <b>+1.9</b>         | <b>+5.1</b>                    | <b>+1.3</b>        | <b>+9.9***</b>        | <b>+16.7***</b>    | <b>+11.8*</b>     | <b>-.8</b>            | <b>+3.2</b>             | <b>+12.4**</b>        |
| Speech/language therapy  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1   | 9.0<br>(2.0)        | 31.0<br>(4.2)                  | 19.3<br>(2.9)      | 3.1<br>(1.4)          | 41.6<br>(3.6)      | 5.5<br>(2.3)      | 18.2<br>(3.6)         | 11.7<br>(3.2)           | 46.3<br>(6.7)         |
| Cohort 2   | 15.1<br>(2.2)       | 65.5<br>(3.3)                  | 43.6<br>(3.2)      | 12.6<br>(2.1)         | 56.7<br>(3.4)      | 19.8<br>(3.4)     | 32.0<br>(3.3)         | 23.2<br>(2.2)           | 66.5<br>(3.1)         |
| Percentage point change  | <b>+6.1*</b>        | <b>+34.5***</b>                | <b>+24.3***</b>    | <b>+9.5***</b>        | <b>+15.1**</b>     | <b>+14.3***</b>   | <b>+13.8**</b>        | <b>+11.5**</b>          | <b>+20.2**</b>        |
| Occupational therapy/life skills training                            |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1   | 8.2<br>(1.9)        | 2.0<br>(1.3)                   | 16.2<br>(2.7)      | 4.0<br>(1.6)          | 8.0<br>(2.0)       | 11.0<br>(3.1)     | 15.9<br>(3.4)         | 8.6<br>(2.8)            | 19.3<br>(5.3)         |
| Cohort 2   | 6.8<br>(1.6)        | 5.5<br>(1.6)                   | 23.9<br>(2.7)      | 13.0<br>(2.1)         | 14.8<br>(2.5)      | 26.4<br>(3.8)     | 37.4<br>(3.4)         | 15.8<br>(1.9)           | 57.1<br>(3.2)         |
| Percentage point change  | <b>-1.4</b>         | <b>+3.5</b>                    | <b>+7.7*</b>       | <b>+9.0***</b>        | <b>+6.8*</b>       | <b>+15.4**</b>    | <b>+21.5***</b>       | <b>+7.2*</b>            | <b>+37.8***</b>       |

**Exhibit 4-2**  
**CHANGES IN SERVICES RECEIVED BY YOUTH WITH DISABILITIES FROM OR THROUGH THEIR SCHOOLS,**  
**BY COHORT AND DISABILITY CATEGORY (Concluded)**

|   | Learning Disability | Speech/<br>Language Impairment | Mental Retardation | Emotional Disturbance | Hearing Impairment | Visual Impairment | Orthopedic Impairment | Other Health Impairment | Multiple Disabilities |
|---|---------------------|--------------------------------|--------------------|-----------------------|--------------------|-------------------|-----------------------|-------------------------|-----------------------|
| Percentage who in the past year received from or through the school |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Mental health services  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1  | 6.5<br>(1.7)        | 2.5<br>(1.4)                   | 4.0<br>(1.4)       | 13.2<br>(2.7)         | 6.6<br>(1.8)       | 3.4<br>(1.8)      | 4.9<br>(2.0)          | 7.4<br>(2.6)            | 6.1<br>(3.2)          |
| Cohort 2  | 12.2<br>(2.0)       | 7.8<br>(1.9)                   | 15.8<br>(2.3)      | 33.5<br>(3.0)         | 18.4<br>(2.7)      | 14.2<br>(3.0)     | 9.1<br>(2.0)          | 17.7<br>(2.0)           | 21.0<br>(2.7)         |
| Percentage point change   | <b>+5.7*</b>        | <b>+5.3*</b>                   | <b>+11.8***</b>    | <b>+20.3***</b>       | <b>+11.8***</b>    | <b>+10.8**</b>    | <b>+4.2</b>           | <b>+10.3**</b>          | <b>+14.9***</b>       |
| Transportation help   |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1  | 1.3<br>(.8)         | 1.6<br>(1.1)                   | 10.3<br>(2.3)      | .5<br>(.6)            | 19.1<br>(2.9)      | 15.8<br>(3.7)     | 34.9<br>(4.4)         | 8.0<br>(2.7)            | 33.0<br>(6.3)         |
| Cohort 2  | 2.6<br>(1.0)        | 5.4<br>(1.6)                   | 25.5<br>(2.8)      | 19.4<br>(2.5)         | 25.4<br>(3.0)      | 38.2<br>(4.1)     | 47.7<br>(3.5)         | 17.8<br>(2.0)           | 50.0<br>(3.2)         |
| Percentage point change   | <b>+1.3</b>         | <b>+3.8</b>                    | <b>+15.2***</b>    | <b>+18.9***</b>       | <b>+6.3</b>        | <b>+22.4***</b>   | <b>+12.8*</b>         | <b>+9.8**</b>           | <b>+17.0*</b>         |
| Physical therapy  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1  | .4<br>(.4)          | .0<br>(.0)                     | 3.9<br>(1.5)       | .5<br>(.6)            | 2.4<br>(1.1)       | 7.5<br>(2.9)      | 36.2<br>(5.3)         | 7.0<br>(2.8)            | 16.5<br>(5.7)         |
| Cohort 2  | 1.3<br>(.7)         | 1.8<br>(.9)                    | 9.2<br>(1.8)       | 2.0<br>(.9)           | 3.9<br>(1.3)       | 13.8<br>(3.0)     | 42.1<br>(3.5)         | 4.8<br>(1.1)            | 40.1<br>(3.2)         |
| Percentage point change   | <b>+.9</b>          | <b>+1.8*</b>                   | <b>+5.3*</b>       | <b>+1.5</b>           | <b>+1.5</b>        | <b>+6.3</b>       | <b>+5.9</b>           | <b>-2.2</b>             | <b>+23.6***</b>       |
| Hearing loss therapy  |                     |                                |                    |                       |                    |                   |                       |                         |                       |
| Cohort 1  | .0<br>(.0)          | .4<br>(.6)                     | .5<br>(.5)         | .0<br>(.0)            | 27.2<br>(3.3)      | .3<br>(.6)        | .0<br>(.0)            | .3<br>(.6)              | 1.7<br>(1.8)          |
| Cohort 2  | 1.0<br>(.6)         | .9<br>(.6)                     | 3.4<br>(1.1)       | .5<br>(.4)            | 50.9<br>(3.5)      | 5.5<br>(1.9)      | 1.9<br>(.9)           | 1.6<br>(.7)             | 5.5<br>(1.5)          |
| Percentage point change   | <b>+1.0</b>         | <b>+.5</b>                     | <b>+2.9*</b>       | <b>+.5</b>            | <b>+23.7***</b>    | <b>+5.2**</b>     | <b>+1.9*</b>          | <b>+1.3</b>             | <b>+3.8</b>           |

Source: NLTSS and NLTSS Wave 1 parent interviews.  
Standard errors are in parentheses.  
Statistically significant difference in a two-tailed test at the following levels: \* p<.05, \*\* p<.01, \*\*\* p<.001.

schools in 2001. But even among categories of youth who had been receiving services at relatively higher rates initially, large increases were noted. For example, more than half of cohort 1 youth with hearing impairments (58%), orthopedic impairments (58%), or multiple disabilities (62%) received some type of support service from their schools. With increases of 20 to 27 percentage points ( $p < .001$ ), almost 80% or more were receiving services from their schools in 2001. The most notable exception to these large increases was youth with learning disabilities. With an 11 percentage point increase between cohorts ( $p < .05$ ), only about 40% of cohort 2 youth with learning disabilities were reported by parents to be receiving any related or support services from their schools, a significantly lower rate of reported service receipt than any other group ( $p < .001$ ).

Increases in schools providing speech/language therapy were the most widespread. The largest increase (34 percentage points,  $p < .001$ ) was among youth with speech impairments, as might be expected, but all other categories also showed gains, ranging from 6 to 24 percentage points ( $p < .05$  to  $.001$ ). Increases in vocational services, life skills training, and mental health services also were widespread, with almost all categories of youth experiencing significant increases. Increases ranged from 8 to 26 percentage points for vocational services, from 6 to 38 percentage points for life skills training, and from 5 to 20 percentage points for mental health services ( $p < .05$  to  $.001$ ). Exceptions to these increases were that youth with learning disabilities did not receive significantly more vocational services or life skills training from their schools, and youth with orthopedic impairments did not have a significant increase in mental health services. Youth with speech impairments also did not receive significantly more life skills training. Transportation services increased significantly to all categories of youth, except those with learning disabilities or speech or hearing impairments.

It is not surprising that increases in these broadly relevant kinds of services were experienced by most categories of youth, regardless of disability. However, another kind of service that could have broad applicability across disability categories was help from a tutor, reader, or interpreter. Significant increases in receiving these services from schools were seen only for youth with emotional disturbances, hearing or visual impairments, or multiple disabilities (10 to 16 percentage points,  $p < .05$  to  $.001$ ).

As expected, increases in more focused services were concentrated among particular disability groups. For example, significant increases in hearing loss therapy occurred for four groups, with youth with hearing impairments having the largest increase (24 percentage points,  $p < .001$ ), as would be expected. Similarly, significant increases in physical therapy occurred for three groups, including a 24 percentage point increase for youth with multiple disabilities ( $p < .001$ ). Mental health services provided to youth with emotional disturbances from or through their schools increased from 13% to 34% ( $p < .001$ ). Youth with orthopedic impairments continued to be the most likely to receive physical therapy (42%), but the increase from 1987 to 2001 was not significant.

## **Demographic Differences in Changes in Services Received**

**Gender.** Changes between 1987 and 2001 in the kinds and levels of services provided by schools to boys and girls were quite similar (Exhibit 4-3). For example, the percentage of both boys' and girls' receiving support services went from about one-third in 1987 to one-half in 2001

**Exhibit 4-3**  
**CHANGES IN SERVICES RECEIVED BY**  
**YOUTH FROM OR THROUGH THEIR SCHOOLS,**  
**BY YOUTH'S GENDER**

|   | Boys            | Girls           |
|---|-----------------|-----------------|
| Percentage who in the past year received from or through the school |                 |                 |
| Any of these services   |                 |                 |
| Cohort 1  | 32.2<br>(2.6)   | 33.5<br>(3.6)   |
| Cohort 2  | 51.1<br>(2.4)   | 49.3<br>(3.4)   |
| Percentage point change   | <b>+18.2***</b> | <b>+15.1**</b>  |
| Vocational services   |                 |                 |
| Cohort 1  | 15.7<br>(2.0)   | 11.3<br>(2.4)   |
| Cohort 2  | 24.9<br>(2.2)   | 20.9<br>(2.8)   |
| Percentage point change   | <b>+9.2**</b>   | <b>+9.6**</b>   |
| Speech/language therapy   |                 |                 |
| Cohort 1  | 11.3<br>(1.7)   | 13.9<br>(2.7)   |
| Cohort 2  | 22.7<br>(2.0)   | 21.6<br>(2.8)   |
| Percentage point change   | <b>+11.4***</b> | <b>+7.7*</b>    |
| Mental health services  |                 |                 |
| Cohort 1  | 6.9<br>(1.4)    | 6.0<br>(1.8)    |
| Cohort 2  | 15.1<br>(1.8)   | 16.5<br>(2.6)   |
| Percentage point change   | <b>+8.2***</b>  | <b>+10.5***</b> |
| Transportation help   |                 |                 |
| Cohort 1  | 3.3<br>(1.0)    | 5.6<br>(1.8)    |
| Cohort 2  | 10.5<br>(1.5)   | 10.5<br>(2.1)   |
| Percentage point change   | <b>+7.2***</b>  | +4.9            |
| Physical therapy  |                 |                 |
| Cohort 1  | 1.1<br>(.6)     | 2.8<br>(1.3)    |
| Cohort 2  | 3.7<br>(.9)     | 4.7<br>(1.5)    |
| Percentage point change   | <b>+2.6*</b>    | +1.9            |

Source: NLTS and NLTS2 Wave 1 parent interviews.  
Standard errors are in parentheses.  
Statistically significant difference in a two-tailed test at the following levels: \* p<.05, \*\* p<.01, \*\*\* p<.001.

(18 and 15 percentage points increases, respectively, p<.001 and .01). There were no significant increases in receipt of hearing loss therapy, life skills training, or help from a tutor, reader, or interpreter for either gender. Both boys and girls experienced significant increases in vocational services (9 and 10 percentage points, p<.01), speech therapy (11 and 8 percentage points, p<.001 and .05), and mental health services (8 and 10 percentage points, p<.001). Only boys experienced significant increases in transportation services (7 percentage points, p<.001) and physical therapy (2 percentage points, p<.05).

**Household income.** Youth at all household income levels experienced significant increases in support services from or through their schools (Exhibit 4-4). In 1987, about one-third of youth received some type of support service from schools, regardless of household income. Increases by 2001 were largest for youth from middle- and low-income households, so that more than half were receiving some type of service in 2001 (20 and 24 percentage point increases, respectively, p<.001). Receipt of support services by youth from higher-income households increased by 14 percentage points, to almost half receiving services (p<.01).

There were no significant increases in hearing loss therapy; physical therapy; help from a tutor, reader, or interpreter; or life skills training provided from or through schools to youth in any income group. In contrast, all income groups experienced significant increases (of 6

or 7 percentage points, p<.05) in receipt of transportation help from their schools.

For services that increased significantly, increases were more common among youth in the lower- and middle-income groups. For example, significant increases in receipt of vocational services occurred only among low- and middle-income students (14 and 10 percentage points,  $p < .001$ ). Similarly, mental health services significantly increased among low- and middle-income students (14 and 9 percentage points,  $p < .001$  and  $.05$ ). These increases created a significant difference among income groups in the receipt of mental health services. Youth from low-income level households in cohort 2 received significantly more of such services than higher income youth (20 vs. 10 percentage points,  $p < .01$ ).

Youth from lower income households also experienced significant gains in receipt of speech/language therapy (11 percentage points,  $p < .05$ ). However, in contrast with the pattern for mental health and vocational services, middle-income youth did not share such gains, although youth from higher income households did (12 percentage points  $p < .001$ ).

**Race/ethnicity.** White, African American, and Hispanic youth in cohort 2 received more services than youth in these groups in cohort 1 (Exhibit 4-4). Significant increases of 17 to 21 percentage points ( $p < .001$  and  $.05$ ) resulted in about half of each group receiving some type of support service.

Hispanic youth had a different pattern of change in services from or through their schools than white and African American youth. Both of these groups experienced significant increases in the receipt of speech therapy, vocational and mental health services and transportation help, ranging from 6 to 9 percentage points for white youth ( $p < .01$  and  $.001$ ), and from 8 to 15 percentage points for African American youth ( $p < .05$  and  $.001$ ). The somewhat larger increases for African American youth resulted in a significantly larger percentage of them receiving mental health services than white youth in cohort 2 (21 vs. 12 percentage points,  $p < .05$ ). There were no significant changes in receipt of hearing loss therapy for any group.

Hispanic students shared the significant increase in vocational services experienced by others (12 percentage points,  $p < .05$ ), but did not experience the significant increases in mental health services and transportation help noted for white and African American youth. Instead, there were significant increases for Hispanic youth in help from a tutor, reader, or interpreter (13 percentage points,  $p < .05$ ) and physical therapy (7 percentage points,  $p < .05$ )—the only group to experience such increases. The significant increase in the percentage of Hispanic students receiving help from a tutor, reader, or interpreter eliminated the significant gap between them and white students in the receipt of these services from schools in cohort 1.

**Exhibit 4-4**  
**CHANGES IN SERVICES RECEIVED BY YOUTH WITH DISABILITIES FROM OR THROUGH THEIR SCHOOLS, BY INCOME AND RACE/ETHNICITY**

|  | Income          |                 |                 | Race/Ethnicity  |                  |               |
|--|-----------------|-----------------|-----------------|-----------------|------------------|---------------|
|  | Low             | Medium          | High            | White           | African American | Hispanic      |
| Percentage who in the past year received from or through the school: |                 |                 |                 |                 |                  |               |
| Any of these services  |                 |                 |                 |                 |                  |               |
| Cohort 1   | 32.0<br>(4.1)   | 34.1<br>(4.0)   | 33.4<br>(3.5)   | 32.6<br>(2.6)   | 32.5<br>(4.4)    | 30.1<br>(7.2) |
| Cohort 2   | 56.2<br>(3.3)   | 54.1<br>(3.8)   | 47.1<br>(3.8)   | 49.3<br>(2.6)   | 52.7<br>(4.4)    | 51.4<br>(5.0) |
| Percentage point change  | <b>+24.2***</b> | <b>+20.0***</b> | <b>+13.7**</b>  | <b>+16.7***</b> | <b>+20.2***</b>  | <b>+21.3*</b> |
| Vocational services  |                 |                 |                 |                 |                  |               |
| Cohort 1   | 11.9<br>(2.9)   | 13.2<br>(2.9)   | 17.5<br>(2.8)   | 15.6<br>(2.0)   | 13.2<br>(3.2)    | 9.4<br>(4.6)  |
| Cohort 2   | 25.4<br>(2.9)   | 23.5<br>(3.3)   | 22.6<br>(3.2)   | 23.5<br>(2.3)   | 24.4<br>(4.0)    | 21.7<br>(4.2) |
| Percentage point change  | <b>+13.5***</b> | <b>+10.3*</b>   | +5.1            | <b>+7.9**</b>   | <b>+11.2*</b>    | <b>+12.3*</b> |
| Tutor/reader/interpreter   |                 |                 |                 |                 |                  |               |
| Cohort 1   | 13.8<br>(3.1)   | 16.9<br>(3.2)   | 14.1<br>(2.6)   | 14.6<br>(1.9)   | 12.0<br>(3.1)    | 4.7<br>(3.4)  |
| Cohort 2   | 16.8<br>(2.5)   | 16.4<br>(2.8)   | 18.5<br>(2.9)   | 15.4<br>(1.9)   | 20.4<br>(3.7)    | 17.6<br>(3.9) |
| Percentage point change  | +3.0            | -.5             | +4.4            | +8              | +8.4             | <b>+12.9*</b> |
| Speech/language therapy  |                 |                 |                 |                 |                  |               |
| Cohort 1   | 15.3<br>(3.2)   | 13.5<br>(2.9)   | 8.2<br>(2.0)    | 10.5<br>(1.7)   | 14.1<br>(3.3)    | 15.2<br>(5.8) |
| Cohort 2   | 25.9<br>(2.9)   | 20.0<br>(3.1)   | 20.4<br>(3.1)   | 19.8<br>(2.1)   | 27.3<br>(4.1)    | 26.5<br>(4.5) |
| Percentage point change  | <b>+10.6*</b>   | +6.5            | <b>+12.2***</b> | <b>+9.3***</b>  | <b>+13.2*</b>    | +11.3         |
| Occupational therapy/life skills training                            |                 |                 |                 |                 |                  |               |
| Cohort 1   | 8.8<br>(2.5)    | 9.4<br>(2.5)    | 11.1<br>(2.3)   | 10.9<br>(1.7)   | 4.1<br>(1.9)     | 7.4<br>(4.2)  |
| Cohort 2   | 10.5<br>(2.1)   | 11.6<br>(2.4)   | 14.0<br>(2.6)   | 13.5<br>(1.8)   | 10.4<br>(2.8)    | 7.8<br>(2.7)  |
| Percentage point change  | +1.7            | +2.2            | +2.9            | +2.6            | +6.3             | +4            |
| Mental health services   |                 |                 |                 |                 |                  |               |
| Cohort 1   | 6.3<br>(2.2)    | 7.9<br>(2.3)    | 7.3<br>(1.9)    | 6.4<br>(1.3)    | 5.5<br>(2.2)     | 9.3<br>(4.6)  |
| Cohort 2   | 20.2<br>(2.7)   | 16.9<br>(2.9)   | 9.9<br>(2.3)    | 12.5<br>(1.7)   | 20.7<br>(3.7)    | 19.3<br>(4.0) |
| Percentage point change  | <b>+13.9***</b> | <b>+9.0*</b>    | +2.6            | <b>+6.1**</b>   | <b>+15.2***</b>  | +10.0         |



**Exhibit 4-4**  
**CHANGES IN SERVICES RECEIVED BY YOUTH WITH DISABILITIES FROM OR THROUGH THEIR SCHOOLS, BY INCOME AND RACE/ETHNICITY (Concluded)**

|  | Income        |               |              | Race/Ethnicity |                  |               |
|--|---------------|---------------|--------------|----------------|------------------|---------------|
|  | Low           | Medium        | High         | White          | African American | Hispanic      |
| Percentage who in the past year received from or through the school: |               |               |              |                |                  |               |
| Transportation help  |               |               |              |                |                  |               |
| Cohort 1   | 5.2<br>(2.0)  | 3.1<br>(1.5)  | 3.8<br>(1.4) | 3.2<br>(1.0)   | 4.1<br>(1.9)     | 7.8<br>(4.3)  |
| Cohort 2   | 11.7<br>(2.2) | 10.1<br>(2.3) | 9.4<br>(2.2) | 9.2<br>(1.5)   | 12.6<br>(3.1)    | 13.3<br>(3.5) |
| Percentage point change  | <b>+6.5*</b>  | <b>+7.0*</b>  | <b>+5.6*</b> | <b>+6.0***</b> | <b>+8.5*</b>     | +5.5          |
| Physical therapy   |               |               |              |                |                  |               |
| Cohort 1   | 2.4<br>(1.4)  | 1.0<br>(.9)   | 1.6<br>(1.0) | 1.5<br>(.7)    | 2.4<br>(1.5)     | .3<br>(.9)    |
| Cohort 2   | 5.9<br>(1.6)  | 3.2<br>(1.3)  | 2.9<br>(1.3) | 3.1<br>(.9)    | 4.3<br>(1.9)     | 7.3<br>(2.6)  |
| Percentage point change  | +3.5          | +2.2          | +1.3         | +1.6           | +1.9             | <b>+7.0*</b>  |

Source: NLTS and NLTS2 Wave 1 parent interviews.

Standard errors are in parentheses.

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

## Summary

Youth with disabilities were substantially more likely to be receiving support services in 2001 than in 1987, with the difference being accounted for entirely by increases in services provided from or through their schools. By 2001, half of 15- to 17-year-old students with disabilities were receiving related or support services from or through their schools. Significant increases were noted for many kinds of services, with there being particularly large increases of 9 and 10 percentage points in receipt of speech/language therapy and vocational and mental health services. Only life skills training and help from a tutor, reader, or interpreter were not received from their schools by significantly more youth in 2001 than in 1987.

The increases in receipt of support services from schools occurred for youth in all disability categories, with the largest increase being for youth with emotional disturbances, largely because of their 20 percentage point increase in receipt of mental health services. The reported receipt of speech/language therapy also increased for all categories of youth. Students with learning disabilities experienced increases in receipt of fewer kinds of services than other youth, increasing only in receipt of speech/language therapy and mental health services. All other categories of youth experienced increases in at least four kinds of services, and youth with mental retardation, visual impairments, or multiple disabilities had increases in seven of the eight kinds of services assessed.

Boys and girls both experienced significant increases in receiving services from their schools, but boys had increases in five kinds of service, whereas girls had increases in three. All income groups also experienced significant increases in receiving any services and receiving

transportation help. Youth from lower income households had increases in a wider range of services than youth from higher income households. White and African American youth had a similar pattern of increase in services, with significant increases in speech/language therapy, vocational and mental health services, and transportation. Hispanic youth shared gains in vocational services, but were the only ones to experience increases in help from a tutor, reader, or interpreter, and in physical therapy.

The following chapter explores whether increases in the kinds of services reported here are reflected in improved outcomes for youth with disabilities.