SECTION II

STUDENT CHARACTERISTICS

Modules

1. *Infants and Toddlers with Disabilities Served Under IDEA, Part H*

2. *Children Served Under IDEA, Part B Preschool Grants Program*

3. *Students Served Under IDEA, Part B*

4. *Students with Attention Deficit/ Hyperactivity Disorder*

Infants and Toddlers with Disabilities Served Under IDEA, Part H

Part H of the Individuals with Disabilities Education Act (IDEA) was adopted by Congress in 1986. Part H was designed to address the needs of infants and toddlers with disabilities and their families through a "statewide system of coordinated, comprehensive, multidisciplinary, interagency programs providing appropriate early intervention services to all infants and toddlers with disabilities and their families" (20 U.S.C. §1476 (a)).

Formulation of the goals for Part H and early intervention was influenced by multiple factors, including the historical context that led to the passage of Part H, the actual language used in the Part H legislation and regulations, and the professional literature. Part H contains the following purpose statement:

The Congress finds that there is an urgent and substantial need:

(1) To enhance the development of infants and toddlers with disabilities and to minimize their potential for developmental delay,

(2) To reduce the educational costs to our society, including our Nation's schools, by minimizing the need for special education and related services after infants and toddlers with disabilities reach school age,

(3) To minimize the likelihood of institutionalization of individuals with disabilities and maximize the potential for their independent living in society,

(4) To enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities (20 U.S.C. §1471), and

(5) To enhance the capacity of State and local agencies and service providers to identify, evaluate, and meet the needs of historically underrepresented populations, particularly minority, low-income, inner-city, and rural populations (20 U.S.C. §1471).

This statement sets forth a broad set of goals for early intervention programs and emphasizes serving both children and families.

Part H provides Federal funds to assist States in planning and implementing a system of early intervention services to:

(1) develop and implement a statewide, comprehensive, coordinated, multidisciplinary, interagency program of early intervention services for infants and toddlers with disabilities and their families;

(2) facilitate the coordination of payment for early intervention services from Federal, State, local, and private sources;

(3) enhance their capacity to provide quality early intervention services and expand and improve existing early intervention services being provided to infants and toddlers with disabilities and their families (20 U.S.C. §1471).

The first year of implementation for Part H was 1987. Part H was designed to be phased in over a 5-year period. However, it was later amended by adding two 1-year extensions to permit States to fully implement the law. All States provided an assurance that they had implemented Part H as of September 30, 1994. Funding for the program

has increased from $50 million in FY 1987 to $316 million in FY 1996.

Infants and toddlers from birth through age 2 are eligible for Part H services if they:

(1) Are experiencing developmental delays, as measured by appropriate diagnostic instruments and procedures in one or more of the following areas:

(i) Cognitive development.

(ii) Physical development, including vision and hearing.

(iii) Communication development.

(iv) Social or emotional development.

(v) Adaptive development; or

(2) Have a diagnosed physical or mental condition that has a high probability of resulting in developmental delay (34 CFR 303.16).

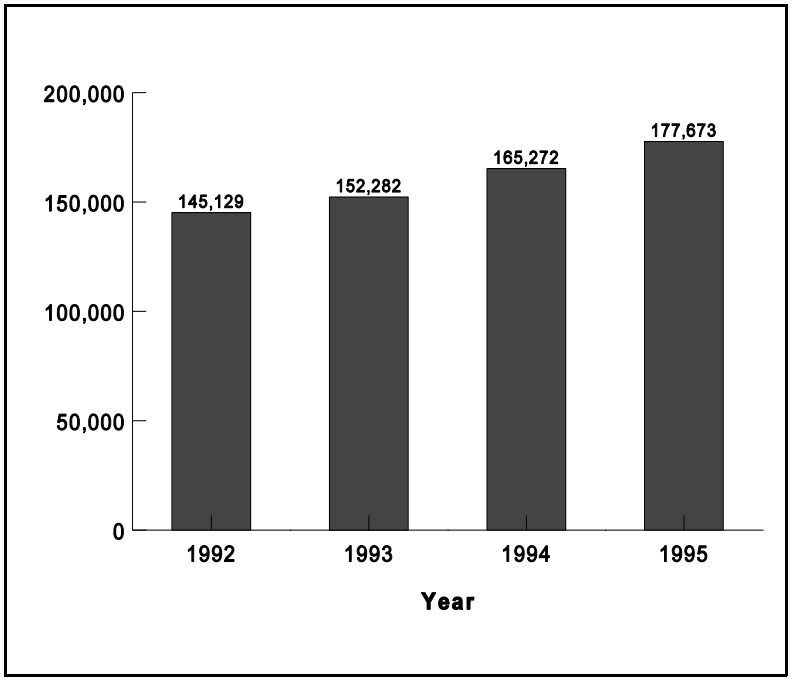
States have the discretion to serve infants and toddlers and their families who are "at risk of having substantial developmental delays if early intervention services are not provided" (34 CFR 303.16). In 1995, 13 States and one Outlying Area served at-risk infants and toddlers.[1]

Children eligible to receive services under Part H must have an individualized family service plan (IFSP) in place.

This section discusses the increasing number of infants and toddlers with disabilities who are being served under Part H of IDEA, the distribution of these children by age, and the percentage of infants and toddlers served in the

[1] States serving at-risk infants and toddlers were Arkansas, California, Colorado, Hawaii, Indiana, Maine, Massachusetts, New Hampshire, New Mexico, North Carolina, Ohio, Rhode Island, and Wisconsin. Guam also serves these children.

Figure II-1
Number of Infants and Toddlers with Disabilities Served Under IDEA, Part H



Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

resident population. (Further discussion on Part H can be found in "The Part H Longitudinal Study (PHLS)" in Section IV.1.)

Number of Infants and Toddlers Served

Figure II-1 shows the number of infants and toddlers and their families who have received services since December 1992.[2] Counts prior to December 1992 were considerably

[2] Counts of infants and toddlers served prior to 1994-95 include infants and toddlers served under the Chapter 1 Handicapped Program.

higher than the 1992 count. Discussions with State representatives indicate that these earlier counts were somewhat inflated because States had difficulty providing unduplicated counts of infants and toddlers served, and some States counted infants and toddlers who did not have an IFSP in place.

Since 1992, the States have reported a steady increase in the number of children served. During the past 4 years, the number of infants and toddlers served has increased by 22.4 percent. Ten States--Arkansas, California, Florida, Kansas, Kentucky, Mississippi, Montana, New Mexico, New York, and Oregon--reported increases of more than 50 percent, while 10 States and jurisdictions--Alaska, Arizona, District of Columbia, Massachusetts, Missouri, New Hampshire, North Carolina, Tennessee, Virginia, and Washington--reported serving fewer infants and toddlers with disabilities in 1995 than in 1992.

States vary in the percentage of infants and toddlers served under Part H. In 1995, six States served less than 1 percent of their resident birth to age 3 population under Part H, while 33 States served 1 to 2 percent of their resident population through Part H. Eight States served from 2 to 3 percent of the population. Four States served more than 3 percent of the population under Part H. One of those States, Hawaii, continues to serve the highest percentage among all States (6.73 percent). (See Appendix table AH1.)

It is likely that the overall growth in the number of infants and toddlers served is in part related to child find and public awareness efforts. Almost 50 percent of the children served in 1995 were in the 2- to 3-year-old range, whereas approximately 17 percent of the infants were 1 year old or younger, as shown in table II-1. Only the 2- to 3-year-old age group had an overall increase during the 4-year period of 1992-95.

A small study conducted in Colorado, North Carolina, and Pennsylvania sampled the families of 155 infants and toddlers with disabilities in early intervention programs in three counties of each State. The study found that average

Table II-1
Percentage Distribution of Ages of Infants and Toddlers Served Under IDEA, Part H 1992-95

Year	Ages			Total**
	Birth to 1	1 to 2 Years Old	2 to 3 Years Old	
1992*	18.8	34.2	47.1	100.0
1993*	20.3	35.1	44.6	100.0
1994	17.9	33.4	48.7	100.0
1995	16.8	33.4	49.8	100.0

* Includes infants and toddlers with disabilities served under the Chapter 1 Handicapped Program.

** Due to rounding, totals may not sum to 100 percent.

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

age of referral to the program was 12.1 months in Colorado, 10.6 months in North Carolina, and 7.7 months in Pennsylvania. The most commonly used referral source was a physician or nurse (50 percent). The study also found that the sample collected in May of 1994 consisted of 24 (15 percent) infants ages birth to 1, 64 (41 percent) infants ages 1 to 2, and 70 (44 percent) toddlers ages 2 to 3 (Kochanek & Buka, 1994).

The Early Education Program for Children with Disabilities

The Office of Special Education and Rehabilitative Services (OSERS) in the U.S. Department of Education administers a variety of programs related to improving the quality and quantity of services to young children with special needs and their families. Selected early childhood projects are sponsored by OSERS and administered by the Office of Special Education Programs (OSEP) through the Early Education Program for Children with Disabilities (EEPCD).

These early childhood initiatives include demonstration projects, in-service training projects, outreach projects, research institutes, research and experimental projects, statewide data system projects, and a technical assistance center that support programs for infants, toddlers, and preschoolers with disabilities.

EEPCD, originally named the Handicapped Children's Early Education Program (HCEEP), was established in 1968 with a mandate to set up model demonstration projects for the delivery of special education and related services to young children with disabilities, from birth through the third grade. Three major needs were identified for early intervention programs: (1) locally designed ways to serve infants, young children, and their families; (2) more specific information on effective programs and techniques; and (3) distribution of visible, replicable models throughout the country.

Two major assumptions underlie this program: (1) only through early intervention with tested and successful program models can the highest quality services be provided for children with disabilities, and (2) the program should provide models of services rather than be a direct service delivery program. HCEEP was intended to provide an opportunity for any public or private nonprofit organization to develop and demonstrate high-quality services for a selected group of children and their families. It also was intended to provide an opportunity to demonstrate the effectiveness of locally designed approaches and disseminate those ideas across the nation to other agencies that might choose to use the model rather than develop their own program. EEPCD currently supports 109 projects, including 35 demonstration projects, 18 in-service training projects, 49 outreach projects, 6 research institutes, and 1 national technical assistance center.

The demonstration projects address a range of topics, including multidisciplinary intervention services for child and family; interagency collaboration in the provision of services; service delivery models; developmentally appropriate practices; transitioning children with disabilities into community settings; increasing and improving child care

options for children with disabilities; curriculum development; evaluation of child progress; services for infants with special health needs, including HIV infection and AIDS, or exposure to drugs in utero; and assistive technology. Projects in this priority area are developing and evaluating in-service training models that will prepare professionals and paraprofessionals to provide, coordinate, or enhance early intervention, special education, and related services for infants and toddlers with disabilities and/or for preschool children with disabilities. Outreach projects engage in awareness activities; stimulation of model replication sites; training of professionals, paraprofessionals, and parents; promotion of State involvement; product development and dissemination; and consultative activities. Outreach efforts have contributed significantly to informing people about effective programs for young children, to providing improved training and services, and to building continuity and interagency/inter-State collaborations. During 1995-96, four research institutes were funded. These institutes address interventions for children affected by parental substance abuse; barriers to the inclusion of preschool-age children with disabilities in classroom and community settings; influences on service patterns and utilization in early intervention and preschool programs; and the adoption of successful early intervention practices in children's early elementary education in order to improve the education of children with disabilities.

Summary

The increase in the number of infants and toddlers served under Part H (22.4 percent) since 1992 has been greater than the growth in the number of children and youth served under the Part B program for this same period (10.6 percent). However, the Part H growth rate is comparable to the growth rate of the number of children ages 3 through 5 that are served under Part B (20.4 percent). This growth in services to young children reflects one of the OSEP's policy goals--to strengthen early intervention to enable every child to start school ready to learn. Early intervention programs can benefit both the child and the family by helping the child become more involved in both

the community and the family and can diminish or prevent further developmental limitations and secondary or tertiary disabilities (Guralnick & Bennett, 1987).

The overall percentage of infants and toddlers with disabilities served under Part H as a function of the resident population has also increased, from 1.2 percent in 1992 to 1.5 percent in 1995. However, these percentages vary across the States. Children with disabilities ages 2 to 3 continue to be the most dominant age group, representing almost half of all those served under Part H.

References

Guralnick, M.J. & Bennett, F.C. (1987). *The effectiveness of early intervention for at-risk and handicapped children*. Orlando: Academic Press.

Kochanek, T.T. & Buka, S.L. (1994). *The Early Childhood Research Institute on Service Utilization: Study environments and a portrait of children, families and service providers within them*. The University of North Carolina Rhode Island College Center for Family Studies: Early Childhood Research Institute on Service Utilization.

Children Served Under IDEA, Part B Preschool Grants Program

The Preschool Grants Program, authorized under Section 619 of IDEA, Part B, was established to provide grants to States to serve young children with disabilities. All States and Outlying Areas have participated in the program since FY 1992.

Over the years, the preschool special education programs administered by those States have evolved, and now many States are involved in a variety of education reform efforts. Many of the efforts at the preschool level have focused on increasing collaboration between regular and special education agencies, revising funding policies, establishing transition agreements between agencies serving infants and toddlers birth through 2 years old with disabilities, and developing programmatic guidelines and policies. In many cases, these changes have influenced settings in which eligible children are served.

The following sections will highlight several key aspects of the Preschool Grants Program, including:

(1) Grant Awards for the Preschool Grants Program;

(2) Number of Preschoolers with Disabilities Served;

(3) Current Educational Reform Efforts; and

(4) Educational Placements of Preschoolers with Disabilities.

Grant Awards for the Preschool Grants Program

States and Outlying Areas are awarded Preschool Grants Program funds based on the number of 3- through 5-year-

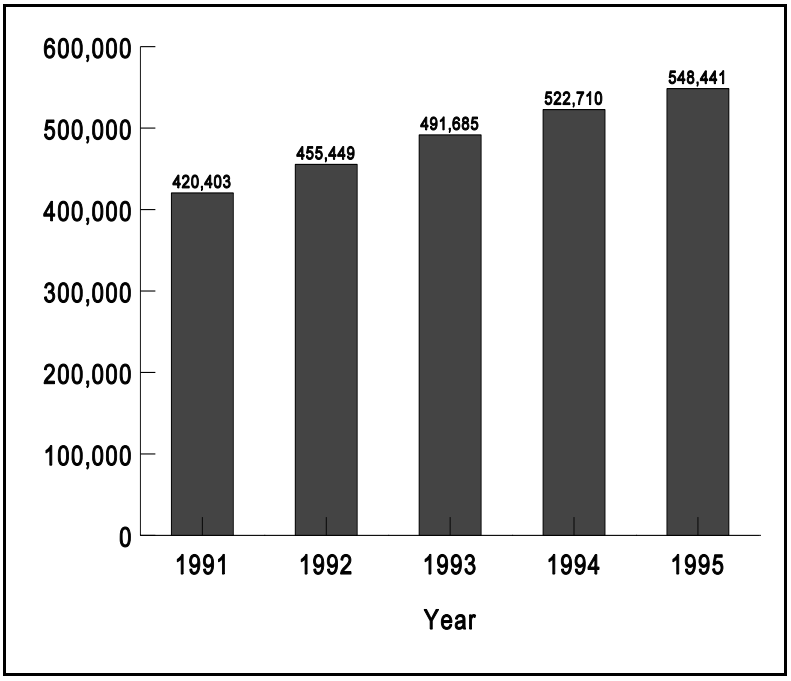
old children with disabilities served on December 1 of the previous year. In FY 1996, Congress appropriated $360,409,000, only slightly more than the $360,265,000 appropriated in FY 1995. However, the number of children served increased 4.9 percent, from 522,710 on December 1, 1994, to 548,441 on December 1, 1995. Grant awards made to each State in FY 1996 are shown in table AG1 in Appendix A.

States and Outlying Areas may set aside up to 20 percent of their Section 619 set-aside funds for the planning and development of a statewide comprehensive service delivery system for children with disabilities from birth through age 5 years; for the provision of direct and support services for children with disabilities ages 3 through 5 years; and at the State's discretion, for the provision of a free appropriate public education (FAPE) to 2-year-old children with disabilities who will reach age 3 during the school year. According to the 1996 *Section 619 Profile*, 20 States have retained the full 20 percent for this purpose. The most common uses of these funds were training activities, technical assistance, development of program materials, and planning or coordination activities. An additional 5 percent of Section 619 funds can be retained for administrative use. Among the 47 States that answered this survey question, 37 set aside the full 5 percent for this purpose, and two States reported using 0 percent. The remaining States reported using 4 percent (3 States), 3 percent (2 States), 2 percent (0 States), and 1 percent (3 States).

Number of Preschoolers with Disabilities Served

The Preschool Grants Program continues to grow. The growth in the number of preschool children (30 percent from 1991-92 to 1995-96) (see figure II-2) who received special education services under IDEA exceeded the growth in the general preschool population (8.3 percent from 1991-92 to 1995-96). This relationship is demonstrated in the increase in the percentage of preschool children served

Figure II-2
Number of Children Ages 3-5 Served on December 1, 1991, Through December 1, 1995



Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

under IDEA of the general population from 3.8 percent to 4.5 percent over this period.

The total percentage of the resident population ages 3-5 served under the program within each State continues to vary greatly (see table AA10 in Appendix A). Kentucky serves the highest percentage (9.2 percent), while the District of Columbia serves the lowest (1.6 percent). However, 41 States are serving 3 to 6 percent of their resident ages 3-5 population.

Current Educational Reform Efforts

Many States apply the general educational reform efforts that are made within their States to programs that serve children ages 3-5 with disabilities. According to the *Section 619 Profile (Seventh Edition)*, 18 States have revised their Section 619 programs to reflect some of the general education reform efforts. These States have made changes in the following areas:

- administrative organization;
- collaborative statements with other agencies;
- guidelines;
- outcome assessments;
- preschool special education criteria/classification;
- program evaluation procedures;
- program standards; and
- vision and goal-setting statements.

This section will highlight some of the reforms that have taken place in Rhode Island, Kentucky, and Minnesota. Telephone interviews were conducted with the Section 619 coordinators of these States. These States were chosen because of the innovative changes to their programs that serve eligible preschoolers. All three have promoted collaborative arrangements among agencies that serve children and families.

In Kentucky, local districts collaborate with other agencies in several ways. First, duplication of programs and services to the same children is avoided through careful planning. This entails allowing local agencies to operate the preschool program through contractual agreements with Head Start and other existing preschool programs. Second, blended or shared classrooms in which the children in a room are financially supported through several funding sources and agencies (such as the State, Head Start, Chapter 1, private tuition, or other sources) are encouraged. In a blended classroom, costs are shared, but separate audit trails are maintained for each source. The classroom must meet the operating requirements of each funding source, and children must receive all services for which they are eligible. Third, local agencies work with

child care providers and local family resource centers to assist in the coordination of before- and after-school child care. Fourth, collaborative agreements with medical, health, mental health, and social service agencies are fostered to meet the comprehensive needs of children and families. In 1994-95, 62 percent of the districts operated State-funded services in a collaborative arrangement with an outside agency. As a result of these efforts, 90 percent of children ages 3-5 were served in regular classes, 5 percent in resource rooms, and 2 percent in separate classes during the 1994-95 school year.

Similarly, in Rhode Island, preschool special education programs have been blended into general early childhood programs. A shared vision statement was developed by early childhood special educators and regular early childhood educators. All professional training is now done jointly, including summer institutes on inclusion practices and professional development in-service training. Curriculum planning, which has a strong emphasis on family involvement and assessments and evaluations, is also conducted jointly. During the 1994-95 school year, 93 percent of the preschool students were served in either regular classes, resource rooms, or separate classes. Among the 93 percent, 48 percent were served in regular classes.

In 1995, Minnesota unified services from a variety of programs that were previously handled by six separate State agencies for children and their families into one State agency called the Department of Children, Family, and Learning. Prior to that time, the Department of Education was the lead agency. The other five agencies that joined this collaborative effort were (1) the Department of Human Services, (2) the Department of Economic Security, (3) Minnesota Planning, (4) the Department of Corrections, and (5) the Department of Public Safety. Doing so allows the agency greater flexibility in using funding sources and promotes collaboration among previously separate entities. The new agency seeks to develop public policies that recognize that children's economic, psychological, and educational needs are inseparable.

Educational Placements of Preschoolers with Disabilities

OSEP collects data on preschoolers with disabilities who are served in each of eight different placements: regular class, resource room, separate class, separate school (public and private), residential facility (public and private), and homebound/hospital. Because these placement categories may not reflect all of the placement categories specific to preschoolers, OSEP provides optional instructions to States and Outlying Areas about reporting counts of preschoolers in each of the placement categories. Table II-2 includes a definition of each placement category as it applies to preschoolers with disabilities.

As shown in figure II-3, just over 50 percent of children ages 3-5 with disabilities were served in regular class placements on December 1, 1995. This is a 2 percent increase over the percentage served on December 1, 1994. The second most frequently used setting was separate class placement, followed by resource room. The percentage of children served in these two settings has remained fairly stable from December 1, 1994, to December 1, 1995. The use of separate facilities, both public and private, has declined (from 8.92 percent on December 1, 1994, to 5.5 percent on December 1, 1995), while the use of residential facilities has remained stable (0.3 percent to 0.2 percent) and the use of home/hospital placements rose slightly (1.9 percent to 2.6 percent).

Table II-2
Educational Environments for Preschoolers with Disabilities

Regular class includes children who receive services in programs designed primarily for nondisabled children, provided the children with disabilities are in a separate room for less than 21 percent of the time receiving services. This may include, but is not limited to, Head Start centers, public or private preschool and child care facilities, preschool classes offered to an age-eligible population by the public school system, kindergarten classes, and classes using co-teaching models (special education and general education staff coordinating activities in a general education setting).

Resource room includes children who receive services in programs designed primarily for nondisabled children, provided the children with disabilities are in a separate program for 21 to 60 percent of the time receiving services. This includes, but is not limited to, Head Start centers, public or private preschools or child care facilities, preschool classes offered to an age-eligible population by the public school system, and kindergarten classes.

Separate class includes children who receive services in a separate program for 61 to 100 percent of the time receiving services. It does not include children who received education programs in public or private separate day or residential facilities.

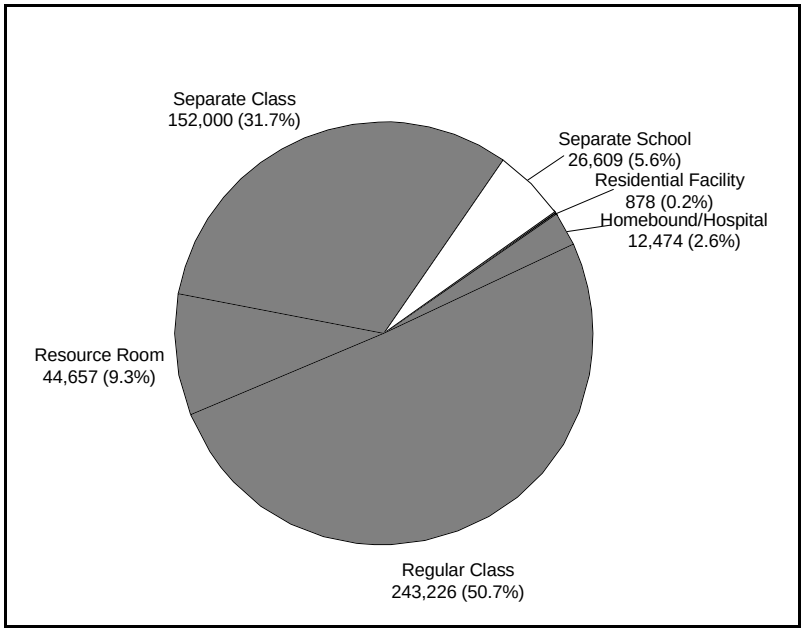
Separate school includes children who are served in publicly or privately operated programs, set up primarily to serve children with disabilities, that are NOT housed in a facility with programs for children without disabilities. Children must receive special education and related services in the public separate day school for greater than 50 percent of the time.

Residential facility includes children who are served in publicly or privately operated programs in which children receive care for 24 hours a day. This could include placement in public nursing home care facilities or public or private residential schools.

Homebound/hospital includes children who are served in either a home or hospital setting, including those receiving special education or related services in the home and provided by a professional or paraprofessional who visits the home on a regular basis (e.g., a child development worker or speech services provided in the child's home). It also includes children 3-5 years old receiving special education and related services in a hospital setting on an inpatient or outpatient basis. However, children receiving services in a group program that is housed at a hospital should be reported in the separate school category. For children served in both a home/hospital setting and in a school/community setting, report the child in the placement that comprises the larger percentage of time receiving services.

Source: OSEP Data Dictionary, Office of Special Education Programs, U.S. Department of Education.

Figure II-3
Number and Percentage of Children Ages 3-5 Served in Different Educational Placements on December 1, 1995



Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

Summary

The number of children served each year continues to increase, although the funds appropriated have remained almost level over the past 2 years. States continue to use the full continuum of placement options. However, there has been an increase in the number of children served in regular class placements, and the use of separate facilities has declined.

Creative ways of administering services are being developed. As shown in the examples in this module, State and local agencies are increasing the level of collaboration among agencies. This, in turn, is making access to services easier for families.

Reference

deFosset, S., Hardison, M., Ward-Newton, J. (1996). *Section 619 profile-seventh edition*. Chapel Hill, NC: National Early Childhood Technical Assistance System.

Students Served Under IDEA, Part B

Children with disabilities are guaranteed a FAPE under IDEA. Part B programs support children and youth with disabilities ages 3 through 21. This module focuses mainly on children ages 6-21.

Until 1994, children and youth with disabilities were also served under the Chapter 1 Handicapped Program. In October 1994, the Improving America's School Act (IASA) was enacted, which reauthorized the Elementary and Secondary Education Act of 1965 (ESEA). However, the Chapter 1 Handicapped Program was not reauthorized. Beginning with the FY 1995 appropriation, all children with disabilities were served under programs authorized by IDEA. The IASA included a number of amendments to IDEA to provide for a smooth transition to serving all children.

Table II-3 summarizes the amount of IDEA, Part B funding appropriated to States and Outlying Areas for FY 1977 through FY 1996. Funding increased steadily from $251,770,000 in 1977 to $2,323,837,000 in 1996. The per child allocation rose from $71 in 1977 to $418 in 1995. However, in 1996 the amount allocated for the 1996-97 school year did not correspond to the increase in the number of students with disabilities that were served, and consequently the per child allocation dropped to $413. However, the appropriation for FY 1997 is $3,107,522,000. This amount will significantly increase the per child allocation for the 1997-98 school year.

This section examines the number and the changes in the number of students served under IDEA, Part B over time and further examines these changes by age group and disability. The proportion of students served as a function of total enrollment and resident population is also presented. Note that for ease of reference, the numbers of students served are discussed only in terms of IDEA. For the years 1976-77 through 1993-94, these numbers

Table II-3
IDEA, Part B State Grant Program: Funds Appropriated, 1977-96

Appropriation Year	IDEA, Part B State Grants[a/]	Per Child Allocation[b/]
1977	$ 251,770,000	$ 71
1978	566,030,000	156
1979	804,000,000	215
1980	874,190,000	227
1981	874,500,000	219
1982	931,008,000	230
1983	1,017,900,000	248
1984	1,068,875,000	258
1985	1,135,145,000	272
1986	1,163,282,000	279
1987	1,338,000,000	316
1988	1,431,737,000	332
1989	1,475,449,000	336
1990	1,542,610,000	343
1991	1,854,186,000	400
1992	1,976,095,000	410
1993	2,052,730,000	411
1994	2,149,686,000	413
1995	2,322,915,000[c/]	418
1996	2,323,837,000	413[d/]

a/ The figures from 1977 through 1994 include amounts appropriated to the Federated States of Micronesia and the Republic of the Marshall Islands. In 1995, those entities received no appropriations.

b/ The per child allocation excludes children and funds for the Outlying Areas and Bureau of Indian Affairs (BIA) and is based on the child count information available as of July 1 of the fiscal year.

c/ This amount includes $82,878,000 added to the Grants to States appropriation because of the elimination of the Chapter 1 Handicapped Program.

d/ This allocation was derived by dividing the total appropriations for the 50 States, District of Columbia, Outlying Areas, and BIA by the total number of children served in all of those areas.

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

include those children from birth through age 21 served under the Chapter 1 Handicapped Program.

Total Number of Children and Youth Served

A total of 5,619,099 children and youth with disabilities ages 3 through 21 were served under IDEA, Part B during the 1995-96 school year (see table II-4), an increase of 188,876 (or 3.5 percent) from the previous year. The increase in the number of students with disabilities served resulted in an increase in the percentage of children with disabilities enrolled in school. The percentage of children ages 6 through 17 with disabilities enrolled in school increased from 10.4 percent in 1994-95 to 10.6 percent in 1995-96.[1] There was also an increase in the percentage of children in the resident population served in special education. The percentage of children with disabilities ages 3 through 21 in the resident population increased from 7.7 percent in 1994-95 to 7.9 percent in 1995-96.

Total school enrollment decreased from 45,090,301 in 1976-77 to 38,925,000 in 1984-85. Since 1985-86, enrollments have increased steadily. The 1995-96 enrollment count of 45,363,691 represents a net increase of 6,438,691 (16.5 percent) in enrollment since the 1984-85 school year.

The resident population ages 6 through 17 decreased from 46,337,802 in 1976-77 to 41,436,000 in 1985-86, and then gradually increased to 45,109,401 in 1995-96. There has been a net decrease of 1,228,401 (-2.7 percent) in the number of students ages 6 through 17 since 1976-77. There was also a decrease in the 18 through 21 age group, from 17,014,688 in 1976-77 to 14,032,177 in 1995-96 (-2,982,511 or -17.5 percent). The 3 through 5 age group increased during this period, from 9,429,510 to 12,060,235.

[1] These proportions are calculated by dividing the number of 6- through 17-year-old students served under IDEA by the pre-kindergarten through grade 12 enrollment count compiled by National Center for Education Statistics (NCES).

Table II-4
Students Served Under IDEA, Part B[a/]: Number and Percentage Change, School Years 1976-77 Through 1995-96

School Year	Change in Total Number Served From Previous Year (%)	Total Served[c/]	Percentage of 0-21 Population
1976-77	--	3,708,601	4.52
1977-78	1.9	3,777,300	4.65
1978-79	3.8	3,919,073	4.87
1979-80	3.0	4,036,219	4.98
1980-81	3.5	4,177,689	5.15
1981-82	1.3	4,233,282	5.20
1982-83	1.5	4,298,327	5.40
1983-84	1.0	4,341,399	5.50
1984-85[b/]	0.5	4,363,031	5.50
1985-86	0.2	4,370,248	5.56
1986-87	1.2	4,421,601	5.64
1987-88	1.4	4,485,702	5.73
1988-89	1.8	4,568,063	5.82
1989-90	2.4	4,675,619	5.93
1990-91	2.8	4,807,441	6.07
1991-92	3.7	4,986,039	6.20
1992-93	3.4	5,155,853	6.38
1993-94	4.0	5,363,766	6.60
1994-95	1.2	5,430,223	6.63
1995-96	3.5	5,619,099	6.79

a/ The data for 1976-77 through 1993-94 include children 3 through 21 years of age served under IDEA, Part B and children birth through 21 served under the Chapter 1 Handicapped Program. Funding for the two programs was merged in 1994 as a result of the passage of the IASA. The totals for 1994-95 and 1995-96 reflect only children ages 3 through 21. The totals do not include infants and toddlers from birth through age 2 served under Part H.

b/ Beginning in 1984-85, the number of children with disabilities reported for the most recent year reflects revisions to State data received by OSEP between the July 1 grant award date and October 1. Updates received from States for previous years are included, so totals may not match those reported in previous annual reports to Congress. Before 1984-85, reports provided data as of the grant award date.

c/ Although States must serve all eligible children with disabilities, funds are provided only for up to 12 percent of the State's total population ages 3 through 17, except in Massachusetts. This is commonly referred to as "the 12 percent cap."

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

Age Groups of Students Served Under IDEA, Part B

The largest age group of students (2,581,061 or 45.9 percent) with disabilities served in 1995-96 under IDEA, Part B were ages 6 through 11. Students with disabilities ages 12 through 17 were the next largest age group served; 2,237,124 (39.8 percent) students received services in this age group (see table II-5). The remaining age groups, ages 3 through 5 (548,441 children) and ages 18 through 21 (252,473 students) made up less than 15 percent of the students served. The largest increase in the percent of students served occurred in the 18 through 21 (5.8 percent) and 3 through 5 (4.9 percent) age groups.

Table II-5
Number of Students Served Under IDEA, Part B by Age Group: School Years 1994-95 Through 1995-96

Age Group	1994-95	Percent of Total	1995-96	Percent of Total	Change	
					Number	Percent
3-5	522,710	9.63	548,441	9.76	25,731	4.9
6-11	2,515,487	46.32	2,581,061	45.93	65,574	2.6
12-17	2,153,448	39.66	2,237,124	39.81	83,676	3.9
18-21	238,578	4.39	252,473	4.49	13,895	5.8
6-17	4,668,935	85.98	4,818,185	85.75	149,250	3.2
6-21	4,907,513	90.37	5,070,658	90.24	163,145	3.3
3-21	5,430,223	100.00	5,619,099	100.00	188,876	3.5

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

As stated earlier, child count data by age group for all children served under IDEA, Part B only exist from 1987-88 forward. The largest percentage increase between 1987-88 and 1995-96 occurred in the 3 through 5 age group, which increased by 63.3 percent (212,670). This was followed by the 12 through 17 (25.8 percent or 459,511) and 6 through

11 (21.9 or 463,535) age groups. The 18 through 21 age group only increased by 12.2 percent over the same period. There was a concomitant increase in the percentage of children served under IDEA, Part B in the resident population. These increases occurred in all age groups.

Disabilities of Students Served

OSEP collects information on the primary disability condition of children ages 6 through 21 served under IDEA. As in the past, the largest disability categories continue to be specific learning disabilities (2,597,231 or 51.2 percent), speech or language impairments (1,025,941 or 20.2 percent), mental retardation (585,308 or 11.5 percent), and serious emotional disturbance (438,217 or 8.6 percent).

The largest relative increases from 1994-95 to 1995-96 occurred in the traumatic brain injury (30.1 percent), autism (27.2 percent), and other health impairments (24.5 percent) categories (see table II-6). Most States attributed the increases in the two newest categories, traumatic brain injury and autism, to the reclassification of students at the time of triennial re-evaluations. The increase in the other health impairments category was generally attributed to increased service to students with attention deficit/hyperactivity disorder.

Table II-6
Change in the Number of Students Age 6-21 Served Under IDEA, Part B From 1994-95 to 1995-96 by Disability

Disability Category	1994-95	Percent of Total	1995-96	Percent of Total	Change Based on Number Served	
					Number	Percent[a/]
Specific Learning Disabilities	2,510,224	51.2	2,597,231	51.2	87,007	3.5
Speech or Language Impairments	1,020,331	20.8	1,025,941	20.2	5,610	0.5
Mental Retardation	570,518	11.6	585,308	11.5	14,790	2.6
Serious Emotional Disturbance	428,049	8.7	438,217	8.6	10,168	2.4
Multiple Disabilities	89,620	1.8	94,156	1.9	4,536	5.1
Hearing Impairments	65,204	1.3	68,070	1.3	2,866	4.4
Orthopedic Impairments	60,467	1.2	63,200	1.2	2,733	4.5
Other Health Impairments	107,133	2.2	133,419	2.6	26,286	24.5
Visual Impairments	24,713	0.5	25,484	0.5	771	3.1
Autism	22,664	0.5	28,827	0.6	6,163	27.2
Deaf-blindness	1,331	0.0[b/]	1,362	0.0[c/]	31	2.3
Traumatic Brain Injury	7,259	0.1	9,443	0.2	2,184	30.1
All Disabilities	4,907,513	100.0	5,070,658	100.0	163,145	3.3

a/ The percent of change is calculated in the following manner: The number served in 1994-95 is subtracted from the number served in 1995-96. The result is then divided by the total number served in 1994-95.

b/ This percent is rounded to the nearest tenth. The actual percent is .027.

c/ This percent is rounded to the nearest tenth. The actual percent is .026.

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS).

Summary

There has been a steady increase in the number of students served under IDEA, Part B. It is important to note that two different underlying demographic factors existed during this period. During the first 10 years of the program, the growth in the IDEA, Part B count occurred while population and enrollment counts were decreasing. Early growth in the special education count occurred as IDEA was more fully implemented, and services were expanded to more fully serve the eligible population.

During the second 10 years of the program, growth in the special education counts coincided with increases in enrollment and population. However, the percentage of students enrolled in special education has increased at a slightly higher rate than has the total school age population. The percentage of children receiving special education ages 6 through 17 enrolled in schools increased from 9.6 percent in 1987-88 to 10.6 percent in 1995-96. The percentage of children ages 3 through 21 receiving special education in the resident population increased from 6.6 percent in 1987-88 to 7.9 percent in 1995-96.

There are several explanations for the growth in the special education population over this period. As mentioned earlier, there was a natural growth in the numbers in the early years of the program as States fully implemented IDEA. The ability to identify children with disabilities may have also improved as a result of new developments in the assessment of children and in medical tests. The program has also expanded the age range of students served.

Students with Attention Deficit/ Hyperactivity Disorder

In recent years, much emphasis has been placed on the proper diagnosis and treatment of students with attention deficit/hyperactivity disorder (ADHD). The American Psychiatric Association (APA) (1994) estimates that children with attention deficit/hyperactivity disorder comprise between 3 and 5 percent of the school-age population nationally, though many of these children may not require special education.

Providing effective programs to educate students with attention deficit/hyperactivity disorder poses a unique set of challenges--for families and teachers alike. Many children with attention deficit/hyperactivity disorder have difficulty learning to read (Dykman, Ackerman, & Raney, 1994). Other academic subjects that children with this disorder may find difficult include (1) mathematics (Cantwell & Baker, 1991), (2) written communication (Anderson et al., 1987), and (3) spelling (Zentall, 1993). In addition, children with attention deficit/hyperactivity disorder often have difficulty developing age-appropriate social skills. For example, many children have low levels of self-esteem (Barkley, 1990); are easily frustrated, especially when faced with novel or challenging tasks (DuPaul, 1991); and have difficulty establishing friendships with other children (Swanson, 1992).

Given these challenges, this module will discuss several important issues related to the education of school-aged students with attention deficit/hyperactivity disorder. These issues include:

- What is attention deficit/hyperactivity disorder?
- How should students with attention deficit/hyperactivity disorder be identified?
- What are the legal rights of students with attention deficit/hyperactivity disorder? and

- What are effective treatments for students with attention deficit/hyperactivity disorder?

What Is Attention Deficit/Hyperactivity Disorder?

Children with attention deficit/hyperactivity disorder share common clinical syndromes associated with problems of inattention, hyperactivity, and impulsivity (Shaywitz & Shaywitz, 1988). In addition, many children with attention deficit/hyperactivity disorder experience co-occurring disabilities, such as specific learning disabilities or serious emotional disturbance (Forness et al., 1992).

Clinical descriptions of children with attention deficit/hyperactivity disorder symptoms have existed in the research literature for almost 100 years. For example, Still (1902), perhaps the first clinician to report the disorder, described a group of 20 children who exhibited aggressive, impulsive, and defiant behaviors. Other researchers, such as Ebaugh (1923) and Stryker (1925), described children who exhibited difficulty maintaining attention, regulating their own activity levels, and controlling impulsive behavior. Today, these three symptoms continue to be the key distinguishing characteristics of children with attention deficit/hyperactivity disorder (McKinney, Montague, & Hocutt, 1994).

Over the past 50 years, there has been some change in the terminology used to label children with attention deficit/hyperactivity disorder--although the major symptoms associated with the disorder have remained constant. For example, these children were often identified as having "minimal brain damage" (e.g., Strauss & Lehtinen, 1947) in the 1940s, while the term "hyperactive child syndrome" (e.g., Chess, 1960) was more common in the 1950s and 1960s. The APA initially defined attention deficit disorder as "hyperkinetic reaction syndrome," in 1968, and renamed the disorder as "attention deficit disorder" in 1980. The APA introduced the term attention deficit/hyperactivity disorder in 1987.

The *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* (DSM-IV), published by the APA in 1994, contains the most commonly accepted clinical definition of attention deficit/hyperactivity disorder (see table II-7). According to the DSM-IV, a child's attention deficit/hyperactivity disorder symptoms must meet several criteria, including:

- **Severity.** The child's attention deficit/hyperactivity disorder symptoms must be more frequent and severe than is typical of other children at similar developmental levels;

- **Early Onset.** At least some of the child's attention deficit/hyperactivity disorder symptoms must have begun before 7 years of age; and

- **Duration.** The child's attention deficit/hyperactivity disorder symptoms must have persisted for at least 6 months prior to the diagnosis.

The DSM-IV categorizes a child's attention deficit/hyperactivity disorder symptoms within two general categories: (1) inattentive behaviors, such as making careless mistakes or being very disorganized and (2) hyperactive/impulsive behaviors, such as excessively fidgeting or interrupting others. These two categories yield three main types of attention deficit/hyperactivity disorder:

- **Attention Deficit/Hyperactivity Disorder-Predominantly Inattentive Type.** The child exhibits at least six of the nine symptoms for inattention but does *not* meet the hyperactivity-impulsivity criteria.

- **Attention Deficit/Hyperactivity Disorder-Predominantly Hyperactive-Impulsive Type.** The child exhibits at least six of the nine symptoms for hyperactivity-impulsivity but does *not* meet the criteria for inattention.

Table II-7
Attention Deficit/Hyperactivity Disorder

A. According to the DSM-IV, a person with Attention Deficit/Hyperactivity Disorder must have either (1) or (2):

(1) six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

(a) often fails to give close attention to details or makes careless mistakes in school work, work, or other activities

(b) often has difficulty sustaining attention in tasks or play activities

(c) often does not seem to listen when spoken to directly

(d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)

(e) often has difficulty organizing tasks and activities

(f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)

(g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)

(h) is often easily distracted by extraneous stimuli

(i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

(a) often fidgets with hands or feet or squirms in seat

(b) often leaves seat in classroom or in other situations in which remaining seated is expected

(c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness).

Table II-7 (cont'd)

(d) often has difficulty playing or engaging in leisure activities quietly

(e) is often "on the go" or often acts as if "driven by a motor"

(f) often talks excessively

Impulsivity

(g) often blurts out answers before questions have been completed

(h) often has difficulty awaiting turn

(i) often interrupts or intrudes on others (e.g., butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).

D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Disassociative Disorder, or a Personality Disorder).

Attention Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months.

Attention Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months.

Attention Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months.

Source: American Psychiatric Association (1994). *Diagnostic and statistical manual for mental disorders*. Washington, DC: Author. pp. 83-85.

- **Attention Deficit/Hyperactivity Disorder-Combined Type.** The child exhibits at least six of the nine symptoms for both inattention and hyperactivity-impulsivity.

The DSM-IV manual advises clinicians to use evidence of the child's behavior over the 6 months prior to his or her diagnosis to confirm which of these three syndromes is most applicable. However, according to the APA, most children with attention deficit/hyperactivity disorder are likely to meet the criteria for the attention deficit/hyperactivity disorder-combined type.

How Should Students with Attention Deficit/Hyperactivity Disorder Be Diagnosed?

Although there is no single test for attention deficit/hyperactivity disorder (APA, 1994), an accurate diagnosis can be made by obtaining information about the child from several sources, including (1) personal histories on the child and his or her family, (2) tests and questionnaires that assess the child's behavior, and (3) direct observation of the child in several settings (U.S. Department of Education, 1994). Collecting such detailed information on *each* child identified as having difficulty paying attention or with hyperactive/impulsive behavior helps avoid problems of overidentifying (or underidentifying) children with attention deficit/hyperactivity disorder (Milich, Pelham, & Hinshaw, 1985).

The Professional Group for Attention and Related Disorders (PGARD) (1990) recommends a two-tier evaluation process to properly identify children with attention deficit/hyperactivity disorder (see table II-8):

- **Tier 1 (Clinical Evaluation)** is used to determine whether the child's symptoms meet commonly accepted standards for an attention deficit/hyperactivity disorder diagnosis, such as those suggested by the DSM-IV; and

- **Tier 2 (Educational Evaluation)** is used to document that the child's attention deficit/hyperactivity disorder symptoms have a substantial, negative impact on his or her classroom performance.

Table II-8
PGARD System for Identifying Children with ADHD

CLINICAL EVALUATION

A clinical evaluation assesses whether the child is manifesting symptoms of ADHD. There are three objectives: (1) assess problems of inattention, impulsivity, and hyperactivity that the child is currently experiencing; (2) assess the severity of these problems; and (3) gather information about other disabilities that may be contributing to the child's ADHD symptoms.

Child rating scales are the best available tools to determine the presence of ADHD symptoms. Numerous rating scales exist, including:

- *Child Behavior Checklist*, *Teacher Report Form*, and *Parent Report Form*, by Achenbach and Edelbrock (1983, 1986), and
- *Conners Parent Rating Scale* and *Conners Teacher Rating Scale* by Conners (1989, a, b).

As with all psychological tests, child rating scales have a range of measurement error. Appropriate scales have satisfactory norms for the child's chronological age and ability levels.

Collecting information about the child's ADHD symptoms from several different sources helps ensure that the information is accurate. Appropriate sources of information include the child's parents, teachers, and medical doctors. It is also important to review both the child's previous medical history as well as his or her school records.

EDUCATIONAL EVALUATION

An educational evaluation assesses the extent to which a child's symptoms of ADHD have had an adverse effect on his or her performance at school. The evaluation involves both direct observations of the child in the classroom as well as a review of his or her academic productivity.

Classroom observations are used to record how often the child exhibits different ADHD symptoms in the classroom. The frequency with which the child with ADHD exhibits behaviors associated with ADHD symptoms are compared to norms for other children of the same age and gender. It is also important to compare the behavior of the child with ADHD with that of other children in the class. It is best to collect classroom observations during two or three different observations across several days. Each observation typically lasts about 20-30 minutes.

An educational evaluation also includes an assessment of the ***child's productivity*** in completing seat work and other academic assignments. It is important to collect information about both the percentage of work completed as well as the accuracy of the work. The productivity of the child with ADHD can be compared with the productivity of other children in the class.

Source: Adapted from U.S. Department of Education (1994). *Attention deficit disorder: Adding up the facts*. Washington DC: Office of Special Education Programs, U.S. Department of Education, pp. 3-4.

Families, teachers, psychologists, and pediatricians must work as a team to diagnose children with attention deficit/hyperactivity disorder (Lahey et al., 1987). Each of these team members is able to provide critical data regarding an individual child. For example, at what age did the behaviors begin to appear? How often do they occur? To what extent do they occur? Where do they occur? How are these behaviors affecting the children's academic, emotional, and social lives? By pooling all of this knowledge among the team members, it is possible to get an overall picture of whether a child should be diagnosed as having attention deficit/hyperactivity disorder (Mash, 1989). This information is also critical in developing appropriate treatment programs, including determining the child's need for services, under IDEA or other Federal legislation.

What Are the Legal Rights of Students with Attention Deficit/Hyperactivity Disorder?

Children with attention deficit/hyperactivity disorder may be eligible for special education and related services under IDEA or under Section 504 of the Rehabilitation Act of 1973, as amended. As is true for students with any other disability, students with attention deficit/hyperactivity disorder are not automatically eligible for services under these two Acts. They must meet the eligibility criteria of the Acts to receive services. This section outlines those criteria.

Eligibility Under IDEA

IDEA, Part B requires that each State have in effect a policy that ensures all children with disabilities the right to a FAPE (20 U.S.C. 1412(1)). It is the State educational agencies' (SEAs) and local educational agencies' (LEAs) affirmative obligation to evaluate a child who is suspected of having a disability to determine the child's need for special education and related services (Davila, Williams, & MacDonald, 1991).

Although attention deficit/hyperactivity disorder is not a separate disability category under IDEA, children with the disorder who require special education and related services because of the disorder are eligible for services under the "other health impairments" category of IDEA, Part B when the child's disorder is a chronic or acute health problem that results in limited alertness and adversely affects his or her educational performance. Children with attention deficit/hyperactivity disorder may also be eligible for services under other eligibility categories such as the "specific learning disability" or "serious emotional disturbance" categories of IDEA, Part B when they have those conditions in addition to their attention deficit/hyperactivity disorder.

Programs and Services Under Section 504

If a child with attention deficit/hyperactivity disorder is found to be ineligible for services under IDEA, Part B, the requirements of Section 504 of the Rehabilitation Act of 1973 are applicable, if the child has a disability as defined by this legislation. Section 504 defines a person with a disability as "any person who has a physical or mental impairment which substantially limits a major life activity (e.g., learning)" (34 CFR 104.3 (j)).

Depending on the nature and severity of his or her condition, a child with attention deficit/hyperactivity disorder may (or may not) fit the eligibility definitions contained in IDEA, Part B or Section 504. As a result, not all children with attention deficit/hyperactivity disorder are entitled to services under one of these Acts.

If the child qualifies for services under Section 504, the LEA must make an individualized determination of the child's needs for general or special education and related aids and services (34 CFR 104.35). Individualized educational services must be provided to each child. Depending on the needs of individual children, these services can include (1) curriculum adjustments, (2) alternative classroom organization and management, (3) specialized teaching techniques and study skills, (4) use of

behavioral management, and (5) increased parent/teacher collaboration. These types of supplementary aids and services enable some children with attention deficit/hyperactivity disorder to succeed in general education settings without special education services (Pfiffner & Barkley, 1990).

What Are Effective Treatments for Children with Attention Deficit/Hyperactivity Disorder?

Different treatments, with varying known effects and limitations, are used by doctors, psychologists, and teachers who work with children with attention deficit/hyperactivity disorder. Two types of standard treatments involve psychostimulant medications and educational programs (Pelham & Murphy, 1986). This section of the module describes current research on the effectiveness of these treatments.

Attention Deficit/Hyperactivity Disorder and Medication

Medication for children diagnosed with attention deficit/hyperactivity disorder has become an issue of increasing public concern as more and more children across the country are diagnosed with attention deficit/hyperactivity disorder and prescribed drugs for treatment (Read, 1995). As Ross and Ross (1976) pointed out over 20 years ago, the limitations and the benefits of prescribing drugs as a treatment for attention deficit/hyperactivity disorder need careful examination.

Stimulants such as methlphenidate (i.e., Ritalin®), as well as pemoline (i.e., Cylert®) and amphetamines (e.g., Dexedrine®), are not effective for one out of every five children who take them (Silver, 1990). While the effects of these medications cause some children to exhibit clear and immediate short-term increases in attention, control, concentration, and goal-directed effort (Kavale, 1982), the

long-term benefits of medication on social adjustment and academic achievement are limited (Gadow, 1983).

Medication can also have negative side effects (Forness, Sweeney, & Toy, 1996). For example, some children may lose weight, lose their appetite, or have problems falling asleep. Less common side effects include slowed growth, tic disorders, and problems with flexible thinking or with social interaction. These effects usually can be eliminated by reducing dosages or changing to different medications altogether, but careful monitoring is necessary (Runnheim, Frankenberger, & Hazelkorn, 1996).

Attention Deficit/Hyperactivity Disorder, Education, and Public Schools

Although medication helps some children with attention deficit/hyperactivity disorder to manage their behavior for a short period, medication alone is not sufficient to ensure that these children learn and achieve at school (Swanson, 1994). All children with attention deficit/hyperactivity disorder need effective educational programs to stay on task and learn (U.S. Department of Education, 1994).

Research shows that many children with attention deficit/hyperactivity disorder can be taught effectively in general education classrooms, as the practices used by skilled teachers benefit not only the child with the disorder but his or her nondisabled classmates as well (Rief, 1993). Those teachers who are most successful with children with attention deficit/hyperactivity disorder often use a three-part approach, integrating different practices developed and validated through research on children's learning and achievement over the past 25 years. This body of research has provided information about the characteristics of effective programs for educating a child with attention deficit/hyperactivity disorder. Successful educational programs are based on three key principles:

- **Effective Teaching Practices** can involve several different techniques to support active, sustained learning (Collagen & Sternberg, 1987). For example,

skilled teachers can (1) provide clear models demonstrating how proficient students learn (e.g., Englert et al., 1991), (2) assign students of different ability levels to work together (Greenwood et al., 1992), and (3) provide students with adequate feedback on their performance (McKinney, Osborne, & Schulte, 1993). Such effective teaching practices, which were originally developed for children with learning and behavioral problems, are increasingly being used successfully with children with attention deficit/hyperactivity disorder (Fiore & Becker, 1994).

- **Behavior Modification Techniques** can help children with attention deficit/hyperactivity disorder learn how to manage their behavior in a variety of different school settings, including the classroom, the lunchroom, and the playground. Techniques such as verbal praise or other positive reinforcement are some of the most commonly used classroom practices (McGinnis & Goldstein, 1984). Skilled teachers can use these techniques effectively not only with their children with attention deficit/hyperactivity disorder, but also with other students with disabilities (Walker, Colvin, & Ramsey, 1995) as well as nondisabled students (O'Leary & O'Leary, 1977).

- **Classroom Modifications** are made in response to the needs of individual children with attention deficit/hyperactivity disorder (Pfiffner & O'Leary, 1993). These modifications generally involve restructuring the instructional environment in the classroom (Broward County Public Schools, 1995). Teachers can make physical accommodations, such as providing a special seat for a child with attention deficit/hyperactivity disorder (Forness & Walker, 1991), or modifications of the learning environment, such as providing follow-up instructions for classroom assignments (Zentall, 1993).

At present, there is a continuing need for additional, rigorous research demonstrating the effectiveness of combining different treatments for children with attention deficit/hyperactivity disorder (Abikoff, 1987). For example,

although Horn et al. (1991) initially reported that a low dosage of medication combined with behavioral interventions helped reduce problems with classroom discipline, children with attention deficit/hyperactivity disorder who received the combined treatment did not maintain their appropriate behaviors 9 months after leaving the treatment program (Ialongo et al., 1993).

OSEP is currently collaborating with the National Institute of Mental Health to investigate the long-term effectiveness of multimodal treatments for children with attention deficit/hyperactivity disorder. This study compares the effects of different treatment programs that involve the use of medication and intensive, home-school intervention--both alone and in combination. This study, which is following more than 600 children with attention deficit/hyperactivity disorder at six sites for 2 years, will provide critical information about which treatment program works best for which children with attention deficit/hyperactivity disorder, in which settings, and for how long.

Summary

In States and localities across the country, families and educators are concerned about how to effectively educate children with attention deficit/hyperactivity disorder. The challenges that parents and teachers face, each day, include teaching children with attention deficit/hyperactivity disorder how to maintain their attention and control their hyperactivity and impulsivity. Teachers are also challenged to individualize educational programs in ways that help children with attention deficit/hyperactivity disorder successfully learn and achieve at school.

Recent research has begun to identify the distinguishing characteristics of effective programs for children with attention deficit/hyperactivity disorder. The results of these studies suggest that:

- Children with attention deficit/hyperactivity disorder can often be taught effectively in general education classrooms;

- Medication helps some children with attention deficit/hyperactivity disorder to control their behavior, but medication alone is often *not* sufficient to ensure that these children learn and achieve at school;

- Many effective educational programs for children with attention deficit/hyperactivity disorder include individualized academic instruction, behavior management techniques, and classroom modifications;

- Many educational practices that are useful in teaching children with attention deficit/hyperactivity disorder are also beneficial to all children in the class; and

- Teachers, parents, psychologists, and health care providers should work together as a team to help identify and serve children with attention deficit/hyperactivity disorder effectively.

Today, there is a continuing Federal commitment, through IDEA, Part B, and Section 504 of the Rehabilitation Act, to ensure that the needs of all eligible children with attention deficit/hyperactivity disorder are met. This support, combined with continuing efforts by teachers and parents to implement effective practices validated through research, will hopefully lead to improved results for children with attention deficit/hyperactivity disorder and their families.

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