Segregated Environments
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The least restrictive environment provision of Public Law 94-142 creates a presumption in favor of educating children with handicaps in regular education environments. Placement in the least restrictive environment (LRE) has been discussed and contested in advocacy efforts, professional literature, the courts, countless due process hearings, and in the regulation development process for the 12 years since the law's signing.

The statute and implementing regulations require that: (1) first, educational services appropriate for each child be defined annually in an Individualized Education Program (IEP), and (2) then an educational placement be selected from a continuum of alternatives so that the Individually appropriate education can be delivered in the setting that is least removed from the regular education environment and that offers the greatest interaction with children who are not handicapped. To assist in implementing the least restrictive environment requirement, federal monitoring/discretionary grants, and technical assistance efforts have been designed to build the capacity of regular educational environments to serve children with disabilities.
Though there has been significant professional discussion related to LRE, there has been little empirical analysis of the extent to which various educational placements actually are used. Data presented in the U.S. Department of Education's Annual Reports to Congress on the implementation of the Education of the Handicapped Act (EHA) indicate little variation over time in the national composite use of the various settings. For example, Figure :, which presents data since 1976-77, reveals little change in the use of separate facilities for students with handicaps over the decade. This period shows an increase in the use of regular class placements which most likely reflects the increase in students with learning disabilities.

One interpretation of these data is that the relative use of the various environments reflects educationally related characteristics of individuals with different types and levels of disabilities. This interpretation would suggest that there is little potential for change or improvement. It would further suggest that the patterns of services across environments would be relatively similar across states. The present paper investigates this possibility by examining state-to-state variability in use of alternative placements during the most recent year for which data are available, school year 1986-87. If state to state variability does exist, this would demonstrate potential for improvement in the national effort to educate children with handicaps in less restrictive environments. Clear
information on the nature of this variability could aid in budget planning and priority setting, and could provide a baseline against which future improvements could be measured. A second purpose of the paper is to provide an opportunity for professional review and discussion of a method of analyzing data on educational placements. The analyses discussed have not been included in the previous reports to the Congress and are distributed in this paper so that their inclusion in future reports can be done with the benefit of the interpretation that follows the professional discussion this year.

The specific questions to which this paper is addressed are: (1) To what extent are students placed in environments that remove them from the regular education environment? and (2) What is the state-to-state variability in the use of those placement categories.

Method

Data sources. Each year states submit data to the Office of Special Education Programs (OSEP) in the U.S. Department of Education on the number of children with handicaps who are served in each of six different educational placements: regular class, resource room, separate class, separate day school, separate residential school, and home/hospital. (Table 1 presents the definition of these environments used in data collection.) These data are among the data requirements mandated in Section 618 of Part B of the Education of the Handicapped Act. States are required to report an unduplicated count of all children with
handicaps, by type of placement and disability category for students aged 3-5, 6-11, 12-17, and 13-21.

**Data collection and verification.** A set of data forms and instructions developed by OSEP are mailed to the states each year. States, in turn are responsible for collecting and compiling data from school districts and other agencies that serve students with handicaps. Since all children, ages 3 through 21, that receive special education and related services are required to be included in this count, each agency within a state that serves students with handicaps must be involved in the state's data collection. Children in private placements where public funding is provided must also be counted.

Once states have provided data to OSEP, editing and verification of data occurs. Editing is a straightforward process of checking row and column addition and examining forms for missing data. After these checks, data are examined for the presence of unusual data values. Typically, this involves year-to-year comparisons of each state's data to identify any unusual fluctuations which states are then asked to verify and explain. The data reported here did not undergo the year-to-year analysis since the 1986-87 school year was only the second year of data collection using these particular forms. The first year's data were not judged to be of sufficient quality to permit useful comparison with data reported here. Since states have been reporting placement data that have been relatively consistent from year-to-year over the last decade, it is reasonable to
assume they have a capacity to collect and report these data, even though the reporting forms have been altered somewhat.

**Cumulative placement rate.** In order to compare state placement patterns, a statistic, cumulative placement rate, was computed in the following way: The number of special education students aged 6-17 years in a state who were served in a selected educational placement and all more segregated placements was divided by the state's total population in this age group. Defined in this way, the cumulative placement rate statistic allows one to ask what percent of the school aged students in a state are served in a particular educational placement and all more segregated placements.

For the present analyses the statistic was limited to the 6-17 age group because of differences among states in the extent to which students under 6 and over 17 are included in mandatory education programs. The data are analyzed across all handicapping conditions. Because states exercise flexibility in defining handicapping conditions and sometimes use different categorical systems or none at all, it would be difficult to interpret variation in placement practices across states within handicapping conditions.

The states' flexibility in determining eligibility for special education also affects the overall number of children with handicaps who are served. Consequently, comparisons across states require reference to the total school age population, not just to the special education child count. For example,
computing placement rate as a function of the total special education child count rather than the state population could make a state with a small overall special education child count that is serving few children with mild handicaps appear to be serving a large number of children in more segregated environments. Population figures used to compute the cumulative placement rate were obtained from the Population Report Series published by the U.S. Census Bureau.

Use of cumulative placement rate appears to be particularly appropriate as a measure that begins at the most restrictive end of the continuum of placement alternatives. State-to-state differences in the rate of identification of children with handicaps primarily affect whether students with mild academic handicaps are counted in special education. This variability can be assumed to make state-to-state comparisons in use of regular class placements a function of both states' placement practice and their overall identification rate. By contrast, data collected on special education students can be assumed to be most comparable for more segregated environments. By examining the proportion of students served in more segregated settings, one can draw conclusions about use of less segregated environments. The present analysis excluded data on home and hospital placements because too little is known about how this placement category is used by the states.

Results

Table 1 summarizes the data for the 50 states, the District
of Columbia, and Puerto Pico for each of the six educational placements. Nearly 44 percent of the students with handicaps were served in resource rooms with another 25 percent served in regular classes. Consequently, over 70 percent of the students counted in special education spend substantial amount of time in regular education classes. Another 24 percent of students with handicaps are educated in regular school buildings but are served primarily in segregated classes. Combining this with the regular class and resource room figures reveals that 94 percent of the children with handicaps are educated in regular school buildings. Over 225,000 students, or 6 percent of all students with handicaps, are educated in programs outside the regular school building. Expressed as a function of the resident population of the U.S., 6 to 17-year-old children are placed in separate facilities at a national rate of approximately 3800 per one million of same-aged resident population. The placement of 6 to 17-year-old students in residential facilities occurs at a rate of approximately 970 per million of same-aged population. The combined rate of placement in segregated facilities is over 4800 students per million of same-aged population.

The state-by-state variation in the placement rate of children and youth in segregated day and residential facilities is depicted in Figure 2. The length of each bar reflects the cumulative rate of placement in segregated programs, with the lower portion showing rate of placement in residential programs and the upper portion showing rate of placement in separate day
schools. There is considerable state-to-state variation. For example, in the District of Columbia the rate is nearly 15,000 children per million, 25 times the rate in Oregon (about 600 children per million population).

One method for analyzing this variability is to estimate the potential for use of regular education settings by averaging the cumulative placement rates of the five states that place the fewest students in segregated settings. The average State places nearly five times as many students in segregated settings as do these five states, and six states place more than 10 times this many students in segregated settings.

The largest proportion of students is placed in day schools. While the overall rate depicted in Figure 2 for most states is largely a function of use of separate day schools, there is substantial variation among states in the placement rate for residential programs. For example, Maine and Delaware are among the states with the highest placement rate outside regular schools, yet they differ substantially in their residential placement rates.

Figure 3 displays the cumulative placement rate in segregated facilities and separate classes. While the variation is not of the same magnitude as in Figure 2, those states with the highest rates are five to six times more likely to have children placed in separate classes or facilities than those with the lowest rates. In each state, the number of students placed in separate classes is larger than the number placed in
segregated placements (combined day and residential programs). Consequently, state rank on the cumulative placement rate for separate class and segregated facilities could vary substantially from the rate for segregated facilities alone. However, 8 of the 10 states with the highest cumulative placement rate through separate class were also among the 10 states with the highest placement rate for segregated facilities.

Discussion

Data reported by states for the 1986-1987 school year show that approximately 6 percent of special education students (4800 students per million same-aged resident population) receive their education in segregated day or residential schools. An additional 24 percent of special education students are educated in separate classes. Nearly 27,000 students per million of resident population receive services in separate classes, segregated day or residential schools. The use of separate educational environments has been relatively stable over the 10 years in which the Department of Education has collected national data on educational placements. However, state-to-state variation in reliance on the various educational placements is quite high, indicating far less stability in service patterns than the national data would suggest.

Three factors should be considered in interpreting this variability in placement rate. First, the cumulative placement rate statistic differs from traditional measures of implementation of the LRE provisions of the statute and
regulations in its focus or the outcomes, rather than the process, of individualized decision making in special education services. The requirements of the statute and regulations focus on the process, on the way that decisions about individual educational goals are made, and on the selection of appropriate placements to achieve those goals. In and of itself, no particular pattern of placements is consistent with or contradictory to these requirements. However, the statute is clear in creating a presumption that services be provided in the regular educational environment to the extent appropriate for each student. One must conclude from the data that some states have been more successful than others in providing services in regular settings that were seen as appropriate by local decision-makers.

Second, while the statute and regulations establish a presumption in favor of the regular educational environment, there are other values that are also present. Of equal or greater importance in the statute is the value that educational services be individually planned by a team of professionals and parents most knowledgeable about each student, so that an individually appropriate service is provided. Consequently, data on placement practices alone should not be interpreted as indicative of the quality of special education in a state. While a high placement rate for segregated facilities does suggest difficulty in achieving results consistent with the LRE provisions, a low placement rate in segregated settings is not
necessarily a testimony to effectiveness of services. To demonstrate such effectiveness states would also have to show that students receive the services necessary and achieve successfully.

Third. attributing meaning to the degree of variability across states is a matter more of values than empirical analysis. It is reasonable to assume that the needs of students will be similar across states, and that random variation would be rather small in the summary data on the large number of students served by a state. The extent of variability does suggest that factors in addition to the characteristics of students are determinants of individual educational placements, and that the decision-making power vested in the IEP process has not been sufficient to overcome these factors.

Of course, some of the variability across states may be the result of measurement error. While states have been reporting placement data since the 1976-77 school year, the current categories have been in use just 2 years. The current instructions represent an improvement over earlier versions in that they define the various placements operationally. The current definitions, which are linked to the percent of time students actually spend in a placement, should provide greater state-to-state consistency in the use of the placement categories. Sampling of school districts is not permitted for these data, so sampling error is not present. However, the fact that each state administers the data collection has the potential
for producing some inconsistency in the interpretations of terms and instructions. Though OSEP has worked extensively with states in the past two years to improve comparability of data from state-to-state, this continues to be of concern. Furthermore, states vary in the degree to which they verify the LIA-reported data. Differences from state-to-state in data collection procedures and terminology could affect a state's placement rate for segregated facilities. However, it is not at all likely that procedural or terminology differences could account for the variance reported here. Nevertheless, interpretation of placement rate data for any particular state should proceed with some caution until further work is done to determine that reported data accurately reflect each state's placement practices.

The present analysis raises a number of questions for further research. Further analysis of both state and local data is needed to identify specific factors that account for variability in cumulative placement rates. It would be helpful to know the extent to which placements outside regular school environments are made by non-education agencies for purposes other than education (e.g., by the courts and social service agencies). It would also be helpful, particularly in the analysis of district-level data to determine whether factors such as urbanicity, district history of services, district size, district wealth, and so on, are associated with cumulative placement rates.
The analysis reported here combined data for all handicapping conditions and used the 6 through 17 age range. Future analyses might examine variability in placement data within the handicapping conditions. Placement data might also be analyzed for each of the four age groupings within which data are reported (i.e., 3-5, 6-11, 12-17, and 18-21 year). It is possible that even for the 6 through 17 age group there may be substantial differences in placement patterns between children of elementary school age and youth at the secondary school level. In the next several years, there will be a great interest in the placement data for children in the 3-5 year age group as states move toward the service mandate established by P.L. 99-457.

OSEP and states need to strengthen efforts to improve the accuracy and state-to-state comparability of data. As part of this, OSEP will be compiling descriptions of methods states use to collect, verify, and analyze placement data. Furthermore, OSEP will attempt to work with several individual states to begin to examine within state variability and to identify factors associated with this variance.
TABLE:

Placement Categories used by OSEP:

Regular Class includes children who receive a majority of their education in the regular class and receive special education and related services for 21 percent or less of the school day. It includes children placed in regular class but receiving special education within regular class, as well as children placed in regular class and receiving special education outside regular class.

Resource Room includes children who receive special education and related services for 60 percent or less of the school day and at least 21 percent of the school day. This may include resource rooms with part-time instruction in the regular class.

Separate Class includes students who received special education and related services for more than 60 percent of the time and are placed in self-contained special classrooms with part-time instruction in regular class or placed in self-contained class full-time on a regular school campus.

Separate school Facility includes students who receive special education and related services in separate day schools for the handicapped for greater than 50 percent of the school day.

Residential Facility includes students who received education in public residential facilities for greater than 50 percent of the school day.

Homebound/Hospltal Environment includes children placed in and receiving education in hospital or homebound programs.
Table 2

Number and Percent of Students with Handicaps, 6 through .7 years old, Served in Different Educational Environments
School Year 1985-86
50 States, D.C. & Puerto Rico

<table>
<thead>
<tr>
<th>Placement Rate</th>
<th>Percent of Handicapped</th>
<th>Number</th>
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<th></th>
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<tr>
<td>per 1 Million Population</td>
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<td>Regular Class</td>
<td>1,002,809</td>
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<tr>
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<td>Resource Room</td>
<td>1,654,318</td>
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<td></td>
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<td>Separate Class</td>
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<td>Separate Facility</td>
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<td>Residential Facility</td>
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<td></td>
<td></td>
<td>Homebound/Hospital</td>
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<td></td>
<td></td>
<td>TOTAL</td>
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Percent of Children Aged 6-17 Served in Regular Schools and in Segregated Facilities From 1970-1971 to 1985-86

Regular School include Regular Rooms, Resource Rooms and Separate Classes. Segregated Facilities include Public and Private Separate Schools and Residential Facilities and Homebound/Hospital Environments.

Percent of children served is based on estimated resident population counts for July 1986; resident populations are estimated by the U.S. Bureau of the Census.
Figure 2
Placement Rate for Students with Handicaps in Separate Schools and Residential Facilities

RATE PER MILLION 6-17 YEAR OLDS

- SEP SCHOOL
- RESIDENTIAL

Note: California did not report students in Separate School Facilities but included them with Separate Classes; therefore California is not on this figure.
Figure 1

Placement Rate for Students with Handicaps in Separate Classes, Separate Schools, and Residential Facilities

RATE PER MILLION 6-17 YEAR OLDS

- SEp CLASS
- SEp SCHOOL
- RESIDENTIAL

NOTE: California did not report students in Separate School Facilities but included them with students in Separate Classes.