

These and other changes necessary for school-linked services may be encouraged as part of broader reform movements within each of the education, health, and social services sectors. As one report about school-linked services states: "[The] convergence of reform in all of the people-serving systems presents a moment of unique opportunity in which to pursue a collaborative agenda."²⁵

Proponents of school-linked services should be in dialogue with those involved in broader reform of the education, health, and social services systems. Some of their agendas may well be compatible with school-linked services. For example, in education reform, one element of restructuring has been for school districts to give more decision-making authority and discretion to local schools and their staffs.²⁶ In the health field, there has been increased interest in creating health centers that can link patients with other services they need.²⁷ In the child welfare field, there is more discussion of focusing on the needs of the child in the context of the family and emphasizing preventive services.²⁸ Each of these developments is consistent with the goals and strategy of school-linked services.

The effect of other reform efforts on school-linked services may not be so clear. For example, the introduction of choice and/or a school voucher system may affect the schools' ability to participate with other agencies and may also affect their interest in collaborating to meet the social and health needs of students (see the discussion by Tyack in this journal issue). Making students' academic outcomes a more significant part of teachers' evaluations could also impact the attention teachers pay to school-linked health and social services.

In sum, there is a need for more precision in defining how schools and other agencies must reorganize to implement school-linked services. It is also important that these systemic changes are considered in relationship to broader reform efforts.

Targeting

One of the most important questions for determining what services should be offered, how they should be governed and evaluated, and what outcomes should be sought is whether a school-linked service effort is designed to serve all children at a

school or in a community or whether it is targeted to a particular population of children with specific, identified needs. To date, most efforts target services—either by selecting only those schools where a high percentage of the student body is from low-income families or by providing services at a school only to those students with particular needs.

The preference for targeting is understandable. In fact, limited funds may make it essential. Also, for both moral and practical reasons, it makes sense that the children with the most severe needs receive first priority. To make the system available to these children, there must be special outreach to them.

There is, however, some danger to targeting. The special attention focused on multiproblem students can be stigmatizing. Also, when a program focuses only on those most in need, there is increased risk that the program will begin treating the children and families served as somehow deficient; the program may emphasize only the clients' weaknesses and not their strengths. Finally, targeting may undermine a basic goal of prevention: to make services available to children and their families before a crisis develops or a problem becomes acute.

We believe a better approach is to ensure some level of universal access to school-linked services to all children, even if special emphasis is directed toward high-risk students. In this regard the New Beginnings program in San Diego offers guidance. The program assesses every family when the son or daughter enters school. Some students are identified as in immediate need of targeted services. All others, however, can still use the school-linked service center through self-referral. This approach carries the advantages of both a universal and a targeted system. The fact that everyone can receive some level of benefit may produce broader community buy-in and political support.

The question of targeting is a difficult one, but it needs to be explicitly addressed in any new endeavor, with full consideration of the options and their consequences.

Financing

The financing of school-linked services is the area that most critically needs attention before school-linked services can be broadly implemented. As Farrow and Joe write in this journal issue: "[Many] of the

issues that surround the financing of school-linked services are really issues of priorities, authority, and control over resources. For this reason, financing strategies require careful thought and, in the long run, can greatly affect whether these new services succeed or fail."

Farrow and Joe recommend a fiscal strategy that includes some new core funding for the additional staff and services necessary for the collaboration; redeployment of existing funds, including relaxing categorical requirements for these funds; and maximum use of the federal Medicaid entitlement funds. Apart from the handful of efforts at decategorization and redirection discussed in the articles by Farrow and Joe, by Levy and Shepardson, and by Jehl and Kirst, most current efforts have not made significant progress in developing such a comprehensive strategy.

The difficulty of this task cannot be overestimated. Today's school-linked service programs are only minuscule experiments in the massive health, education, and social services systems that have been built up over the last several decades. Morrill's article in this journal issue cites an estimate that \$278.4 billion is spent annually on children through the education, health, and social services systems. To change such large systems, or even a portion of them, to allow more flexible funding for school-linked services is an extremely difficult task—one that most of the current efforts at school-linked services have failed to accomplish.

On the other hand, the massive nature of the system also offers incentive. If proponents of school-linked services are correct and collaborative, integrated services do produce better outcomes for children, the potential gains due to increased efficiency and effectiveness from large-scale reorganization of these systems could be very great.

Evaluation

Evaluation of current school-linked service efforts has been sporadic both in type and in quality. Although some consensus is emerging that integrated service efforts generally—and school-linked services specifically—should be evaluated both for process and outcomes, this has rarely happened (see the Gomby and Larson article in this journal issue for a discussion of evaluation strategies). Many of the most recent efforts have collected some information about what services were provided

and for whom, but few have gone beyond this to learn more from the process and to determine whether the efforts made any difference.

For example, little is known to date about the optimum governance structure or organization of services for successful implementation. Comparative process evaluations may assist in answering these questions. In such evaluations, activity logs, staff time sheets, case records, inter-agency memoranda of understanding, logs indicating requests for services, and interviews with staff and program participants could be used to help trace how students and families interact with the new systems that have been established.

Perhaps the greatest need in evaluation, however, is the development and implementation of appropriate procedures for assessing outcomes. There should be more rigor in evaluations of school-linked services, including more use of closely matched comparison groups and/or random assignment to create genuine control groups. There needs to be more attention to behavioral outcomes and to changes in knowledge and attitudes. Researchers and others must develop common measures and approaches for measuring outcomes in a way that allows comparison among sites.

Evaluation is all the more important because school-linked service efforts are still in a stage of experimentation. We need to learn as much as we can from these initiatives. Toward this end, every school-linked service effort, no matter the size, should engage in some level of evaluation. For some programs, this might consist simply of a clear statement about what changes in behavior, knowledge, or attitudes the program is designed to affect and the collection of data and other information to measure these targeted outcomes. Other efforts will be able to incorporate some elements of experimental design to look more closely at the issue of causation (see the discussion in the Gomby and Larson article).

Large state or federal multisite initiatives should include well-designed outcome evaluations. Funding these evaluations will require a new appreciation of and commitment to evaluation by both legislators and private funders such as foundations. The investment in both the

initiatives and their evaluations must be undertaken with a long-term view.

State and Federal Leadership

The fifth issue that emerges from many of the articles in this journal is the need for more state and federal leadership in the development and testing of school-linked service efforts. Too many critical issues simply cannot be resolved without greater participation at these levels of government. To date, even in those states where there are major initiatives under way, there is a tendency for the state to narrowly limit its involvement in scope, financial commitment, and time.

The Gerry and Certo article in this journal issue expresses the federal government's desire to assist state and local community-based efforts to integrate services for children and families. To fulfill this intent, federal leadership will be necessary to change federal eligibility requirements, funding restrictions, and program goals. More than technical assistance is needed if the federal government is to exercise leadership.

Furthermore, the state and federal governments can do much to alleviate some of the confidentiality requirements that block the sharing of information among agencies involved with school-linked services (see Appendix A). Finally, only the states and the federal government can fund some of the large-scale evaluations that are necessary to test this approach.

Although a few states have shown leadership in one or more of these tasks, most have not. And although the federal government has expressed considerable interest and funded some discrete projects, its efforts have been limited. The movement toward school-linked services will not be successful, or even successfully evaluated, without a decision at these levels of government to make a deeper commitment to testing this approach.

Alternatives to School-linked Services

Finally, it is critical to compare the school-linked service approach with others. As the article by Chaskin and Richman in this journal issue discusses, this approach will not be effective if the school seeks to dominate or control the planning and governance of services. Furthermore, in some communities, a significant number of residents may view the school as antagonistic to their interests; the young people most

in need of services may be for the most part out of school; or busing or the use of magnet schools may mean that students do not live near their schools. Some of these barriers can be overcome through special outreach programs and through flexibility as to where services are provided. But in some communities, political and historical barriers may make the school-linked approach unworkable. Service collaborations that are planned and governed by the broader community or neighborhood may be more successful in developing a service system based on the needs of children and their families rather than the needs of an established institution like the school. In their article in this journal issue, Chaskin and Richman briefly discuss some of these alternative, community-based approaches.

In addition to these concerns about the effectiveness of schools as a central focus for integrated services, there is also concern about their appropriateness. Some believe that schools will better meet academic objectives if they are not also asked to be primarily responsible for students' nonacademic needs.²⁹ This caution, however, is consistent with the contention of many supporters of school-linked services that schools should only attempt to address the health and social services needs of children if they have the resources, expertise, and collaboration of other community agencies.

Given such concerns about school-linked services, experimentation with alternative approaches for integrating services for children and families is appropriate.³⁰ The implementation of effective school-linked services will be facilitated if planners know in what circumstances this approach would have the best chances for working.

Conclusions

Interest in school-linked services is strong at many different levels of policy-making. Efforts to date deserve cautious optimism. They have incorporated important lessons from past experience; they are supported by a climate of reform and a developing consensus about the importance of evaluation. But it is impossible to overestimate the difficulty of establishing true collaborations among education, health, and social services providers and of producing fundamental change in how services are delivered to children and their families.

No matter the current level of enthusiasm, this new round of integrated service efforts will fail without a deeper commit-

ment of both public and private involvement and resources to address difficult issues such as financing and evaluation.

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1. Section 1 of Executive Order W-1-91, dated January 8, 1991, and signed by California Governor Pete Wilson. By the fall of 1991, legislation was passed that established the Healthy Start program, under which up to 100 planning and implementation grants will be awarded to support collaborations among school districts and other agencies around the state. The collaborations will provide health and social services to students and their families. 1991 Cal. Stat. ch. 759 (California Senate Bill 620).
2. Taylor, P. Bringing social services into schools: Holistic approach offers health and child care, family counseling. *Washington Post*, May 2, 1991, at A1.
3. In New York, the legislature has appropriated funds since 1987 to create and support community schools that provide extended hours and services to children and their families. The New Jersey legislature has supported for 3 years the School Based Youth Services Program, in which high schools provide a set of health, mental health, and employment services to their students. In Kentucky, as part of a court-ordered overhaul of the education system, the legislature has mandated that, by June 1995, resource centers be established in every elementary school and junior and senior high school. The purpose of the centers is to link students with needed health or social services or to provide the services directly. These actions are just a few of the more large-scale efforts at school-linked services that states are initiating.
4. Committee for Economic Development. *Unfinished agenda*. New York: CED, 1991, pp. 21, 25. Families with multiple problems "need help in determining what services they need, assistance in finding and gaining access to those services, and support to help them successfully utilize those services." The report goes on to state: "[The] school itself can provide a convenient institutional focus for making this linkage because it is the institution to which almost all children between five and seventeen have access."
5. For a description of Joining Forces and its activities, see Levy, J.E., and Copple, C. *Joining Forces, A report from the first year*. Alexandria, VA: National Association of State Boards of Education, 1989.
6. Collaboration includes "jointly developing and agreeing to a set of common goals and directions; sharing responsibility for obtaining those goals; and working to achieve those goals using the expertise of each collaborator." Bruner, C. *Thinking collaboratively: Ten questions and answers to help policy makers improve children's services*. Washington, DC: Education and Human Services Consortium, 1991, p. 6.
7. In her book, *Within Our Reach, Breaking the Cycle of Disadvantage*, Lisbeth Schorr discusses the high cost of "rotten outcomes" for children. These outcomes include delinquency, dropping out, and teen pregnancy. She attributes such outcomes not to a single risk factor, but to an accumulation of risk factors, both biological and environmental, that interact to make poor outcomes much more likely. Her search for programs that effectively address some of these risk factors and reduce adverse outcomes leads to the conclusion that "programs that succeed . . . are intensive, comprehensive and flexible. . . . [Their] climate is created by skilled, committed professionals who establish respectful and trusting relationships and respond to the individual needs of those they serve." Schorr, L., with Schorr, D. *Within our reach, Breaking the cycle of disadvantage*. New York: Anchor Books, 1988, p. 259.

The contention that poor outcomes for children can be reduced by recognizing the interconnection of children's health, education, and social problems and structuring a system to effectively deal with these as a whole, rather than in a fragmented fashion, is at the core of the movement toward school-linked services. See, for example, the Farrow and Joe, Levy and Shepardson, and Morrill articles in this journal issue.

8. For example, between 1983 and 1989, the number of children in foster care rose from 275,000 to 340,000. In 1989 the number of minors arrested for murder was almost one-third greater than the number arrested in 1983. The number of young people held in

correctional facilities on any given day jumped between 1977 and 1987 from just over 73,000 to almost 92,000. National Commission on Children. *Beyond rhetoric. A new American agenda for children and families*. Washington, DC: NCC, 1991, pp. 227, 284.

9. A family with multiple problems can receive benefits and services whose costs total tens of thousands of dollars annually. As Bruner writes: "Every state has its \$50,000 families. . . ." See note no. 6. Bruner, p. 5.

Such public expenditures, however, are not the only cost of poor outcomes for children. As Schorr documented, business leaders and policymakers alike are concerned that continued failure to educate all American children will erode our national productivity, international competitiveness, and standard of living. See note no. 7. Schorr, chap. 1.

10. Melaville, A. and Blank, M.J. *What it takes: Structuring interagency partnerships to connect children and families with comprehensive services*. Washington, DC: Education and Human Services Consortium, 1991, pp. 6-8.
11. Nonprofit organizations that are focusing on, and in some instances promoting, integrated services for children include, but are not limited to, the Institute for Educational Leadership, Washington, D.C.; the Center for the Study of Social Policy, Washington, D.C.; the Family Resource Coalition, Chicago; and the Youth Law Center, San Francisco. For a list of resources for additional information and assistance, see note no. 10. Melaville and Blank, Appendix B.
12. Research and policy groups exploring approaches to integrated services for children include, but are not limited to, the Bush Center for Child Policy, Yale University; The Chapin Hall Center for Children, University of Chicago; and the California Policy Council.
13. A large number of foundations have funded projects relating to school-linked or integrated services for children. In late summer 1991, the Foundation for Child Development of New York convened 15 of these foundations to discuss their experiences in funding such projects. In addition, a group of foundations in Northern California met regularly throughout 1991 to explore school-linked service projects.
14. See note no. 10. Melaville and Blank; note no. 6. Bruner; Office of the Inspector General, United States Department of Health and Human Services. *Services integration: A twenty-year retrospective*. Washington, DC: Office of the Inspector General (OEI-01-91-00580), January 1991; and Office of the Inspector General, United States Department of Health and Human Services. *Services integration for families and children in crisis*. Washington, DC: Office of the Inspector General (OEI-09-90-00890), January 1991.
15. *AMERICA 2000, An Education Strategy*, recognizes the many problems that children bring to school with them and that can interfere with their learning. Although the report states that schools cannot "replace the missing elements in communities and families," it also asserts that schools can "contribute to the easing of these conditions. They can sometimes house additional services. They can welcome tutors, mentors, and caring adults." The fourth track of the strategy, "Each of our communities must become a place where learning can happen," calls on community agencies and leadership to join with the schools in ensuring that the six national educational goals are met. The report promises that the cabinet "will seek ways to maximize program flexibility and effectiveness in meeting the needs of children and communities, including streamlined eligibility requirements for federal programs, better integration of services, and reduced red tape." U.S. Department of Education, *AMERICA 2000, An education strategy*. Washington, DC: U.S. Dept. of Education, (ED/0591-13), 1991.
16. In a recent article, Harold Hodgkinson detailed the "spectacular changes that have occurred in the nature of the children who come to school." He contends that "at least one third of the nation's children are at risk of school failure even before they enter kindergarten" because of such factors as poverty, in utero drug exposure, lack of parental supervision, homelessness, and child abuse. He asserts that until we pay attention to these changes, our efforts at education reform will not produce important results. Hodgkinson, H. Reform vs. reality. *Phi Delta Kappan*, September 1991.
17. The recent report *What It Takes* drew a distinction between collaboration and cooperation. According to the report, a situation called for collaboration if the "need and intent is to change fundamentally the way services are designed and delivered throughout the system." Collaborators can go "beyond the assessment and advisory activities characteristic of most cooperative system level initiatives" and "can authoritatively call for new directions in system-wide programming and make the budgetary revisions and administrative changes necessary to implement them." See note no. 10. Melaville and Blank, pp. 15, 17.

18. "All partners must share responsibility and authority when establishing goals and developing plans to meet those goals." At the top administrative level, this sharing may be seen as "giving up power." Collaboration "allows others to challenge the assumptions of one's profession or occupation." See note no. 6, Bruner, pp. 17-18.
19. As discussed above in note no. 7, Schorr called for such "comprehensive, intensive and flexible" services to serve children and families effectively. See also note no. 10, Melaville and Blank, p. 9.
20. In a recent article, Morrill and Gerry identified several hypotheses about the integration and coordination of services. One hypothesis is that integration will lead to increased access and utilization of needed services and thus to improved life outcomes. Another is that integration will lead to improved efficiency and cost reduction. Morrill, W.A., and Gerry, M.H. *Integrating the delivery of services to school-aged children at risk. Toward a description of American experience and experimentation*. Paper prepared for the conference on children and youth at risk sponsored by the U.S. Department of Education and the Organization for Economic Cooperation and Development, February 6, 1991, p. 4.
21. "[H]igh quality services must empower children and families. . . . [They] should have a considerable voice in identifying and planning how best to meet their own needs." See note no. 10, Melaville and Blank, p. 11.
22. School-linked services should not be seen only as attempts to prevent specific problems or to intervene where problems have already occurred. Many believe that service systems should also provide basic information and support that can benefit all families. See the Levy and Shepardson article in this journal issue.
23. See Schorr, L., and Both, D. Attributes of effective services for young children: A brief survey of current knowledge and its implications for program and policy development. In *Effective services for young children*. L. Schorr, D. Both, and C. Copple, eds. Washington, DC: National Academy Press, 1991, p. 33. The report summarizes a workshop of the National Forum on the Future of Children and Families.
24. See note no. 6, Bruner, p. 18.
25. See note no. 5, Levy and Copple, p. 1.
26. See Lewis, A. *Restructuring America's schools*. Arlington, VA: American Association of School Administrators, 1989, chap. 8.
27. See, for example, the description of the Healthy Start initiative of the U.S. Department of Health and Human Services in the Gerry and Certo article in this journal issue.
28. For example, in a recent report the National Commission on Child Welfare and Family Preservation proposed a system of services "to strengthen and preserve families experiencing problems before they become acute, based on realistic, concrete, early intervention, delivered through a community-based service mechanism." National Commission on Child Welfare and Family Preservation. *A commitment to change*. Washington, DC: American Public Welfare Association, 1991, p. vi.
29. In a recent book Chester Finn wrote: "To the extent we can get children's other needs met, they will learn more in school. Insofar as we can free schools from direct responsibility for dealing with those difficulties . . . we will be more successful in teaching algebra and civics. . . . [That] does not mean isolating the schools. They should be part of a coordinated effort on behalf of children. But in few cases should schools be the primary coordinators, and in none ought they be expected to solve these other problems on their own." Finn, Jr., C.E. *We must take charge*. New York: Free Press, 1991.
30. Both New York and California have recently passed legislation to support demonstration projects in which communities form councils with representative governance. The California legislation was vetoed by Governor Wilson (California Assembly Bill 831); the New York legislation became law (New York 1990 Session Laws, chap. 657).

CENTER FOR THE FUTURE OF CHILDREN • THE DAVID and LUCILE PACKARD FOUNDATION

The Future of Children

VOLUME 6 • NUMBER 1 - SPRING 1996



SPECIAL
EDUCATION
FOR
STUDENTS WITH
DISABILITIES

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The next issue of *The Future of Children*
will focus on financing child care.

Special Education for Students with Disabilities: Analysis and Recommendations

Twenty years ago, the educational rights of students with disabilities were dramatically and firmly established in law and practice. Prior to that time, many students were refused enrollment or special educational services. As recently as 1973, at least one million students were denied enrollment in public schools solely on the basis of their disabilities, and at least two million others were not receiving an education appropriate to their needs.¹ Although every state has provided some form of special education throughout this century, these services were largely at the discretion of local school districts. Only since a federal court case in 1972² and the passage of federal legislation in 1975³ have all states been mandated to provide a free, appropriate public education to all students with disabilities.

Today, as Parrish and Chambers point out in this journal issue, special education for students with disabilities is the largest categorical program in public schools, costing an estimated \$32 billion. Since the passage of Public Law 94-142 in 1975 (later retitled the Individuals with Disabilities Education Act, or the IDEA), the number of elementary and secondary students receiving special education has increased from 3.7 million to 4.6 million, increasing also from 8% to 11% of all students in public schools.⁴ According to Parrish and Chambers, the population of students eligible for special education is expected to continue to rise.

The IDEA governs the educational rights of individuals from birth to age 21, though only students in elementary and secondary school are addressed in this journal issue.

The IDEA allowed access to the public schools for many students who had previously been denied enrollment. The IDEA has also been given partial credit for decreasing the rate of institutionalization of individuals with disabilities. Before the IDEA, many parents had the sole responsibility of meeting all the needs of their severely disabled children 24 hours per day;

once schools began to provide extensive services to students with severe disabilities, more families were able to avoid institutionalization.

Under the IDEA, states and local districts were given a mandate to provide specialized educational programs to students with special needs, and students and parents were given a mechanism for enforcement of their rights. In a 1989 survey, 94% of parents of students with disabilities agreed that services for these students had improved since the implementation of the IDEA.⁵

Yet special education today is widely criticized as expensive, ineffective, inadequately coordinated with regular education, and/or culturally biased.⁶⁻⁸ The National Association of State Boards of Education has recommended radical reduction in the size of special education.⁹

Special education also has its champions, who argue that many students perform better academically¹⁰⁻¹² and have better self-esteem^{13,14} when provided with special services, often in a separate setting.

This analysis addresses five questions concerning special education under the IDEA: (1) Why are so many students considered disabled? (2) What are the educational needs of students with disabilities? (3) How should appropriate, individualized services be funded? (4) Are the IDEA's procedural protections necessary? (5) Can regular education meet the needs of more students?

Why Are So Many Students Considered Disabled?

Students are termed "disabled" because they have real, persistent, and substantial individual differences and educational needs that regular education has been unable to accommodate. These individual differences vary widely, from medical conditions such as cerebral palsy, to dyslexia, to pervasive and chronic maladaptive patterns of behavior. Many of these same students will not be considered disabled once they leave school. Nonetheless, their specialized learning needs are intense and legitimate. The public schools face major challenges in addressing those needs effectively.

Today, more than one in ten school-children has been evaluated and found to have a disability. Although the types of dis-

ability vary widely, a single category, learning disabilities (LD), accounts for half of the disabled school population. The proportion of children identified with learning disabilities has been steadily growing since the inception of the IDEA, although the proportions identified with mental retardation or speech and language disorders have decreased during that same period. These trends are illustrated in this journal issue by Lyon in his Figure 1.

Although the existence of learning disabilities is beyond dispute, the process of identifying students with these disabilities is fraught with complications. Definitions of the disorder are vague and broad, and manifestations of the disorder vary greatly. Even though the student with severe learning disabilities is relatively easy to identify, and it is unlikely that the average student would be

misidentified as having a learning disability, there remains a substantial population of students with mild learning disabilities whose needs are difficult to identify and to meet. Even when identified, most students with learning disabilities do not receive expensive services. They may receive no more than an hour a week of small-group tutoring in a resource room, despite the lack of evidence that such minimal intervention is helpful.

Although identifying a student as "disabled" entitles him or her to special education services, a potentially large expense, school districts nationally have identified a larger proportion of their student body each year as having a disability. Many factors contribute to this increase.

First, funding incentives in most states encourage school districts to label students as disabled. Services delivered to students with a "disability" label are likely to be either partly or fully reimbursed by the state, whereas the same services given to students without a recognized disability are not.

Second, as Reschly observes in this journal issue, ongoing pressures for schools to raise their academic standards leave more and more children falling behind. When the teacher is unprepared to simultaneously raise classroom standards and help the slowest students maintain the classroom's faster pace, the slower students are more likely to be referred to special education.

Third, parents and schools increasingly recognize the important long-term impacts of "less apparent" disabilities. Outcomes for students with less apparent disabilities, as a group, are poor. In this issue, Wagner and Blackorby note that 30% of all students with disabilities dropped out of high school, and an additional 8% dropped out before ever reaching high school. Only 30% of students with learning disabilities participated in post-secondary education, as compared with 68% of youth in the general population. The young women with disabilities were more likely than their nondisabled peers to become unmarried parents: among single women with disabilities, one in five had a child within three to five years after high school, compared with 12% of single women in the general population.¹⁵

It is also true that some mildly disabled students are able to make progress with interventions of sufficient intensity and duration. Some interventions do work well for some mildly disabled students, though none work well for all students.¹⁰

What Are the Educational Needs of Students with Disabilities?

Students with disabilities are an extremely heterogeneous group, varying by type and severity of disability, as well as by the many variables found in the population at large, such as income, family characteristics, temperament, and intelligence. This heterogeneity means that some students have highly specialized educational needs, such as sign language interpretation or occupational therapy. However, it is possible to make some generalizations about the most common characteristics and needs of students with disabilities as a group.

Most Common Characteristics

Instructional Characteristics

In general, students in special education require greater than normal consistency and intensity of instruction, greater individualization of both academic content and pacing, and greater emphasis on behavior management. Here, common characteristics of children with disabilities in various categories are described. Later, options for providing special educational services in the regular classroom are also discussed.

Demographic Characteristics

As a group, students with disabilities are more likely to be poor and to be African American than are students in the general school population.

Poverty and disability are often found together. Wagner found that 68% of high school students with disabilities in 1986 came from households with incomes of less than \$25,000, compared with about 40% of the general school population.¹⁶

Congress has established separate programs to meet the educational needs of children with disabilities (the IDEA) and children in poverty (Title 1 of the Elementary and Secondary Education Act).

Congress's intent was that the IDEA's strong entitlements be reserved for children with disabilities. Indeed, the IDEA definition of learning disability specifically excludes those students whose underperformance is primarily attributable to poverty. However, this distinction is often difficult or impossible to draw. For example, as Lyon points out in this issue, no empirical data exist to support this exclusionary practice as it relates to learning disabilities in basic reading skills, the most common disability diagnosis.

Ethnicity and Disability

It has long been noted that African Americans are disproportionately represented in special education. At the same time, Hispanics are nominally underrepresented in most categories of special education. (See the article by Reschly in this journal issue.) While it is common for special educators to be accused of overidentification of minority children, attributing some identifications to cultural bias, Wagner found higher incidence among minorities of deafness, blindness, and other disabilities measured by accepted, objective criteria. In her statistical analysis of a large sample, poverty played a major role in this overrepresentation.¹⁷ The majority of the disproportionate representation of African-American students in special education is within the category of mild mental retardation. Disproportionate representation is discussed by Reschly in connection with mental retardation.

Eligibility and Entitlement Processes

Students who may have a disability are identified and referred for evaluation by their classroom teachers or, more rarely, by their parents or pediatricians.¹⁸ Once referred, students are entitled to a multidisciplinary evaluation provided by specialists competent in each area of suspected disability.¹⁹ If a student is found to have a disability and to need special services, then he or she is entitled to services under the IDEA. Once eligibility is determined, the school develops an individualized education program (IEP) laying out goals for the student, proposed placement, and services to be provided by the school district. Parental consent is required before a student can be evaluated, services provided, or the student's placement changed.

Disability Categories Under the IDEA

Under the IDEA, students are categorized for statistical purposes by their primary disability, although students must receive services based on their individual needs, not on their disability category. Within each category, there is a wide range of severity of disability.

Fifty-one percent of students served under the IDEA in grades K-12 in 1992-93 had learning disabilities as their primary disability. Another 22% had speech or language impairments; 11% had mental retardation; 9% had serious emotional disturbance; and 7% had hearing or visual impairments, orthopedic impairments, autism, traumatic brain injury, or multiple disabilities.²⁰

The category of learning disabilities (LD) is examined in greater detail here because of the increase in the number of students identified as having learning disabilities and the controversies about the criteria used for this identification. A description of students with attention-deficit hyperactivity disorder (ADHD) is also included because of extensive interest in this diagnosis, although ADHD is not recognized as a disability under the IDEA.

Learning Disabilities (LD)

Fifty-one percent of students served under the IDEA, amounting to 5% of all students in public schools, have learning disabilities. The proportion of students identified with learning disabilities has grown steadily since 1975. This growth is caused by multiple factors including increased awareness of the existence and impact of learning disabilities, ambiguous definitions of learning disabilities, the inability of regular education to provide individual accommodations in an era of increased academic expectations and diminishing resources, and the attraction of a less stigmatizing label.

Is this growth in identification of children with learning disabilities legitimate? Research literature is not able to answer this question because of continuing debate over both theoretical and operational definitions of LD. What is clear is that *the group of students identified with learning disabilities has particular, persistent educational needs that are not being met in the regular classroom.*

Despite their prevalence, learning disabilities are poorly defined or understood. Learning disabilities are identified by professionals in many fields, including pediatrics, psychology, neurology, and audiology. Although a coalition of professional and parent organizations has agreed upon a broad and complex definition of LD,²¹ there are no universally accepted, validated tests or diagnostic criteria to determine the presence or absence of learning disabilities. Some observers argue that the IDEA's requirement of multidisciplinary evaluations increases the likelihood of an LD diagnosis because a student may meet the criteria established by one professional discipline but not another.²²

Learning disabilities are most commonly diagnosed on the basis of a notable discrepancy between the student's academic achievement and ability to learn. In other words, the student has reasonable intelligence and adequate opportunity to learn but performs poorly for unknown reasons. Ability to learn is usually measured by intelligence quotient (IQ), and the discrepancy between ability and achievement must be substantial. Specific standards are set by individual states, but the American Psychiatric Association suggests a discrepancy of either two standard deviations or one standard deviation plus other factors such as motor, sensory, or language differences, which are believed to have artificially depressed the student's IQ.²³

Further complicating diagnostic efforts, learning disability is not a single condition, but a collection of often co-occurring but distinct conditions that may involve difficulties with listening, speaking, reading, writing, reasoning, or mathematical abilities. Other characteristics commonly found in students with learning disabilities include pervasive weakness in general organizational skills and exceptionally poor social skills.²⁴ This wide variation in symptoms leads to confusion because individual students with learning disabilities may look very different from one another. One student may have problems with basic reading skills, while another has problems with listening, comprehension, and social perception. Learning disorders are also frequently found in association with medical conditions such as lead poisoning, fetal alcohol syndrome, or fragile X syndrome.²⁵

As with most disabilities, there is a range of severity with learning disabilities, and the student with severe learning disabilities is relatively easily recognized by his specific academic inabilities combined with general intelligence and competence. These unusual cases of severe learning disability have been recognized for more than a century, as with this 1896 observation of a 14-year-old boy: "I then asked him to read me a sentence out of an easy child's book without spelling the words. The result was curious. He did not read a single word correctly, with the exception of 'and,' 'the,' 'of,' 'that,' etc.; the other words seemed to be quite unknown to him, and he could not even make an attempt to pronounce them.

"I next tried his ability to read figures, and found he could do so easily. . . . He multiplied 749 by 876 quickly and easily. He says that he is fond of arithmetic and has no difficulty with it, but that printed or written words 'have no meaning for him,' and my examination of him quite convinces me that he is correct in that opinion. . . . I may add that the boy is bright and of average intelligence in conversation. . . . The school master who has taught him for some years says that he would be the smartest lad in the school if the instruction were entirely oral."²⁵

Though the severe learning disabilities might be easily recognized, the majority of students with learning disabilities have a milder form, and there is no clear line of demarcation between students who have mild learning disabilities and those who do not have learning disabilities. As Reschly points out in this issue, the current system imposes dichotomous decisions (students are either disabled or not disabled) rather than reflecting the reality that, in learning disabilities, as in many other aspects, individuals vary by fine gradations along broad continua. The lack of agreed-upon diagnostic criteria means that states and localities create their own diagnostic criteria, leading to considerable variations from state to state in the identification rate for learning disabilities, as discussed in this journal issue by Lyon and by Lewit and Baker.

Despite difficulties in identification, the impacts of having a learning disability are real and persistent. As Wagner discusses in this issue, students with learning disabilities

as a group show poor academic performance, high dropout rates, and poor employment and postsecondary education records. Hocutt in this issue concludes that students with learning disabilities who are taught in regular education without extensive support are rarely able to achieve the level of academic competence of even low-achieving, nondisabled students.

Improving outcomes for students with learning disabilities has proven to be a challenging task, generally requiring intensive interventions for even modestly improved outcomes. No model program has proven to be effective for all students with learning disabilities.

Speech and Language Disorders

Twenty-two percent of students eligible for services under the IDEA have speech or language disorders. Approximately half of these students have a speech disorder, usually involving difficulties with articulation.²⁶ Disorders of articulation can generally be improved or resolved with speech therapy, though doing so may take months or years.

Language impairments, on the other hand, often result in substantial learning problems. Students with language impairments will have difficulty with language comprehension, expression, word-finding, and/or speech discrimination. Language impairments are often first noticed because of the student's significantly delayed speech (for example, not using two-word sentences until age four). Delayed speech may be associated with early hearing loss, which also correlates strongly with delayed or inadequate vocabulary development, reading, and general academic development.²⁷ The major causes of language impairments are mental retardation, hearing impairment, central nervous system dysfunctions (generally in the form of learning disabilities), and environmental factors such as lack of stimulation.²⁸ Determining causes with precision in individual cases is often not possible. Indeed, classifications based on causation have not proven useful for remediation, and so professionals are generally advised to base interventions on an assessment of the individual student's language abilities.²⁸

Treatment by a language therapist generally leads to improvement in functional

communication skills,²⁹ although the treatment cannot usually be expected to eradicate the problem.

Mental Retardation (MR)

Eleven percent of IDEA-eligible students have mental retardation (MR).³⁰ The severity of mental retardation is classified as mild (generally defined by an IQ test score of between 50–55 and 70, accompanied by deficits in adaptive behavior), moderate (IQ of 35–40 to 50–55), severe (IQ of 20–25 to 35–40), or profound (IQ below 20–25).³¹ Roughly 75% to 85% of those with mental retardation fall in the category of mild mental retardation (MMR).^{31,32} In this journal issue, the other three categories are referred to collectively as severe mental retardation.

From an epidemiological viewpoint, using a cutoff of 50 IQ points to divide students into different classifications is arbitrary, because students may show either mild or severe mental retardation as a result of the same diagnosis, such as Down's syndrome. As a group, however, students with severe mental retardation are more likely to also show signs of serious conditions with neurological complications, such as Down's syndrome, cerebral palsy, epilepsy, hearing impairment, visual impairment, and other structural, chromosomal, or metabolic birth defects affecting the central nervous system. In a study of 458 students with mental retardation in Atlanta,³³ two-thirds of the students with severe MR, but less than 20% of the students with MMR, were known to have another neurological condition. Moreover, the students with severe mental retardation were more likely to have multiple neurological conditions.

Nationally, African-American students are more than twice as likely as whites to be diagnosed as having MMR. (See the article by Reschly in this journal issue.) Researchers have some understanding, though far from complete, of the reasons for this disproportionate representation. Causes most commonly proposed are poverty¹⁶ and cultural bias.³⁴ Recent important research concludes that poverty is a major cause of disproportionate African-American representation within the MMR category, but that poverty does not explain the differences at the mildest levels of mental

retardation. A study in Atlanta of 330 children identified as having MMR and 563 randomly selected controls³⁵ found that African-American children were 2.5 times as likely as whites to receive a diagnosis of MMR and that approximately one-half of this difference could be eliminated by controlling for economic status. Low birth weight (defined in this study as under 2,500 grams) was found to be only a minor contributing factor to MMR, though other researchers have found that the incidence of mental retardation escalates with very low birth weight (that is, less than 750 grams).³⁶

In the Atlanta study, ethnicity was closely related to the student's age at time of initial diagnosis. After adjusting for economic status, the researchers found no significant difference in the occurrence of MMR between African-American and white children diagnosed before age 6. However, among children first diagnosed between the ages of 8 and 10, even after controlling for economic status, African-American students were 2.5 times as likely as whites to be identified as having MMR. The median IQ among children diagnosed before age 6 (54.5 for whites, 56.5 for African Americans) was significantly lower than that for children diagnosed between the ages of 8 and 10 (68 for whites, 67 for African Americans). Thus, children with the mildest level of mental retardation, who are identified at a later age, appear to be most disproportionately African American, and the difference is strong even after controlling for poverty. The cause of this disproportionate identification, however, is unclear.

Students with MMR can usually be expected, by their late teens, to develop academic skills to approximately the sixth-grade level. During their adult years, they are often able to hold jobs and live on their own with some supportive supervision or in group homes.³¹ Students with severe MR can be expected to need more extensive supervision.

Serious Emotional Disturbance (SED)

Students with serious emotional disturbance (SED) account for 9% of students served under the IDEA. These students may have an inability to build or maintain relationships, inappropriate behaviors or feelings under normal circumstances, a pervasive

mood of unhappiness or depression, or a tendency to develop physical symptoms or fears associated with personal or school problems.³⁷ These problems are "severe, pervasive and chronic, not minor, situational, or transitory."³⁸

Most students with serious emotional disturbance have been removed from the regular classroom because of their consistently disruptive behavior. As Hocutt notes in this journal issue, research consistently finds that general education teachers will not tolerate disruptive, aggressive, defiant, or dangerous behaviors. Elementary and secondary teachers are concerned that students follow classroom rules, listen to and comply with teacher directives—in short, behave in an orderly fashion. By definition, students with serious emotional disturbance have significant difficulty in these areas. They are more likely than students with any other disability to first experience disability-related problems in adolescence, although their parents report that the majority of these students began to display their emotional problems in their grade school years.¹⁵

An article describing the characteristics and outcomes of students with serious emotional disturbance appeared in a recent issue of this journal.¹⁵ The author concluded that placement decisions for these students must be made on an individual basis. The higher-functioning students with SED, when returned to regular classrooms, benefitted socially and held constant in academic achievement. However, lower-functioning students (those with more course failures and less social integration) were more likely to drop out of school altogether if moved to regular classrooms.

Hocutt in this issue notes that programs designed to return students with serious emotional disturbance to the regular classroom require extensive time on the part of both special education and regular education teachers, as much as several hours per week for several weeks to enable one or two students to make the transition. Such staff-intensive programming requires appropriate budgeting.

Physical or Sensory Disabilities

Seven percent of IDEA-eligible students have multiple disabilities, hearing or visual impair-

ments, orthopedic impairments, autism, or traumatic brain injury. These students are likely to require both special educational services and related services. Related services include transportation and such developmental, corrective, and other supportive services as are required to assist a student to benefit from special education. Related services may also include physical therapy, occupational therapy, speech therapy, psychological services, school health services, social work services, and parent counseling and training.³⁹ Schools are also the provider of last resort for specialized equipment needed by students.⁴⁰

Because social integration is a major goal for many students with severe disabilities, social-skills training and recreation programs can be an important component of services. Students with disabilities who have strong recreational interests that can be shared with others are more likely to be integrated in a meaningful way in social settings.

Attention-Deficit Hyperactivity Disorder (ADHD)

Students with attention-deficit hyperactivity disorder (ADHD) are exceptionally inattentive, impulsive, and/or hyperactive.⁴¹ Although ADHD is theorized to be a neurological condition, its cause has not been firmly established, and it is not listed as a disability under the IDEA.

The number of students diagnosed and treated for attention-deficit hyperactivity disorder (ADHD) has increased dramatically, by some estimates doubling between 1990 and 1995. Between 1990 and 1993 alone, the annual number of outpatient pediatric visits for ADHD increased from 1.7 million to 4.2 million.⁴² It has been estimated that as many as 2.4 million youngsters nationally are affected by ADHD and that 85% to 90% of them are taking stimulant medication (for example, Ritalin), to control their behavior.⁴³ Production of methylphenidate (Ritalin) has more than quadrupled in the past four years.⁴³

There is considerable controversy over whether the increase in diagnosis of ADHD is valid. Some attribute the increase largely to heightened awareness of the disorder.

Others worry that many children are diagnosed without undergoing the hours of observation and interviews required for a comprehensive evaluation.⁴³ There is no simple test for ADHD; rather, diagnosis depends upon habitual and long-standing behavior patterns, beginning before the age of seven, which are maladaptive and inconsistent with the student's developmental level.⁴¹

These maladaptive or developmentally inappropriate behavior patterns may have a significant negative impact on the student's academic performance and may also cause continual disruption in the classroom. In the majority of cases, these problems can be temporarily addressed with prescriptive medication. Methylphenidate (Ritalin) and some other medications have been shown to lead to substantial short-term improvement in the behavior of most children with ADHD.⁴⁴ For many children this medication, combined with appropriate behavior modification and support from parents and teachers, is sufficient. However, not all students respond well to stimulant medications.

As Lyon notes in this journal issue, children with ADHD are twice as likely as others to also have a diagnosis of LD and, therefore, to be eligible for special education. The school may also determine that a student with ADHD is eligible for services under Section 504 of the Rehabilitation Act. There is no way to know how many of the 4.6 million IDEA-eligible schoolchildren have a diagnosis of ADHD or how many of the 2.4 million students diagnosed with ADHD are receiving special education. It is clear that students with ADHD have a recognizable, medically treatable condition which affects their schooling and that, even if they are taking prescription medication, they require additional attention and support from their teachers.

Appropriate, Individualized Services

What do students with disabilities need? First, they need *access* to education. Before passage of the IDEA, many students were denied the opportunity for a free, appropriate public education. Bringing about that access has been a major success of the IDEA.

Second, students with disabilities need *an education that is appropriate to their needs*. It is not enough to include students with disabilities in the regular classroom if their disabilities prevent them from obtaining an education.

Third, appropriateness must be *individually determined*. Differences in disabilities, severity, comorbidities, and individual strengths mean that the federal government and states cannot legislate specific services for students by category.

However, some general statements can be made about the types of instruction required by the majority of students with disabilities. As a group, they respond best to instruction which is more intense, consistent, and individualized than that required by nondisabled students. Compensating for any disability, from hearing loss to dyslexia, can be a tiring process, and students with disabilities are more prone than their nondisabled peers to fatigue and frustration. Thus, they are likely to require different pacing than other students. They may need additional time to cover the same amount of material or a modified curriculum which allows them to keep pace with the class. Fatigue and frustration, even in small amounts, increase the likelihood of behavior problems. Therefore, students with disabilities may need additional assistance with behavior management, oriented to helping the child develop positive self-management skills.

Predictions about which students will do better academically or socially in which setting are highly fallible. No interventions in either regular or special education are uniformly successful for students with special needs; students with the same disability, in roughly the same degree of severity, may vary tremendously in personality, motivation, social and family support systems, and compensating strengths. A strength of the IDEA is its requirement that placements and services be determined individually and that parents be offered the opportunity to contribute their knowledge and insight about their child as the student's individualized education program (IEP) is developed. For these reasons, some advocacy organizations and the major national teachers' unions have

taken the position that schools should preserve a range of options in placements and services.⁴⁵⁻⁴⁷

RECOMMENDATION

■ Schools must continue to recognize the special needs of students who, because of individual differences, do not respond to regular education. The IDEA's guarantees of individually determined, appropriate education should be maintained.

How Should Appropriate, Individualized Services Be Funded?

Funding special education is a shared responsibility of the federal government, states, and local school districts. However, most budgeting for the needs of special education students occurs at the local level. Current funding structures create fiscal incentives for certain diagnoses or placements, which may not be in the best interests of the individual child. The majority of states are now in the process of examining their mechanisms for funding special education, with many states expressing interest in removing funding restrictions, maximizing local flexibility in the design of special services, and maintaining existing accountability mechanisms. This trend is based on limited practical experience.

Funding Sources

Nationally, the federal government pays for about 8% of the cost of special education. The division between states and local school districts varies widely. On average, the states pay 56% of the cost, though the range of state contributions is from 95% to 11%. The remainder comes from local school districts. In this journal issue, Parrish and Chambers list the most recent available data (see their Table 1).

The federal government and about half the states require *categorical funding*. That is, special education funding from those sources must be used solely to benefit special education students.

Existing Incentives

Special education could be described as a *local* responsibility, shaped by *state* funding structures and *federal* due process requirements. Accountability within the federal system is based on requirements of *due process*. State systems, on the other hand, most frequently require accountability for *fiscal management*. Neither encourages schools to be accountable for *educational outcomes*. Considerations at each level, but especially at the state level, affect decisions about what services to provide for each individual child.

Parrish and Chambers, in their article for this journal issue, report that 15 states have reformed their special education funding in the past five years, and 32 states are currently considering major changes. What would motivate such widespread interest in reform? When surveyed, state education officials cited a common theme of fiscal stress: as governmental and school budgets tighten, concerns about the expense of special education have grown. At the same time that special education's cost is under scrutiny, complaints were expressed about the perceived inadequacy of current special education services and about the restrictions placed on funding. There is a common perception that local school districts could provide better services if given more flexibility in the use of funds. (This idea, though of great political currency, has not been tested by research.) One of the most common complaints was that current funding structures often created fiscal incentives for more restrictive placements.

Federal funding for special education is based on the number of special education students in the state. State funding structures may base special education funding on the number of students identified for special education; the category of disability (for example, a school district may receive more funding for a student with hearing loss than for a student with learning disabilities); a percentage of the costs of expenditures in certain categories (for example, the state may pay a share of the salary for each special education teacher); or the student's placement (for example, the state may provide more funding for a student in a separate special education classroom than for a student receiving equivalent services in the regular

classroom). Recently, six states have revised their laws to base funding on the total enrollment in the school district, regardless of disability.

All of these funding mechanisms are likely to affect program decisions. Funding based on the number of students identified for special education encourages states to identify children for special education rather than provide the same services to the student without first finding a disability. States may pay a larger share of the salary of a special educator who works in a separate setting than for one who works with the regular teacher in the regular classroom or who works with all students, regardless of IDEA eligibility. Such mechanisms can encourage local districts to focus special services outside the regular classroom and to rely on expensive evaluations for eligibility determination.

Most states have some mechanism to provide additional support for children with severe disabilities requiring extensive services. In a number of states, districts receive more assistance from the state when they assign students with intensive special needs to private special needs schools than they would if they were to establish a comparable program within the district.⁸

Removing existing incentives can create new, but not necessarily better, incentives. A student with autism may benefit from specialized programs available under contract from a qualified private school. However, if the state eliminates funding mechanisms to pay a large share of the cost of such placements, the student's school district may be motivated to serve the student locally and provide fewer services—a less desirable outcome for the student.

Budgeting Challenges

The fiscal implications of special education, especially for students with "mild" disabilities such as LD, are profound. The population of students with mild disabilities is large and impossible to clearly differentiate from the population as a whole. Yet, minimal interventions for students with mild disabilities have a dismal history, as discussed by both Hocutt and Lyon in this issue. Intensive interventions in some cases appear more promising, but they are expensive.

Budgeting is a particular challenge at the local level because of the school district's legal obligation to provide services, even if unanticipated. As the federal court determined in a pivotal 1972 case,² school districts are prohibited by the U.S. Constitution from budgeting for special services in advance and offering them on a "space available" basis because each student with disabilities is entitled to a free, appropriate public education, regardless of whether the school district had anticipated that student's needs.

Can cost even be considered in determining what services a student with disabilities will receive? As discussed by Martin, Martin, and Terman in this issue, where a service is *necessary* for an individual student, cost considerations will not allow a school district to escape its obligations. However, in instances where more than one *appropriate* configuration of services is available to meet the student's needs, the cost of different alternatives is an allowable consideration.

Ideally, program decisions should be based upon each student's needs, and funding mechanisms should respond to and support those programmatic decisions. At the same time, real limitations on school budgets make it essential to control total costs. To some extent, this fact makes it inevitable that the needs of individual children will be weighed against one another and against the fiscal needs of the rest of the school.

Flexibility with Accountability

To what extent can funding mechanisms be made incentive-free? There is a growing interest in *census-based funding* as a nominally incentive-free funding mechanism. Under census-based funding, funding for special education programs is based on the total enrollment of the school, not on the number of children identified for special education. (At this same time, census-based funding could constitute a negative incentive. Where other funding systems assist districts in providing expensive services, census-based funding, in effect, rewards districts that provide fewer services, by allowing them to spend the money on other priorities.) Six states have recently implemented some form of census-based funding for special education. Arguments for and against census-based funding are discussed by Parrish and Chambers in this issue. These

authors also provide a descriptive list of criteria for evaluating state special education funding formulas.

If categorical restrictions are removed, then schools have maximum flexibility to deliver special services without requiring that they be restricted to students with disabilities. In theory, this will make it easier for schools to implement programs that more thoroughly integrate special and regular education, for example, a program in which a special educator co-teaches a class with a regular teacher and can work with any student, with or without disabilities.

Advocates for students with disabilities fear that dropping categorical restrictions will result in fewer special education services. The best protection against this would be to maintain the current accountability mechanisms contained in the IDEA: students with disabilities must receive a free, appropriate public education in the least restrictive environment, with due process requirements concerning evaluation, individualized education programs (IEPs), parental participation, and right of appeal. These mechanisms provide an enforceable right to an appropriate education.

As schools increasingly experiment with inclusion and with changes in funding mechanisms, one challenge will be to create accountability mechanisms based on student outcomes. Each student with disabilities has an individualized education program (IEP) which provides a list of goals for that student. Goals vary widely, depending on the student's needs, and may include items such as being able to name the countries of North America on a map, walking unassisted, contacting a dozen companies about a summer job, or being in the classroom for three consecutive days without disruptive behavior. In theory, the individual student's improvement on specific outcomes could be measured as barometers of success.

Such a change should be approached carefully: the end result should not be to create artificially low goals for students to guarantee success. Perhaps states could design a two-tiered system of minimal and optimal goals. Schools could be responsible for outcomes for at least the minimal IEP goals (which should still be set at a sufficiently

challenging level) and would also be responsible for delivering services designed to help students attain their more challenging optimal goals.

RECOMMENDATION

■ Funding structures, especially at the state level, must be designed to support schools in making decisions about placement and services based on students' individual needs. States should also investigate ways of basing accountability on measurable student outcomes.

Are the IDEA's Procedural Protections Necessary?

Students with disabilities have needs that have not been met in the typical classroom. Providing supplemental services is expensive and presents challenging budget issues to local school districts. Students with unusual, persistent educational problems often need advocates to ensure that schools provide them with appropriate services. The IDEA's procedural protections were designed to enable parents to be effective advocates for their children. Not only do parents have a unique concern for their child, but in most instances, they are the primary repository of information about the child's medical condition, academic history, behavioral patterns, and responses to previous interventions.

While parents want the best for their individual child, school districts must deal with pressing budgetary constraints and must balance the needs of all students in the district. These different perspectives frequently conflict. The IDEA's procedural protections have been designed to encourage cooperation and the development of mutually agreeable plans for individual children. The IDEA requires that parents of students with disabilities be notified, informed, given full opportunity for involvement, and consent to all evaluations and change in services or placement. If the school district and parents are unable to agree, either may appeal to an impartial hearing officer or ultimately to the federal courts. These procedures are

described by Martin, Martin, and Terman in this journal issue.

Ideally, the parent and school will agree upon services to meet the child's needs. In practice, the time allocated for discussing the child's needs and developing an individualized education program (IEP) is often short, parties are sometimes not well informed, parental input may not be sought or considered, and parents or school officials sometimes have unreasonably high or low expectations for the child.⁴⁹ There is no shortage of anecdotes about parents demanding extensive, possibly unnecessary, evaluations or services, or, at the other extreme, about school districts refusing to provide important services.

Despite the challenges of conflicting interests and shortages of time and money, most parents and schools do agree to individualized education programs. While some people may be accused of "taking advantage of the system," the numbers appear to be small, relative to the 3 million to 5 million students helped each year by the IDEA.

The requirements of parental information, involvement, and consent are important and should be retained. At the same time, parents need a source of information about their rights and an impartial analysis of reasonable goals and services for their child. Currently, the IDEA provides information and consultations for parents through at least one parental resource center in every state. Such services are greatly needed.

RECOMMENDATION

■ The IDEA's procedural protections are critically necessary and should be retained. Additionally, parental resource centers should be maintained.

Can Regular Education Meet the Needs of More Students?

Students with disabilities as a group have significant potential to be educated and productive, but are not responsive to typical

regular education. Most of these students will respond to intensive, consistent, individualized instruction, though instruction cannot be expected to negate the full impact of a disability. States and school districts should consider in what setting students are most likely to receive the education they need. Some students will continue to require special education, but a larger proportion of students can be served in regular education if increased resources are provided, substantial changes are made in typical instructional practices, and local school districts are committed to greater inclusion.

Of students found to be eligible for special services under the IDEA, only a small percentage (about 5%) are now served in locations entirely separated from the regular school building, such as hospitals, day schools, residential programs, or home study. Of the remaining students served by the IDEA, about one-third spend most of their day in the regular classroom, one-third spend most of their day in the regular school building but in separate classrooms, and one-third spend roughly half the day in each setting. (See the article by Hocutt in this journal issue.)

As noted by both Hocutt and Reschly, classroom teachers are the primary source of referrals to special education, and the decision to refer may be largely shaped by factors such as class size, increasing pressure to raise classroom test scores, teacher tolerance for diversity in ability or learning styles, and teacher tolerance for impulsive or inattentive behavior. Still, the teacher's decision to refer the student for assessment is critical because the majority of students referred by teachers are found to have a disability.¹⁸

Here, some characteristics of special education are discussed. Then the ways in which regular education might be changed to meet the needs of more students with disabilities are described.

Special Education

It is difficult to reach conclusions about the effectiveness of special education. The research is not strong, and it particularly lacks comparisons to comparable control groups. Even when control groups have similar diagnoses (such as learning disabilities), random assignment is rarely possible, and it

is likely that unmeasured differences (such as behavior) influenced which children were assigned to which group. Most studies also look only at short-term interventions and short-term outcomes. It is also meaningless to compare outcomes for students in special education with nondisabled students because the groups are not comparable.

In this journal issue, Hocutt reviews the literature about students with disabilities and concludes that outcomes are affected more by the characteristics of the instruction provided than they are by the student's placement in a regular or special education classroom. Students with specialized needs respond best when instruction is more intense, consistent, and individualized than that provided in the typical classroom. Because many students in special education spend the majority of their time in the regular classroom, their instructional needs may not be met by a few hours of special services provided each week. Therefore, some students have better academic outcomes in full-time special education, where instruction is more likely to be adapted to their specific needs.

The majority of students with disabilities will find school a continual challenge, even with good special education. Students who learn skills such as lipreading or reliance on pneumatic devices must make greater efforts than students without disabilities and are naturally subject to greater fatigue and frustration. The fatigue factor alone makes it difficult for many students to keep up with the pace of regular education. The exceptions are those students with relatively few, specific deficits, who are taught compensating skills and who have other strengths (for example, stable home environment, higher IQ, higher tolerance for frustration). Students with disabilities who also have a good constellation of strengths may do quite well.

Most students who are found eligible for special education will continue to receive services under the IDEA until they leave school. Data collected by the Department of Education from 16 states in 1993 indicate that only 1% to 12% of special education students over the age of 14 are declassified each year.⁵⁰ Declassification data are not collected for younger children.

Regular Education

For fiscal, educational, and social reasons, there is increasing pressure to serve more students in regular classrooms, a movement known as inclusion. "Inclusion" as used by educators involves more changes to regular education than the earlier concept of "mainstreaming." Mainstreamed students spend part of the day in the regular classroom but are often "pulled out" to separate settings for special services. Under inclusion, regular education is expected to change in significant ways so that all or most of the individual student's special needs are met in the context of the regular classroom.

Regular education, if appropriately modified, could assume more of the responsibility of providing education to students with disabilities. Many students with learning disabilities, mild mental retardation, or orthopedic impairments, for example, might be good candidates for inclusion. Still, decisions should be made on the basis of individual student needs, not on disability category.¹² Good reasons to consider shifting more responsibility to regular education are to cut down on disruptive pull-out programs, to increase social interaction between regular education and special education students, and to provide benefits for the whole classroom, such as smaller class size. However, inclusion is not likely to cut overall educational costs. Most or all of the resources currently allocated to special education are likely to be needed to implement inclusion effectively.⁵¹

It cannot be overstated that regular education has great difficulty accommodating students with special learning needs. The majority of students served under the IDEA were referred to special education because their regular classroom teachers were not able to deal with their chronic academic and/or behavioral problems. Typical instructional practice in regular classrooms is substantially different from practices which show the greatest success for students with disabilities. (See Box 1 in the article by Hocutt in this journal issue for a comparison of typical practices in special and regular education.)

Research does not make a compelling case either for or against inclusion. At best, several models of inclusive programs have shown modest positive effects and have

required considerable resources in the form of training and assistance for teachers, planning time, access to additional supportive services, and administrative support.

Teachers and parents of students without disabilities often express concern about the impact on the classroom when students with disabilities are included. In this issue, Hocutt summarizes the small body of research on this topic, which indicates that students without disabilities did not suffer in terms of academic achievement or proportion of time engaged in academic instruction under inclusion programs. And they may benefit academically from increased resources in the regular classroom. In one study, where additional resources allowed the inclusive classroom to maintain a teacher-student ratio of 1 to 14, nondisabled students in the inclusive classroom showed greater academic gains than their peers in regular, noninclusive classes.⁵²

Advocates of inclusion, however, make their arguments on the basis of fiscal, educational, and social reasons only modestly supported by research. The cost of special education is apparently a strong motivating factor. As school budgets tighten, many school boards and administrators ask whether resources used for special education might be combined with regular education in ways that would have educational and social benefits for all students. Also, advocates for students with severe disabilities seek greater integration in the regular classroom for social reasons.

The expectations for inclusion are great: advocates hope it will be at least as effective as special education, allow schools to allocate more resources to regular classes, promote local flexibility, and be less stigmatizing to students with special needs.⁹

It is possible to improve outcomes through inclusion programs, but successful programs must meet several stringent requirements. These requirements, each of which is challenging, include retaining the full range of services and placements, providing increased resources in special education, initiating major changes in instruction supported by intensive training of classroom teachers, and making a local commitment to inclusion.

Full Range of Services and Placements

As Hocutt discusses in this issue, some students thrive when returned to the more challenging atmosphere of regular education, but others are more likely to be socially isolated or to fail courses, strong risk factors for dropping out. It is critical that the option of receiving appropriate services in a separate setting be retained for those students who would benefit and that such determinations be made separately for each student. Students with serious emotional disorders, in particular, may not be able to adjust their behavior to expectations in regular classrooms and may need separate placements.³⁸ Many students with learning disabilities also benefit from separate placement.⁵³

Increased Resources

Several types of inclusive classrooms have been tested in research settings using various combinations of resources. Typical resources include smaller class size, teachers' aides or co-teachers, and frequent consultations with psychologists or other professionals to design interventions or adaptations for individual students. A combination of all these resources may be needed, especially when dealing with challenging student behavior.

Many students with disabilities present behavioral challenges. Low-severity central nervous system impairments, such as those associated with ADHD or learning disabilities, have been estimated to affect between 5% and 15% of schoolchildren and are commonly associated with behavioral difficulties and social adjustment problems.²⁴ These behavioral difficulties include consistently speaking out of turn or impulsively jumping out of one's seat, which is disruptive in the classroom, but not aggressive or dangerous. Most teachers respond to inappropriate classroom behavior primarily through disciplinary modes, for example, imposing sanctions such as staying in at recess, doing extra homework, or being expelled.³⁸ Few are trained to implement structured behavior modification programs designed to help a student gain skills of self-control.

Effective management of misbehavior in the classroom requires systematic, consistent interventions; multiple opportunities for students to practice new behavior

and social skills; treatment matched to the needs of individual students rather than generic programs; and treatment with multiple components, such as combinations of remedial, behavioral, psychopharmacologic, or family treatments.³⁴ Even with these components, management of behavior is a challenging, long-term task. Learning effective behavior management skills requires a great deal of practice on the teacher's part, and the process by which teachers learn how to teach self-management skills to children with disabilities should be monitored and supervised by a school psychologist or other professional in behavior management.

Changes in Instruction, Supported by Teacher Training

Research summarized by Hocutt in this issue shows that characteristics of classrooms that are more effective with special education students include intensive instruction; individualized instruction; close, frequent monitoring and feedback; multiple methods of behavior control; lengthy, often multiyear teacher training; curriculum modification; consultation and supportive services; and teacher willingness to work with students who have special needs.

To a large extent, this description may sound like "just good teaching." What is the difference between good teaching and special services in the regular classroom? There is a significant overlap between the two. In fact, studies of "effective schools" show that effective teachers employ frequent individualized monitoring and feedback, along with intensive instruction, practices that have been shown to benefit special education students. In many instances, special education students may not need different interventions so much as they need good teaching with greater consistency and intensity than other students require.

The extensive literature on effective schools gives some reasons for optimism: practices common to the most effective teachers are practices that have been demonstrated to be effective with many special education students. Although this similarity of teaching techniques is encouraging, effective schools and special education differ significantly in terms of pacing. That is, effective teachers tend to cover a great deal

of material in a relatively short time, a pace that is difficult or impossible for many special education students to sustain. In addition, effective teachers tend to have less tolerance for students with unusual individual needs or challenging behaviors. Indeed, studies indicate that effective teachers are more likely than other teachers to resist having difficult students placed in their instruction groups.⁵⁵

There are not sufficient research data to recommend specific ways to resolve this dilemma. One possibility is increased modification of the curriculum, where students with different abilities in the same class have different types of assignments on the same subject. This is a challenging way to teach, requiring additional planning time on a daily basis, as well as additional curricular resources. Another possibility is to group special education students in selected regular classrooms with more receptive teachers⁵⁶ and with additional resources such as smaller class size or more teaching staff, rather than trying to distribute the students with special needs equally among all the district's classrooms.

It appears that inadequate preparation of teachers by colleges of education and increasing expectations for classroom teachers are major causes of overreferral of students with special needs.⁹ Few undergraduate teaching programs routinely provide students with specific skills designed to meet the needs of students with learning disabilities, and few state certification programs require regular education teachers to have those skills.⁵⁷ It is not sufficient for certification programs to require a single survey course on children with disabilities. Indeed, the National Association of State Boards of Education has called such courses "inherently superficial."⁵⁸ Schools of education should provide prospective teachers not only with information about various disabilities, but also with detailed strategies for working with students and opportunities to practice these strategies in realistic classroom situations.

Virtually all school districts provide some form of ongoing, in-service continuing education for teachers. Such programs typically consume two to four days of the school year. In contrast, the training provided to teach-

ers in successful inclusion programs was much more extensive and consultative in nature. Typically, special educators, university faculty, and/or behavioral specialists were on site for most of the school day and for multiple years, observing, consulting, and coaching teachers who were learning new skills.

Deciding which inclusion model to implement should generally be a local decision. Different models call for different types of resources and use different teaching techniques, and the choice among them should take into consideration local resources and preferences.

Local Commitment

In this journal issue, Hocutt notes that teacher willingness to work with students who have special needs is an important factor in the success of inclusion programs. Such willingness cannot be taken for granted. As was discussed earlier, classroom teachers are the primary source of referrals to special education because of the teacher's perception that the child's needs cannot be met in the regular classroom. In a recent descriptive study of inclusion efforts at sites in Kansas, Minnesota, Pennsylvania, Virginia, and Washington, observers expressed multiple concerns about poor planning, inadequate services, and lack of commitment to improved outcomes.⁵⁸ These concerns suggest the appropriateness of experimenting with inclusion gradually—for example, making changes in only a portion of the schools in a district, assessing the positive and negative impacts, and making revisions to programs based on experience—rather than implementing dramatic across-the-board inclusion programs in a short time frame.

RECOMMENDATION

■ Regular education can and should assume more of the responsibility of providing education to students with disabilities. Effective implementation of inclusion requires (1) retaining the full range of services and placements because not all students should be moved to the regular classroom; (2) increasing resources in regular education; (3) initiating major changes in

instruction, supported by intensive training of teachers; and (4) making a local commitment to improved student outcomes.

Some Successful Interventions

One of the more successful educational interventions for high school students with disabilities has been vocational education. Before the passage of the Carl D. Perkins Vocational Education Act in 1984, researchers found that special education students did not have adequate access to vocational education programs.⁵⁹ The Perkins Act, however, made a dramatic difference in accessibility. By 1989, the National High School Transcript Study showed that students with disabilities earned more vocational education credits than did students without disabilities.⁵⁹ Indeed, Wagner and Blackorby in this journal issue note that 99% of all students with disabilities took at least one vocational course in high school and that students with learning disabilities were most likely to take a concentration (four or more related courses) in vocational education.

Vocational education courses, especially in concentrations, were closely associated with improved employment for students with disabilities in the National Longitudinal Transition Study of Special Education Students. Students with mild disabilities who took a concentration of vocational courses were 40 percentage points more likely than their peers who did not take concentrations to be competitively employed after high school and earned an average of \$6,247 more per year.

These data do not confirm a cause-and-effect relationship. The students who chose to take concentrations were obviously self-selected and may not have been fully comparable to their peers who chose not to enroll in concentrations. Even so, it seems clear that access to vocational education had a substantial positive relationship to employment outcomes.

In this era of increasing fiscal pressures and increasing academic requirements for high school graduation, school boards are sometimes tempted to cut nonacademic courses such as vocational education, espe-

cially if enrollment is lower than in some other classes. It is important that school districts resist cuts to vocational education classes and offer courses in concentrations when possible.

RECOMMENDATION

■ Vocational education is strongly associated with positive employment outcomes for students with mild disabilities and should be reinvigorated.

Another area of successful intervention is early intervention for children with problems in basic reading skills. Recent research, summarized by Lyon in this issue, indicates that many more children with learning disabilities in basic reading skills could be identified and effectively helped in the early elementary grades through specialized instruction on phonological awareness.

Deficiency in basic reading skills is the most common form of learning disability, by one estimate affecting 17% of all elementary students.⁶⁰ Certainly, it is critically important that students learn to read with fluency, and new research indicates that specific, highly structured early intervention is effective at increasing most students' ability to decode individual words rapidly and fluently. These interventions are promising, especially for students with less severe learning disabilities. Such intervention can be accomplished in the context of the regular classroom, but it requires teachers thoroughly trained in teaching phonological awareness and related skills. Few schools of education are currently preparing early elementary teachers to teach reading in this manner, apparently because of lack of demand for the instruction and lack of qualified university faculty. State teaching standards boards should encourage or require schools of education to offer training in reading instruction emphasizing phonological awareness, decoding, and word-recognition skills.

An increased emphasis on such teacher training is a necessary, though not sufficient, step to address the problems of students with learning disabilities. Research shows that well-trained teachers providing sus-

tained, intensive instruction can significantly improve the reading skills of students with learning disabilities. In fact, these are among the most successful interventions for any form of LD. However, it must be pointed out that most of these students will have other, additional manifestations of LD. Improved basic reading skills are important, but they will not, by themselves, solve the problem of additional manifestations of learning disabilities and related behavior problems.

Overall, the interventions for learning disability in basic reading skills recommended by Lyon in this issue are most successful when the student's level of disability is less severe; the instruction is provided at the kindergarten and first-grade level; the instruction focuses on phonological awareness, decoding, and word-recognition skills rather than primarily on context and reading comprehension; the instruction is of sufficient intensity and duration; and the teacher is well trained.

RECOMMENDATION

■ Early reading instruction emphasizing phonological awareness is promising and should be expanded. Schools of education should prepare early elementary teachers to provide such instruction.

Conclusion

Special education is a large and expensive system currently serving one in ten students in public schools. Many students are placed in special education because of the inability of regular education to accommodate their needs. Research has shown that regular education, if properly modified, can meet the needs of many more students with disabilities, but doing so is challenging. Increased resources must be provided in the regular classroom, and major changes should be made in typical instructional practice, requiring extensive training of regular teachers. Local schools and teachers must be committed to inclusion to make it work. Each of these requirements is a potential stumbling block.

Inclusion cannot be expected to take the place of special education in the near future. As schools experiment with inclusion, the IDEA's guarantees of appropriate education based on the individual needs of students with disabilities should be maintained. Additionally, the IDEA's procedural protections and parent resource centers are necessary to protect the rights and interests of students with disabilities.

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The Future of Children

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will focus on special education.

Long-Term Outcomes of Early Childhood Programs: Analysis and Recommendations

There is always one moment in childhood when the door opens and lets the future in.

— Graham Greene, *The Power and the Glory*, 1940¹

In recent years, public investment in early childhood programs has burgeoned. Funding for Head Start has increased from \$404 million in 1974 to \$3.3 billion in 1994.² In 1992, states provided about \$665 million for prekindergarten programs to serve children deemed at risk of school failure.³ The federal government spent close to \$1.8 billion in 1993 to help low-income children attend child care programs,⁴ and another \$2.5 billion in tax credits to help families of all income levels purchase child care.⁵ Legislation in 1993 authorized close to \$1 billion in federal funding for family support and family preservation programs over five years, and several states have implemented statewide family support programs. Millions of children and families are assisted each year by these programs.⁶ Despite these large allocations and the numbers of children already being served, organizations such as the National Governors' Association, the National Association of State Boards of Education, the Committee for Economic Development, and the National Commission on Children have all called for additional investment in early childhood programs.⁷

Calls for such investment are usually premised on the assumption that the early childhood years present a special opportunity to open a door to a child's future. Intervening early in the lives of disadvantaged children is assumed to provide the best opportunity to forestall later problems and to ready children for school and life. This assumption is bolstered by evidence that early childhood programs have produced long-term cognitive and social benefits for the children who enrolled in them.

This field is not without controversy, however. Questions about the long-

term benefits of early childhood programs surfaced first in a 1969 study that questioned whether children who attended Head Start benefitted in a lasting way.⁸ Later studies demonstrated benefits on a range of practical indicators of success in school and life for children who attended model early childhood programs,^{9,10} but interpretation of those findings has been a subject of debate.¹¹⁻¹⁴ The recent growth in public investment in a varied array of early childhood programs (preschool education, child care, and family support programs) raises a new set of issues about critical program components to ensure effectiveness, about the capacity of large-scale programs to produce desired benefits, and about the lack of coherence among programs that have different objectives but serve the same children and families.

Today's concerns about the evidence of long-term benefits from early childhood programs can be organized around five general questions:

1. *What are the long-term outcomes of early childhood programs?*

The evidence for long-term benefits in the evaluation literature is not uniformly positive, so questions are often raised about what outcomes can reliably be produced by different program types.

2. *What can be learned from the experience of the past three decades to help design more effective programs?*

If different programs do yield different long-term results, then perhaps those varying results can provide lessons to guide program design and to help policymakers prioritize investments among competing program types.

3. *Can early childhood programs provided in a routine manner on a large scale yield the expected benefits?*

If the level of funding and quality of services provided by the large-scale public programs do not measure up to the quality of the carefully designed, model programs that yielded long-term outcomes, perhaps the public programs will not be able to produce the same positive outcomes.

4. *How applicable are lessons learned from programs that operated 20 or 30 years ago to today's world?*

The world for children has changed in significant ways: poor children are more likely to live in single-parent families and in hostile communities, and more mothers are in the workforce. How well suited are program approaches designed in the 1960s and 1970s to the needs of today's disadvantaged children and families?

5. *How can policymakers increase the coherence of the early childhood service system?*

The attention given to disadvantaged children has spawned a sprawling array of programs, all designed to enhance the lives of children and families and all vying for the same shrinking pool of public dollars. It falls to policy-makers to identify options for linking and integrating programs to better serve children and families.

Given the significance of these questions about early childhood programs, it is timely to explore again the long-term effects that different types of early childhood programs have on children and their families. This journal issue reviews studies of preschool programs, family support programs, and children's experiences in schools, placing them in a broad historical, international, and public policy context.

The results of the methodologically strongest studies in a very vast literature indicate that early childhood programs *can* have substantial effects on children's lives years after their involvement in the programs. For example, such programs have led to enhanced school achievement, higher earnings, and decreased involvement with the criminal justice system. Appropriately designed programs have helped parents strengthen their parenting skills and move toward economic self-sufficiency. However, while all of those benefits *can* be achieved through participation in these programs, they are not *always* achieved.

Following a brief description of the major types of early childhood programs, the remainder of this Analysis and Recommendations reviews what is known about the effects of early childhood programs on children and their families and considers how those effects come about and why effectiveness varies across programs. It revisits the five policy questions raised above and offers recommendations concerning the steps public and private decision makers should take to shape early childhood programs and policies.

Definitions

Early childhood programs are often discussed collectively, but they are in fact a "polyglot array of disjointed programs" that differ widely in their goals, their service delivery strategies, and the ages of the children they serve.¹⁵ There is every reason to expect these differences to influence the effects the programs have on participants. A few definitions are therefore in order. For the purposes of this Analysis and Recommendations, early childhood programs are divided into two categories: child-focused programs and family-focused programs. Each category includes two major types of programs that are described below.

Child-focused programs include (1) preschool, Head Start, and prekindergarten, and (2) child care programs. *Preschool*, *Head Start*, and *prekindergarten programs* are typically part-day and part-year programs that bring groups of four-year-olds (or three- to five-

year-olds) together in centers or school settings. Some offer primarily an educational program; others also provide health and developmental screenings, parent involvement, and social service assistance. Most preschool programs have been designed to promote child development and improve children's readiness to succeed in school. Publicly funded preschool programs typically serve children from disadvantaged families, while private preschool programs supported by parent fees serve children from all backgrounds.¹⁶

In contrast, *child care programs* typically offer care on a full-day basis to children from birth to school age. Such care can be provided either in a center or in a caregiver's home. Most child care programs seek both to promote child development and to free parents from their child care responsibilities so they can work. Recent reports have raised concerns about the quality of typical child

care programs.¹⁷ Child care services are purchased by parents from a wide array of non-profit and for-profit providers. Public funds support subsidies that help some low-income parents pay for care while they work or attend school.¹⁸

Preschool and child care programs are sometimes grouped together and called early childhood care and education, emphasizing their overlapping goals and activities. However, different histories, perceived missions, sources and levels of public investment, and research traditions conspire to perpetuate their separateness and to suggest that they are unlikely to produce equivalent effects on children and families.⁴ This journal issue focuses primarily on preschool programs. (An upcoming issue of *The Future of Children* will examine the financing of child care programs.)

Family-focused programs can also be broken into two categories. *Family support programs* typically serve families with children under three years of age (though many include older children) through weekly or monthly home visits, or through classes or drop-in centers for parents. These programs strive to involve parents in their children's development and to strengthen their parenting skills, with the hope that changes in the parents will help to create, sustain, and amplify positive outcomes for the children.

Two-generation programs, the newest type of early childhood program, link programs for children and parenting support with adult-oriented services such as job training or adult education for the parents. Primarily targeting low-income families, these programs often use a case manager to broker services that are actually provided to families by other community agencies. Two-generation programs seek to promote positive outcomes for both children and parents (hence, "two-generation"); they try to help families escape poverty while simultaneously promoting child development and helping parents learn new parenting skills.

Both family support and two-generation programs typically rely on funds from public agencies or private foundations to support services which are then usually offered free of charge to families. Although some family-focused programs are open to all families,

most concentrate their efforts on families facing such challenges as poverty, teen parenthood, immigrant status, or welfare dependency.

Long-Term Outcomes

What are the long-term outcomes of early childhood programs? Thousands of studies of varying quality describe the implementation and assess the effects of these programs. A relatively small, but important, group of those studies focuses on long-term outcomes for children and families when the children are in third grade or later.¹⁹ The strongest method for assessing long-term outcomes is to randomly assign young children to groups that do or do not receive the special program's services and then to follow the development of both groups of children over time. Because it takes at least 15 years for a group of three-year-olds to complete high school, evidence of long-term effects that last into adolescence and beyond is available only from programs that operated more than 20 years ago.

The early childhood research summarized in this journal issue was launched in three primary waves. The first programs began in the 1960s and early 1970s as small research projects designed to demonstrate that compensatory education programs for young children from low-income families could produce cognitive and developmental gains. These programs seldom involved more than a few hundred children. Meanwhile, the federally funded Head Start program, started in 1965, was growing rapidly and, during the 1970s, served between 300,000 and 400,000 children each year. During the late 1970s and throughout the 1980s, many states launched prekindergarten programs to serve disadvantaged children through the public schools.

Evaluations of these much larger, public preschool programs form a second wave of research on the effects of early childhood programs. Widespread interest in family-focused programs designed to benefit both children and parents has taken hold yet more recently, leading to the development of two-generation programs in the late 1980s and early 1990s. The still-unfolding results of evaluations of these programs form a third wave of research on early childhood programs.

This interplay between history and research design means that most studies assessing long-term outcomes have evaluated the child-focused programs for disadvantaged children begun in the 1960s through the early 1980s: model preschool programs and a few large-scale public programs such as Head Start or prekindergarten programs. Children who attended an early childhood program are typically compared with children who remained at home until school entry. As a result, the articles in this journal issue rely primarily on studies of those programs for information about probable long-term effects. Short-term findings relating to family support, two-generation, and child care programs are also included.

The following sections summarize results of the best of the studies of early childhood programs, beginning with the outcomes of child-focused programs and then reviewing those achieved by family-focused programs. Results indicate that early childhood programs can have large and persistent benefits for children in terms of cognitive achievement and social outcomes. Benefits for parents appear to be more difficult to achieve.

Outcomes of Child-Focused Programs

Most of the studies of child-focused early childhood programs have examined program effects on children's cognitive and social development, fewer have considered effects on children's physical health, and some have measured effects on parent-child interaction, parenting skills, or the mother's education, employment, or childbearing.

Cognitive Outcomes

Barnett, in his article in this journal issue, summarizes the effects that child-focused early childhood programs have had on key indicators of children's cognitive development and academic achievement, such as intelligence quotient (IQ), language development, school achievement, and progress in school.

Generally, the research indicates that participation in early childhood programs can result in IQ gains of about eight points immediately after completion of the program. The IQ advantage that the children who attended the early childhood program have over those in the control group usually

persists until the children enter school, but it diminishes as they progress through the early grades. In most studies, the IQ scores of the two groups converge: the IQ scores of participating children tend to drop a little, while the scores of the control children rise in response to the stimulation they encounter in the school environment.²⁰

The reliance of many early childhood program evaluations on IQ scores and the consistent finding that IQ benefits diminish over time have both been controversial. The "fade-out" phenomenon has led some to question the utility of these programs.^{12,21} Others contend that relying on IQ as a marker of program success is short-sighted and that the more important outcomes are measures of reading performance, retention in grade, or placement in special education.²²

We endorse this latter point of view. As reviewed by Barnett, the studies of early childhood programs consistently show benefits that go beyond IQ. Children who attended the programs are less likely to be placed in special education classes or retained in grade. This robust finding is supported by results from American studies of model early childhood programs and many large-scale public programs, and it is confirmed in the international research reviewed by Boocock in her article in this journal issue. Although very few studies have followed children until age 18, most that have done so discovered that children who attended early childhood programs were more likely to graduate from high school.

Researchers have described two mechanisms that could explain how children's experiences at ages three and four might lead to changes that alter the course of their school careers 5, 10, and 15 years later. The first emphasizes changes in children's cognitive abilities.²³ Preschool improves children's ability to think and reason as they enter school, enabling them to learn more in the early grades. Even if their IQ advantage fades, their learning accumulates and their academic success keeps them "on track" toward high school graduation. The second explanation begins with the same cognitive advantage but emphasizes the child's increased motivation and the support provided by parents and teachers once their expectations for the child's success in school

rise.¹³ The child gains confidence and becomes oriented toward school achievement as parents and teachers encourage the child's learning.

The article by Entwisle in this journal issue examines these different mechanisms and highlights the extent to which tracking practices in the early grades of school effectively lock children into trajectories of academic success or disappointment. Although much of the research reviewed by Barnett and Entwisle supports the cognitive route toward school success, multiple pathways of influence are likely to operate simultaneously, compounding the effects of program participation on later development.

Social Outcomes

Studies of the effects on children's social development of attending child-focused programs have examined child care programs designed for working parents, as well as preschool programs.

Reflecting concerns that young children might not fare as well emotionally in large groups as they do in the more intimate surroundings of their homes, researchers have considered the possibility that social development might be harmed by experience in early childhood programs. Recent studies of the short-term effects of child care have shown that poor-quality programs have negative effects on children's play and relationships with their caregivers.¹⁷

The article by Barnett cites a few studies which indicate that even children in high-quality center-based programs behave more aggressively than other children when they begin school, but these differences most often disappear or are reversed later in life. The article by Boocock describes studies showing that children in Sweden who enter that country's excellent child care system early in life are more independent and socially confident as they go through school.

Another way of looking at social behavior and adjustment is by considering whether early childhood programs can prevent delinquent and criminal behavior in later life. Yoshikawa's article reports that model programs which combined home visits with center-based child development services reduced the occurrence of aggressive behavior. Two studies

gathered data from the courts and found the program children had fewer contacts with the criminal justice system. One study that has followed its subjects through age 27 also found that preschool participants had fewer out-of-wedlock births, relied less on social services as adults, and had higher average earnings than individuals who had been in the control group.²³

Health Outcomes

Early childhood programs can affect children's physical health by requiring that children be properly immunized; by linking them to health services; by conducting vision, hearing, and developmental screenings, as the Head Start program does;²⁴ and by providing them with nutritious meals. As the article by Boocock points out, early childhood programs in developing nations are sometimes seen as a key vehicle for supplementing the diets and improving the health of severely malnourished children.

While the dramatic effects that programs in the developing world have had on children's health would not likely be produced in the United States, the importance of feeding and delivering basic health care to poor children is recognized even by some who are skeptical of claims that early childhood programs can assure children of success in school.^{11,12} The federal Child Care Bureau and the Maternal and Child Health Bureau are launching a campaign to strengthen linkages between health care providers and child care centers, as these links are currently uncommon.

Effects on Parents

Although most studies of child-focused programs assess only effects on children, some programs combine parent education or parent support with child-focused services and measure both child and parent outcomes.²⁵ Yoshikawa reports that these "combined" programs decreased aggressive and delinquent behavior in children, but their effects on parents were mixed. Some of these programs influenced parents' expectations for their children or helped mothers to interact with their children in a warmer and more positive fashion or to rearrange their home to provide learning opportunities for their children. Other programs did not yield these benefits for parents.

A few studies have gone beyond parenting measures to examine life outcomes for the mothers. Programs that offer full-day activities for the children effectively provide free child care that enables the mothers to pursue additional education or to take a job to improve the family's circumstances. It is these types of programs, which combine excellent child care with services for parents, that have produced effects on such maternal life course outcomes as delays in the timing of subsequent pregnancies and reduced reliance on welfare.²⁶⁻²⁹

Access to Child-Focused Programs

This evidence of program benefits has convinced federal and state policymakers to expand Head Start and prekindergarten programs for disadvantaged children, but preschool attendance is still highest among advantaged children. In 1990, 60% of children from relatively wealthy families (those earning more than \$63,370 for a family of four) attended preschool programs, compared with only 35% of children from poor families.⁴ One observer commented wryly that "middle-class parents used to want preschool purely as a social experience for their child. Now they seem to want a head start to Harvard."³⁰

The fact that attendance at center-based programs during the preschool years is becoming the norm in America poses problems for policymakers who hope that publicly funded preschool programs will close the gap in school performance between poor children and their peers from wealthier families. Instead, the 65% of poor children who do not now receive a preschool experience may be left even further behind.

RECOMMENDATIONS

■ Given the research that documents benefits for children and the dramatic disparity of enrollment rates in preschool programs across income levels, policymakers at the federal, state, and local levels should allocate sufficient funds for child-focused programs to ensure their availability to all disadvantaged children.

■ Because child-focused programs offer an opportunity to provide health benefits for

children, resources should be allocated to permit all early childhood programs to link to or provide directly health services such as screening and immunizations to enrolled children.

Outcomes of Family-Focused Programs

Articles by Yoshikawa and St. Pierre and his colleagues in this journal issue review evidence from past and ongoing evaluations of family support programs and two-generation programs. As these authors report, many of these family-focused programs have not yet been able to measure long-term outcomes, making conclusions about what these types of programs will produce in the long run somewhat speculative.

Effects on Children

As summarized by Yoshikawa in his article, pure family support programs (primarily home visiting and parent education programs without any dedicated child development or adult job training or education services) appear to have inconsistent and modest effects on children's cognitive development, although most children were not assessed beyond the age of three years. The article by St. Pierre and colleagues describing two-generation programs reports that the most ambitious of them yielded small positive effects on children's cognitive development at two years of age, but most of the programs did not affect the children's status in measurable ways.

With respect to physical health, research studies of home visiting programs for children from birth to three years of age indicate that some programs increase the utilization of health care services while others do not.³¹ Some home visiting programs that enhanced parenting skills reduced the occurrence of abuse-related injuries and visits to the emergency room,³¹ but these outcomes have not been measured in most studies of family-focused programs.

Effects on Parents

Family support programs deliver services primarily to parents so, as might be expected, they are more successful in modifying parenting behaviors than were the child-focused programs discussed earlier. Parents who take part in the programs have, in some

instances, been found to provide a more stimulating home environment for their children and to spend more time talking and reading with them.

The evidence concerning family-focused program effects on life course outcomes for parents is less positive, except (as noted earlier) when the programs link parent-focused services to full-day, developmental child care. Several years after enrolling in the program, parents in a number of the two-generation programs reviewed by St. Pierre and colleagues were more likely to earn high school equivalency diplomas, and some delayed subsequent births, but other program benefits such as increased income were not found.

Summary: The Family Support Approach

In sum, the studies of family support programs show short-term impacts on parents but only weak effects on children's development. These modest and inconsistent effects may be related to the family support approach itself. The services offered by many family support programs (for example, one home visit per week) are not particularly intensive when contrasted with child-focused programs that typically meet every day. Some studies indicate that participants in early childhood programs who receive lower intensity services do not benefit as much as do those who receive higher intensity services,³² and so the modest effects of family support approaches are perhaps to be expected.

In addition, family support programs tend to tailor their services to meet individual family needs. For example, programs may provide some families with information about child development and offer others assistance in accessing health or social services or encouragement to return to school. As a result, program impacts, when considered for the whole group of participants, tend to be weak and spread across a range of outcomes.

Finally, one of the premises of family support is that benefits for the children follow from changes in parent behavior and attitudes. Parents are encouraged by program staff to interact differently with their children, but changing any habit is difficult, and

changing patterns of behavior forged over many years is even harder.³³ As a result, even in the best parent-focused program, positive benefits may take some time to emerge.

From the point of view of children in the family, all of these factors are problematic: children's development does not wait while the modest effects of a parent-focused program gradually emerge. It is therefore intuitively sensible that better results should come from programs that link child-focused activities to parent-focused activities because in those programs parents and children are changing simultaneously, in mutually reinforcing ways.

Summary: The Two-Generation Approach

As the article by St. Pierre and colleagues explains, two-generation programs are designed to serve both children and parents simultaneously. Educational services for children promote their cognitive development, while activities for parents both support parenting (which is presumed to promote child development) and also encourage the parents' own development and learning. As parents pursue their own educational and employment opportunities, they can increase the family's income, over time reducing the direct impacts of poverty on the child.³⁴ Theoretically, this three-pronged approach (promoting child development, enhancing parenting skills, and providing adult economic self-sufficiency services) should be the most powerful of the intervention models reviewed, but the short-term results reported by St. Pierre and his colleagues indicate very modest effects.

These modest effects probably reflect several factors. Two-generation programs, which are being carried out in dozens of sites that serve thousands of children, face the problems of variable implementation that confront any large-scale program. In addition, most do not design or manage their own services for children and families but, instead, refer families to community agencies, so they have little control over the quality of the job training, adult education, or child care assistance that is provided. As is also true for family support programs, the breadth of the program goals and the tailoring of services to meet the needs of individual families may also lead to a diffuseness

that undermines effectiveness and that makes detecting benefits across a group difficult. Furthermore, the two-generation programs are serving very stressed families, including teen parents receiving welfare, Head Start parents affected by problems of substance abuse, and residents of neighborhoods marked by entrenched poverty.³⁴ The intensity of support provided by the two-generation programs may not be sufficient to overcome the many challenges that confront these families.

As Yoshikawa and St. Pierre and colleagues discuss, two-generation programs are very promising from a theoretical standpoint. Because they are so new, some of the most sophisticated examinations of these programs are only now beginning to produce results. These evaluations should continue, with special emphasis on exploring how quality and intensity of services and the diffuseness of program goals influence program outcomes.

RECOMMENDATION

■ Experimentation and evaluation of family-focused programs should be continued to determine whether these services can yield the benefits to families that are suggested by theory.

Realistic Expectations

Researchers often judge the importance of their results by scientific thresholds that indicate results can be attributed to the intervention and not to chance: policymakers want to know whether the program creates a meaningful, functional difference in the lives of participants. The studies of early childhood programs reviewed in this journal issue included real-world outcomes, such as being held back in first grade, being placed in a classroom for the "educable mentally retarded," or being arrested several times. The impact of those very tangible outcomes on both the child and the community is obvious to policymakers and the public alike and may help explain the powerful effect these findings have had on American social policy.¹³

One caveat must be noted, however. The low-income children who attended these programs may do better than other children from their poor neighborhoods, but most still lag behind middle-class children. For example, even in the High/Scope Perry Preschool Project, which is known for its remarkably positive outcomes, nearly one-third of the program children were later arrested, and one-third dropped out of high school.²³ This is not to say that what the children and their families have achieved is minimal. These children still out-performed their counterparts in the control group in significant ways, and it is on this basis that we earlier recommended expanding the availability of these programs. It is to say, however, that policymakers should not assume that the widespread enrollment of low-income children and families in early childhood programs will enable children living in poverty to perform later in school and life at the levels reached by more advantaged children. Realistic expectations are in order.

Effective Program Design

What can be learned from the experience of the past three decades to help design more effective programs? Barnett, Yoshikawa, Frede, and St. Pierre and colleagues all examine studies of the programs that appear to have been most effective in identifying shared characteristics that may suggest the best ways to implement early childhood programs. Their suggestions concerning "best practices" are fairly consistent.

Service Intensity

Barnett, Yoshikawa, and Frede agree that there is little evidence indicating the ideal intensity of early childhood programs. Long-term benefits for children have been generated by programs that serve children in center settings on half-day or full-day schedules, some including home visits on a weekly or a monthly schedule. Because different service intensity levels have seldom been examined in the context of a single program, it is difficult to derive specific prescriptions about these factors from available research, although many researchers, including St. Pierre and his colleagues, believe that a minimum threshold of program intensity is probably necessary to yield benefits.

Program intensity drives program cost, of course. It is less expensive to offer part-day

rather than full-day preschool, or monthly rather than weekly home visits. In the absence of clear research findings, program planners and policymakers may be tempted to opt for lower intensity services. Consequently, determining optimal levels of services is a critical need for future program planning.

RECOMMENDATION

■ Planned variation studies should be launched to assess the relative advantage of providing services at differing levels of intensity, and to identify minimum thresholds for achieving positive outcomes.

Onset and Duration of Services

A key rationale for providing early childhood programs is the idea that intervening sooner is better than intervening later. Most of the programs described in this journal issue served three- to five-year-old children. Nevertheless, the strong effects achieved by a few programs that enrolled children as infants, and neurological evidence that the environment influences infant brain development, lead Barnett, Yoshikawa, and others³⁵ to suggest that beginning services in infancy will likely generate larger effects than waiting until a year before children enter school. These ideas lie behind the Head Start Bureau's new initiative, Early Head Start, which will serve children from birth to age three years. (See Appendix A for additional information.)

Others argue that, although the accumulating research suggests that early childhood may be a special time, it is not the only age period during which successful interventions can and should be launched.³⁶ For example, some researchers conclude that the cognitive gains children achieve in early childhood programs can be sustained and enhanced if continued support is offered during the children's first few years in school,³⁷⁻⁴⁰ although Barnett argues that the evidence for that conclusion is weak. Efforts such as the Head Start Transition Projects described in Appendix A have been launched to ease children's transition from early childhood programs to the schools, and the ongoing

evaluations of those efforts should be informative.

Research has shown that Head Start students wind up in "our lowest-quality schools,"⁴¹ and it may be that simply providing supportive transition services without altering those schools will not safeguard the hard-won gains made by the children in preschool. School improvements might address the tracking practices schools use to assign children to ability groups and to make decisions about grade retention and placement in special education, as described in the article by Entwisle. Or they could include curricular reforms or efforts to involve parents in the school to a significant degree.³⁷ Federal education dollars provided through Title I are an important source of funding to improve the schools that disadvantaged children attend (see Appendix C for information concerning Title I), and their use should be closely followed.

RECOMMENDATION

■ Given the likely importance of the school environment in sustaining gains made in preschool, additional resources should be dedicated to improve the quality of schooling received by disadvantaged children, especially in the early grades.

High-Quality Services

Yoshikawa, Barnett, and Frede agree that high-quality services are necessary to generate the long-term benefits associated with the most successful early childhood programs. All three suggest that high quality in child-focused programs means small classes and high staff-to-child ratios. Frede also concludes that the curricula used in the most effective programs engage children as active learners and dovetail with what children are likely to encounter when they enter school. She and Yoshikawa both emphasize the importance of supervision and training for all early childhood program staff. These principles of quality are also embodied in the criteria that the National Association for the Education of Young Children (NAEYC) uses when accrediting early childhood care and education programs.⁴²

The international perspective on early childhood programs presented in the article by Boocock suggests that there are a number of different avenues for achieving and assuring program quality. For example, other nations accept larger group sizes and lower staff-to-child ratios than the United States, and curricula that emphasize an active learning style are not universally embraced. By contrast, a number of countries have uniform national guidelines for early childhood program content and performance while the United States does not, and many place greater emphasis than does the United States on the qualifications of early childhood teachers.⁴³

Interrelationships among key elements of quality may explain some of these differences in emphasis across nations. For example, a well-trained teacher may be better able than a poorly trained one to provide fairly good care even with larger groups of children or with less advantageous staff-to-child ratios.

Given the international research, it is sensible to explore different combinations and levels of quality indicators. In the interim, however, research from the United States should be used to define the elements of quality care. Implementing standards based on that research will afford early childhood programs the best opportunity to replicate the long-term gains produced by the model programs reviewed in this journal issue.

RECOMMENDATION

■ Child-focused programs should be designed in accordance with the evidence from U.S. studies that program quality depends on small group sizes, high ratios of staff to children, trained and well-supervised teachers, and developmentally appropriate curricula.

Child or Parent Focus

St. Pierre and his colleagues, Barnett, and Yoshikawa agree that child-focused programs benefit children more than they benefit adults, and that family-focused programs

tend to benefit adults more than they benefit children. That is perfectly sensible. It should not be surprising to see benefits primarily in the areas that an intervention targets.

Fairly strong evidence suggests that the best way to promote child development is to work directly with children and not to assume that changes in parents will lead to changes in children. Programs that relied only on indirect methods of intervention (influencing the child only through their effects on parents) had some of the weakest results on child outcomes among the programs discussed in this journal issue.

At the same time, Frede and Yoshikawa point out that the child-focused programs which produced the most substantial long-term outcomes combined center-based services for children with significant parent involvement through home visits, classroom participation, or parent group meetings. Perhaps parent involvement is a necessary contributor to program success but not sufficient by itself to produce long-term benefits for children and families.⁴⁴

Calls for parent involvement and family-focused services are based partly on research and largely on consideration of the values that undergird American society. Parent involvement is consonant with a core American value, dubbed by one researcher the "doctrine of parental rights," which places responsibility for determining the child's best interest squarely in the hands of parents.⁴⁵ Because parents are responsible for rearing their children, many argue and we agree that early childhood programs should seek to involve and support parents, less to promote changes in the children than out of respect for the crucial role parents play in overseeing their children's development.

Scaling Up

Can early childhood programs provided in a routine manner on a large scale yield the expected benefits? A frequently voiced concern about the large-scale early childhood programs supported by public funds, such as Head Start and state prekindergarten programs, is whether they have captured the seemingly magical essence of the early model programs.^{10,11,13} If they differ in

important ways from those earlier smaller efforts, then perhaps the large-scale programs will not generate the expected positive benefits.

Some conceptualize that magical essence in terms of the quality criteria discussed above. They worry that quality may suffer when programs move beyond models implemented at a few sites to efforts to serve children across a state or the nation. Barnett's review offers some reassurance on this score, indicating that, with respect to cognitive outcomes at least, children have benefitted from participating in typical public early childhood programs. The international research reviewed by Boocock confirms that early childhood programs can be implemented on a nationwide scale without sacrificing the level of quality needed to produce positive effects on children.

Nevertheless, there is indeed some evidence that the level of quality provided in large-scale U.S. programs is not all it should be.¹⁴ When programs are institutionalized in large bureaucratic agencies and when they face the fiscal constraints that accompany government funding, the constant danger is that oversight will flag and the drive for economies will undermine the program.

Regulations and Standards

Both regulations and program guidelines can help ensure the quality of early childhood programs. As mentioned earlier, Boocock points out that some of the most highly regarded early childhood programs exist in European nations where programs must meet uniform, government-enforced standards. As Gustafsson and Stafford note, however, emphasis on the private enterprise system is a defining feature of American policy toward early childhood programs, and many policymakers here resist the idea of setting national standards for such programs.⁴⁶

A noteworthy exception is the federally funded Head Start program, the only U.S. early childhood program that is centrally administered and that obliges all grantees to meet detailed performance standards. Regulation of most other early childhood programs is quite varied: state education departments and local school districts set guidelines for preschool and prekindergarten

programs operated by public schools; state legislatures provide the minimum health and safety regulations that govern child care programs; and there is no system for overseeing the activities of family-focused programs.

Recent concern regarding the uneven quality of Head Start programs focused attention on the accountability of programs supported by tax dollars.^{14,47} Obliging programs that receive public funds to meet specific, enforceable program guidelines is one means of assuring the quality of large-scale public early childhood programs. However, the many programs that do not receive public funds will remain outside the reach of any such guidelines. Therefore, the voluntary accreditation systems through which professional organizations assess and recognize the quality and credentials of both early childhood programs and the staff who work within them^{42,48} can play a critical role as well.

RECOMMENDATIONS

■ Public officials, after consultation with practitioners, should create and enforce explicit program guidelines relating to quality features such as staff qualifications, group size, staff-to-child ratio, and parent involvement—at least for all programs receiving public funds.

■ Because guidelines associated with public funding will not cover all programs, practitioners and their professional associations should set the ideal quality standards for their professions, and voluntary accreditation of programs and credentialing of staff should also be encouraged to raise program quality.

Program Costs

Regulations and guidelines must be coupled with sufficient and savvy investment if quality in early childhood programs is to be assured. Model programs are typically funded at a higher level than are larger-scale similar programs, although expectations are not necessarily adjusted accordingly. In the words of one observer, "America expects robust

results from programs it consistently underfunds."⁴⁹

For instance, the Perry Preschool Project, which combined part-day, part-year center-based services with weekly home visits and which yielded many of the benefits discussed here, cost \$7,600 per family per year in 1993 dollars.⁵⁰ St. Pierre and colleagues report that the Infant Health and Development Project, a model program that provided full-day, full-year center-based infant care and offered home visits and other supports to families, cost about \$10,000 per family per year. In contrast, in 1994, the part-day, part-year comprehensive Head Start program cost about \$4,000 per child per year,² and most states in 1991-92 invested between \$2,000 and \$3,000 per child per year in their state-funded preschool initiatives that typically offered part-day educational services.³

Many economists, including Steve Barnett in this journal issue, have contended that the nation underinvests in children and that the payoffs for increased investment would be substantial.⁵¹ As Barnett and Yoshikawa point out, there is evidence from one study (the High/Scope Perry Preschool Project) that the benefits outweighed the cost of providing that preschool and home visiting program by seven to one.

Of course, money is not everything. It is important to make sure not only that programs are adequately supported, but also that all the services they deliver (or broker) meet quality standards such as those described above.

RECOMMENDATIONS

■ To ensure that large-scale programs created and funded by public dollars provide services of the quality required to produce long-term positive outcomes, they should be supported at levels commensurate with the funding levels devoted to the demonstration programs that yielded the long-term benefits to children.

■ When public agencies pay for services provided by existing programs, they should offer higher rates for ser-

vices that meet higher standards of quality, such as professional accreditation standards.

Applicability Today

How applicable to today's world are lessons learned from programs that operated 20 or 30 years ago? By definition, longitudinal studies are begun years before results are reported, and changing times can make them anachronisms before the ink is dry on the latest round of results. The literature reviews by Barnett, Yoshikawa, and St. Pierre and colleagues suggest that early childhood programs implemented within the past decade may produce more modest benefits than did programs in previous years. These more modest effects could be due to inadequate funding or poor quality services as described above. Or the times may have changed enough and the needs of families may have changed enough that one should not now expect to see the dramatic benefits that resulted from programs that worked with disadvantaged children and families 20 or 30 years ago.

Deepening Poverty, Multiple Risks

The past 30 years have made the world in which poor children and families live a grimmer place. Poverty is as significant a problem in the 1990s as it was in the 1960s, but it is now complicated by other social changes. As Hernandez explains in his article, one-fourth of all children under six live in single-parent homes, as do 65% of poor children.⁵² Many confront alcohol and drug abuse, domestic conflict, and street violence in their homes and neighborhoods.^{53,54}

These changes all expose children to more of the risk factors that Yoshikawa argues are precursors for poor outcomes such as school failure and delinquent behavior. Because exposure to many risk factors multiplies the probability that a child will experience difficulties later on, Yoshikawa suggests it is important to provide early childhood programs that offer a sufficiently broad array of services to address a number of risk factors at the same time.

The growing popularity of family support and two-generation programs reflects the

belief that family-focused services do just that.^{34,53,55} Although, as noted earlier, these family-focused programs have not had dramatic effects. Decision makers should wait for the results of the important ongoing studies that St. Pierre and colleagues summarize before reaching conclusions about the capacity of these programs to counteract the risks faced by poor families in the 1990s.

Part-Time Preschools, Full-Time Jobs

More children attend early childhood programs today than at any time in our history, in large part because their mothers are now working outside the home. Although one-third of mothers who are homemakers send their three- to four-year-old children to part-day preschool and nursery school programs,⁵⁶ families with employed mothers are likely to need full-day child care.

The article by Hernandez explains that, in 1960, when the model preschool programs were being conceptualized, only 19% of children under age six had two employed parents or a single parent who worked. By 1993, that was true of 51% of young children. Gustafsson and Stafford report that one-third of American mothers with children under six work more than 35 hours a week.

The need to have child care that covers the hours of employment makes it difficult for many parents whose children are eligible for Head Start or other publicly funded preschool programs to take advantage of those opportunities for their children. A third of parents whose children attended Head Start in 1988 worked full time, yet only 15% of Head Start programs are open for a full-day schedule.⁵⁷ State-funded prekindergarten programs usually have the same part-time hours and present working families with the same dilemma.³

Two systems of programs for children are now running on parallel tracks—part-day preschools supported by public funds and intended to promote children's learning, and full-day child care programs that offer care for the hours needed by parents and are largely reliant on fees paid by parents. Both part-day and full-day programs can provide either excellent or inadequate experiences for children, but sufficient funding

and clear programmatic expectations mean that, in many states, publicly funded part-day programs can offer richer child development experiences than can the private market's full-day child care programs.⁴ In too many families, the parents' need to work means their children cannot access those enriched early childhood programs.

If mothers must enter the work force out of economic necessity or because of governmental mandate, stable care that covers the hours when they are at work must be provided. But, as mentioned earlier, it is unrealistic to expect that just any early childhood program will generate the positive developmental outcomes for children produced by the high-quality model programs reviewed in this journal issue. The Scandinavian countries, as the articles by Boocock and Gustafsson and Stafford explain, have responded to the dilemma of balancing mothers' needs to work with children's needs for high-quality care by creating a fairly costly system of government-funded programs that promote child development and operate on a full-time schedule.

One approach recently taken in the United States has been to link part-day educational programs with child care settings that are open for longer hours (called "wrap-around care"). Unfortunately, these arrangements too often oblige children to move back and forth during the day between preschool and child care programs. When each program is physically sited in a different location and staffed by different individuals, policy and practice have combined to create chaos in the lives of children and families.

RECOMMENDATION

■ Resources should be used to increase the availability of programs that have the educational features associated with long-term benefits for children, but that also meet parents' requirements for full-day care that permits them to work. Practically, this will likely entail (1) establishing new full-day, full-service programs, (2) providing incentives and requirements to link together the existing systems of part-day and full-day programs

through collaborative arrangements that are minimally disruptive for children, and/or (3) expanding part-day, part-year programs such as Head Start to a full-day, full-year schedule.

A Coherent System

How can policymakers increase the coherence of the early childhood service system? In the absence of a unified national policy toward children and families, a myriad of competing programs and interests have sprung up. These reflect the nation's laudable concern about the well-being of its youngest citizens, but collectively they are a confused array of independent, uncoordinated efforts to address closely related problems. The welter of diverse policy aims, target groups, and service strategies is unacceptably inefficient and wasteful, especially when resources are scarce. As one policy analyst has noted, early childhood programs overlap, compete, and leave important needs unaddressed: "Inconsistencies among programs have a number of costly consequences: duplication of effort, competition for resources, conflicting participation and eligibility requirements that burden and confuse providers and clients, competition for some clients and neglect of others, and discontinuities and inconsistencies in services that disrupt the lives of children and parents."³⁸

The importance of undertaking a comprehensive review of the programs and policies that address the needs of young children and families, to prioritize among them, and to develop realistic plans for integrating or linking them together has seldom loomed so large. The nation as a whole is reexamining the roles that federal, state, and local governments should play in addressing social issues. Government budgets will almost certainly shrink, making it critical that available resources be used as wisely as possible. The reconfiguration of government programs may also give state and even local leaders the flexibility and incentives to take a fresh look at early childhood programs, examining how they fit together and how they are influenced by broader child and family policies such as parental leave, tax policies that provide extra support to families with

children, and education and welfare reform.

Just as policy for children and parents should be unified, so too should practice. The lives of children and families are touched by many different institutions and agencies, including health care providers, social service agencies, employers, preschools, child care programs, family support programs, and schools. The fact that these are distinct, independent entities should not mean that they are unconnected or unaware of the role the others play in supporting child and family well-being. System linkages can help to stretch scarce resources and to reduce the confusion experienced by families and children when they participate in different programs or seek assistance from different agencies.

RECOMMENDATIONS

■ Policymakers should (1) establish a broad, interagency policy framework which specifies clearly defined and distinct goals for early childhood programs for children and parents; (2) identify specific program strategies to address those goals; and (3) coordinate the efforts of responsible agencies.

■ Early childhood programs should be helped and obliged to link with one another and with other social service programs in their communities. Linkages between child care programs and part-day preschool programs such as Head Start should be established first, followed by linkages between early childhood programs and the schools, as well as with the health care system and the child welfare system.

Conclusions

This journal issue is essentially a review of a research success story: research should facilitate action; and in the field of early childhood programs, it has done so. State and federal governments today make significant investments in early childhood programs, totaling about \$10 billion annually, and more children than ever before are enrolled in preschool programs. Of course, these

investments and participation rates are dwarfed by the cost and coverage of the nation's universal system of free public schooling (discussed in the article by Hernandez), and problems in quality and unevenness in coverage limit the positive benefits that may be obtained. Nevertheless, these numbers represent significant progress that is the result, at least in part, of research documenting the benefits of early childhood programs.³

For instance, a 1995 report by the National Conference of State Legislatures asserted: "The good news is that there now exists a significant research foundation to inform state policy development. Today, lawmakers know with great confidence not just that quality programs work, but also what makes them work. . . ."⁵⁹ A school superintendent quoted in another report said: "The effect of early intervention on school success is well documented. I believe that early intervention therapy, language stimulation and rich experiences at ages three and four will do more to increase the achievement of at-risk children and to reduce dropouts than any amount of money spent at grades seven through twelve."⁶⁰

Persuaded by evidence of the effectiveness of early childhood programs generally, this superintendent stepped beyond the existing research in concluding that investments in early childhood programs outweigh the value of investments in junior high or high school. For all its strengths, the research literature on early childhood programs does not provide guidance about such specific decisions, although those are the types of trade-offs policymakers must weigh when they formulate legislation and budgets.

As Zervigon-Hakes indicates in her article, research can and should be crafted in

cooperation with policymakers to answer the specific questions that they face. The next wave of research on early childhood programs should focus on policy trade-offs of the type mentioned by the superintendent and include studies that systematically vary program features to identify components and thresholds of program quality. To make maximum use of available funds, researchers should take advantage of the natural experiments that occur whenever new policy is implemented and should build on the groundwork laid by others by following up the young people who participated in research studies on earlier early childhood programs to observe long-term effects on their development.

It is important to recognize, too, that it is not always research that drives policy. Just as often, it is societal values that drive policy. As Boocock reports and Gustafsson and Stafford describe, many other nations have implemented far broader and more comprehensive early childhood systems based on far less research than exists in the United States, usually building upon the strength of commonly held values about children and families.

The early childhood years do indeed provide a moment when a door opens, and the future seems within reach. The current array of independent and uncoordinated early childhood policies and inadequately funded early childhood programs are squandering a precious opportunity. With hope and resolve, early childhood programs and policies can be united to provide a brighter future for America's disadvantaged children.

Deanna S. Gomby
Mary B. Larner
Carol S. Stevenson
Eugene M. Lewit
Richard E. Behrman

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