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REGULAR ARTICLES

Young Children with Autism: Judicial Responses to the Lovaas and Discrete Trial Training Debates

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In the last decade, parents have filed an increasing number of due process hearings and court cases requesting the Lovaas method, an intensive discrete trial training based on select principles of applied behavior analysis, for their young children with autism. This article examines provisions of the Individuals with Disabilities Education Act (IDEA) that relate to these cases, the Lovaas method and research issues surrounding it, published federal cases decided since the revisions to IDEA in 1997, and public policy issues that have surfaced as a result of the controversial cases. Recommendations for addressing these issues are offered.

Although the original federal legislation guaranteeing a free appropriate public education to children and youth with disabilities in the least restrictive environment was passed in the mid-1970s, ambiguities about the actual intent of the law and responsibilities of educational entities remain. Since 1995, parents have filed a growing number of due process hearings and court cases arguing that a free appropriate public education (FAPE) requires Lovaas or discrete trial training (DTT) methods for their young children with autism (Berkman, 1997; Feinberg & Beyer, 1998; Yell & Drasgow, 2000). Between the 1997 passage of amendments to the Individuals with Disabilities Education Act (IDEA) and mid-December 2002, federal courts decided 19 cases concerning the Lovaas method or the more generic DTT method. All of these cases involved children who were either eligible for or receiving early intervention services under IDEA or who were in preschool special education at the onset of the litigation. These cases have challenged the uncertainty surrounding the definitions of FAPE and meaningful educational benefit conferred by federal law.

In this article, we examine the dilemmas posed by the Lovaas and DTT cases as we (a) review the meaning of free appropriate public education (FAPE) and early intervention entitlement services under IDEA, (b) define and report the incidence of autism and associated autism spectrum disorders, (c) describe the Lovaas method and research that supports and refutes it, and (d) review federal cases involving the Lovaas method between the 1997 passage of IDEA amendments and December 2002. We then discuss policy questions raised by the cases, and recommend ways to address the dilemmas posed by the Lovaas cases.

INDIVIDUALS WITH DISABILITIES EDUCATION ACT

IDEA is a complex piece of legislation that establishes the right of all children and youth with disabilities to appropriate and individualized services or education, notwithstanding the extra cost involved (Berkman, 1997; Hehir

& Gamm, 1999; Huefner, 1997, 2000). Part C of the Act covers infants and toddlers from birth to age 3 while Part B covers children and youth from ages 3 to 22. The procedural safeguards of IDEA delineate parent involvement in the decision-making processes for their children. If parents disagree with the evaluation of their child, placement decisions, service recommendations, or the appropriateness of the program (Individualized Family Services Plan [IFSP] or Individualized Education Program [IEP]), they may seek relief through administrative hearings and court litigation. According to Part C of IDEA, the term infants and toddlers with disabilities applies to children who (a) are experiencing developmental delays in one or more of the following areas: cognitive, physical, communication, social or emotional, and adaptive development; (b) have a diagnosed condition that has a high probability of resulting in a developmental delay; or (c) at the state's discretion, infants and toddlers who are at-risk (IDEA, Supp III 1997, Sect.1432(5)). Under Part B of IDEA, 13 categories of disability, including autism, are specified. In addition, the law provides that young children, birth through age 9, may be classified under the noncategorical designation of developmental delay (Berkman, 1997; Huefner, 2000). IDEA specifies the types of services that may be offered (e.g., special education, speech therapy, assistive technology), types of locations in which services may be provided, and the process for decision making. It does not specify what constitutes appropriate services or education for a given child with a given disability (Berkman, 1997).

The Supreme Court attempted to clarify the ambiguities of FAPE under Part B in its decision in *Board of Education of Hendrick Hudson Central School District v. Rowley* (1982). The Court's interpretation of IDEA limits FAPE to the right to obtain some educational benefit rather than maximization of potential. The Court held that IDEA provides a ''basic floor of opportunity'' (Berkman, 1997; Hehir & Gamm, 1999; Huefner, 1997; Yell & Drasgow, 2000). The Court's analysis established the two-part test (the *Rowley* standard) used by lower courts when reviewing a school district's education program for a student:

> First, has the state complied with the procedures set forth in the Act? And second, is the individualized educational program developed through the Act's procedures reasonably calculated to enable the child to receive meaningful benefit? If these requirements are met, the state has complied with obligations imposed by Congress and the courts can require no more (*Board of Education of Hendrick Hudson Central School District v. Rowley*, 1982, p. 206).

Subsequent cases (e.g., *Board of Education of Clementon School District v. Oberti*, 1993; *Town of Burlington v. Department of Education*, 1985) have further interpreted FAPE as the entitlement to meaningful educational benefit (Berkman, 1997; Hehir & Gamm, 1999). Parents of young children with autism have gone to court seeking relief under the umbrella of IDEA, arguing that, for their children, FAPE and meaningful educational progress cannot occur without the Lovaas method, an intensive behavioral intervention that is a form of DTT designed specifically for children with autism.

The Lovaas cases have raised important questions about FAPE and early childhood special education. What is ''educational benefit''? Should the courts be involved in deciding methodology for the achievement of FAPE for children with autism? Do, or should, all children with disabilities have equal access to intensive, in-home services that extend beyond the school day? What is the role of the family in educational decision making under IDEA Part B and under Part C's family-centered intervention model? Should the extent of services be determined by disability category, and what are the implications of the developmental delay classification (Berkman, 1997; Feinberg & Beyer, 1998; Yell & Drasgow, 2000)? As the cases progress through the courts, some issues become clearer, but these and other questions continue to need further analysis and clarification.

AUTISM AND AUTISM SPECTRUM DISORDERS

Before we examine the above questions in relationship to the Lovaas cases, it is useful to review the definition of autism in the IDEA regulations:

> A developmental disability significantly affecting verbal and non-verbal communication and social interaction, generally evident before age 3, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences (IDEA Part B Regulations, 1999, Sec. 300.7b(1)).

Autism is not mutually exclusive of other disabilities, and a multidisciplinary team must confirm the educational diagnosis (Berkman, 1997). When children exhibit some autistic characteristics but do not meet the criteria for autism, they may be classified as having pervasive developmental disorder, not otherwise specified (PDD-NOS). PDD-NOS is not, however, a designated category under IDEA Part B. Nonetheless, at a state's discretion, children with a diagnosis of PDD-NOS may receive services under the category of developmental delay if they are under the age of 10 (Berkman, 1997). They may also receive services under other primary categories such as mental retardation, speech and language impairment, learning disability, or emotional disturbance. Similarly, individuals with other conditions that have been identified as occurring along the autism spectrum such as Asperger disorder, childhood disintegrative disorder, and Rett's disorder (Volkmar, Klin, & Cohen, 1997) must meet criteria set for other disability categories if they are to receive services under IDEA Part B. Under IDEA Part C, children from birth to age 3 who are diagnosed with PDD-NOS may receive services if the individual state eligibility definition includes the diagnosis or if they meet the delay criteria set by the state.

The incidence of autism has risen sharply since 1966 when initial surveys estimated that autism occurred in 4 to 5 per 10,000 persons. Recent studies using very rigorous criteria yielded rates of approximately 1 per 1,000 persons (Bryson, 1997; Wing, 1993). Other studies estimate the figure to be 1 in 700 births, with 2 in 1,000 persons diagnosed with PDD (Feinberg & Beyer, 1998). For the 1992–1993 school year, the U.S. Department of Education reported 15,580 school-aged children with autism (U.S. Department of Education, 1996), and for 2000–2001, the figure rose to 78,717 (U.S. Department of Education, 2001). Epidemiologists attribute the increase to changes in diagnostic criteria and increased awareness of autism and its expression, but a real increase in absolute numbers is also a possibility (Bryson, 1997; Feinberg & Beyer, 1998; Wing, 1993). A recent epidemiological study in California, which examined the 273% increase in cases of autism in the state between 1987 and 1998, found the rising number of cases could not be attributed to a loosening of the diagnostic criterion, a rise in the number of children with mental retardation who were misdiagnosed as having autism, or an in-migration of individuals with autism to the state (Bird, 2002). The diagnostic criteria for autism spectrum disorders are not clearly delineated and little definitive information is available about their incidence (Bryson, 1997; Volkmar et al., 1997).

Several treatment interventions have demonstrated effectiveness for treatment of children from birth to age 5 who have autism (Dawson & Osterling, 1997). Marcus, Garfinkle, and Wolery (2001) and Cohen and Volkmar (1997) delineated several intervention frameworks for the treatment of autism including (a) those primarily based on developmental, social-emotional theories such as Floortime (Greenspan & Weider, 1998); (b) inclusive, behavioral approaches such as the LEAP program (Learning Experiences: An Alternative Program for Preschoolers and Parents; Strain & Cordisco, 1994) and the Walden program (McGee, Daly & Jacobs 1994); (c) an integrative model such as TEACCH (Treatment and Education of Autistic and Communication Handicapped Children; Marcus, Schopler, & Lord, 2000); and (d) primarily intensive behavioral frameworks typified by the

Douglass Developmental Disabilities Center (Harris, Handleman, Arnold, & Gordon, 2000) and the Young Autism Project at the University of California at Los Angeles (UCLA; Lovaas, 1987).

A major study conducted by the National Research Council (2001) identified six features that are critical to appropriate intervention for young children with autism. Briefly, these include: (a) entry into intervention programs as soon as the diagnosis is seriously considered, (b) active engagement in intensive instructional programming for a minimum of 25 hr per week with full-year programming varied according to the child's chronological age or developmental level, (c) repeated teaching opportunities organized around brief periods of time in one-to-one and small group instruction to meet individual needs, (d) the availability of a family component that includes parent training, (e) low student/teacher ratios or no more than two young children with Autism Spectrum Disorders per adult, and (f) ongoing program evaluation and assessment of child progress that translate into adjustments in programming as indicated (p. 219).

Programs highlighted in IDEA litigation concerning children with autism are the Lovaas model and the TEACCH model, which is often offered as an alternative to Lovaas. The majority of cases involve the Lovaas model specifically. Two cases used only the term *discrete trial training* (DTT) as the method sought by the parents, and one case used only the terms DTT and *applied behavior analysis* (ABA).

LOVAAS METHOD

The terms ABA and DTT are used in some of the court cases as synonymous with the Lovaas method. Important distinctions, however, exist among these terms. ABA involves examining analytically what maintains a given behavior and then seeking to discover systematically what variables are effective in modifying it (Baer, Wolf, & Risely, 1968). Against the backdrop of Baer et al. (1968), Cooper, Heron, and Heward (1987) defined applied behavior analysis as ''the science in which procedures derived from the principles of behavior are systematically applied to improve socially significant behavior to a meaningful degree and to demonstrate experimentally that the procedures employed were responsible for the improvement in behavior'' (p. 14). DTT is one approach to behavior change and skill acquisition that is based on select principles of ABA. In DTT, skills are broken into small, measurable steps and are taught in one-to-one discrete trials until mastery. Trials are repeated numerous times and occur in rapid fashion. In accordance with operant principles, specific prompts are used to elicit responses, and consequent reinforcers follow correct responses. Behavioral techniques such as shaping and discrimination training also are applied (Marcus et al., 2001).

The Lovaas approach to the treatment of children with autism, one application of DTT, begins with intensive, one-to-one treatment for children under the age of 4, preferably as young as 2 years, in the child's home for a recommended 30 to 40 hr per week for 2 to 3 years. Instruction should gradually progress from one-to-one to small group, and finally, to large group instruction. A one-to-one or ''shadow'' aide is used often in school settings to assist the child as needed; however, the goal is for the child to function eventually in the general classroom environment with little or no support (Green, 1996; Harris & Weiss, 1998; Smith & Lovaas, 1998). Aversives (unpleasant stimuli or events) and punishment were once a part of the Lovaas method, but have now been eliminated (Smith & Lovaas, 1998).

Lovaas Research

In 1987, O. Ivar Lovaas published the results of a 15-year study, the Young Autism Project, based upon his methods. Preschool-age children with autism who had been referred to the Young Autism Project were assigned to one of two groups: an intensive-treatment experimental group that received 40 hr per week of one-to-one treatment ($n = 19$), or a control group ($n = 19$) that received 10 hr or fewer per week of the same one-to-one treatment.

Treatment group assignment was determined by staff availability as opposed to random assignment. If sufficient staff were available, participating children were assigned to the experimental group. If there were not enough staff or if the children lived more than a 1 hour drive from UCLA, the children were assigned to Control group 1. A second control group (n = 21) consisted of young children who had not been referred to the Young Autism Project. This group had similar treatment conditions as Control group 1, but the treatment was not administered by the Young Autism Project. The experimental and control groups received treatment for 2 or more years. The mean length of treatment was not provided in the original article. Treatment was delivered in the home and involved operant learning methods including reinforcement of desired behaviors and discrimination training. Ignoring behaviors, time-out procedures, and aversive consequences such as a loud ''no'' and thigh slapping were used to reduce aggressive or self-injurious behaviors. Because of staffing patterns, aversives were not used with the control group. At follow-up (age 7), 47% (n = 9) of the experimental group scored in the average range on standardized tests of mental development and adaptive scales and had been promoted from first to second grade. Two and one half percent (n = 1) of the control group achieved similar gains. Moreover, the gains made by the 9 children in the experimental group were maintained at age 13 (Green, 1996; McEachin, Smith, & Lovaas, 1993; Smith & Lovaas, 1998).

Smith, Eikeseth, Klevstrand, and Lovaas (1997) conducted a later study using archival data from children seen in the UCLA Young Autism Project or at replication sites, and they examined the efficacy of the Lovaas method by evaluating outcomes achieved by preschoolers with both severe mental retardation and PDD. The experimental group (n = 11 boys) received 30 hr per week of intensive in-home intervention using the Lovaas method, and a comparison group (n = 10) of 8 boys and 2 girls received 10 hr per week of the same treatment. Children in the experimental group received treatment for 2 or more years. Those in the control group received intervention for up to 2 years. Assignment to group was based on therapist availability. If therapists were available to provide intensive intervention, children were assigned to the experimental group. If sufficient therapists were not available, children were assigned to the comparison group. At follow-up evaluation, when the children were 5 to 7 years old, children in the experimental group had a higher mean DQ score (36 vs. 24) as measured by the Bayley Scales of Infant Development (Bayley, 1969) and demonstrated more expressive speech than did the comparison group using a scoring system developed by Lovaas (1987). The two groups did not differ significantly in prevalence of behavior problems.

Critique of the Lovaas Research

The 1987 study by Lovaas has not gone without notice or criticism. Gresham and MacMillan (1997a) delineated several methodological flaws in the study, including the lack of a random sample and random assignment to intervention groups. Moreover, different teaching approaches were not compared but rather differing intensities of the same approach. Only two intensities were measured, 40 hr and 10 hr per week, leaving unknown the threshold of intensity that might lie between the two. Physical punishment and other aversives were used in the original study but have since been eliminated from the program. Instrumentation problems also were found, including inappropriate use of numerous pretest and posttest measures, and the use of the Bayley Scales of Infant Development with children older than the 30-month age limit. Gresham and MacMillan criticized the study's interpretation of the educational placement outcome measure, because educational placement can be influenced by many factors, including parental input, teacher philosophy, and teacher attitudes. Further, Lovaas (1987) claimed the study followed a double-blind model, yet parents who filled out adaptive behavior scales and experimenters could not fail to notice how many hours per week of intervention children

received (Gresham & MacMillan, 1997a, 1997b).

Despite such criticisms, the Lovaas method and associated variants (e.g., Green, 1996) remain the only treatments that claim recovery from autism. The alleged achievement of ''normalcy'' by a high percentage of research participants with autism has generated great hope for many families of young children with autism. Parents across the country have requested that school districts and early intervention agencies fund intensive Lovaas-style treatment programs. Because of the increased demand, Lovaas treatment is offered by a rapidly expanding number of private agencies. Denial of requests for Lovaas treatment set the stage for the ensuing increase in the number of due process hearings and federal court cases.

POST-IDEA 1997 LOVAAS-TYPE CASES

The following analysis of federal court cases updates the Yell and Drasgow (2000) analysis of Lovaas-type administrative hearings and court cases between 1993 and 1998. Yell and Drasgow reported that school districts were ordered to reimburse parents or otherwise fund in-home Lovaas treatment in 76% of the hearings and cases they identified. Their analysis, however, was largely confined to administrative hearing decisions, and their article identified only three published court cases during this period of time. Our analysis reviews federal court litigation since passage of IDEA amendments in 1997 in which the plaintiffs were seeking Lovaas-type treatment or DTT for young children.

A search of the Lexis-Nexis database through mid-December 2002 using the keywords *autism* or *autistic* and *Lovaas* led to 16 federal court cases that focused on methodological issues involving young children in the IDEA Part C early intervention program or the Part B preschool program. In each case, parents were attempting to obtain publicly financed Lovaas training for their children. Three other cases (for a total of 19) were located and included because parents were requesting that the public school deliver or continue either discrete trial training or applied behavior analysis–phrases often used erroneously in the court cases as synonymous with Lovaas training.

As of mid-December 2002, 4 of the 12 regional circuits of the U.S. Court of Appeals and an additional eight lower courts within other circuits had decided Lovaas disputes. These court cases have more precedential value than administrative hearings and indicate what standards are actually being employed in federal court. At this point, parents are being granted substantial relief in court far less often than they were in the administrative hearings summarized by Yell and Drasgow (2000). Unlike the hearing decisions reported by Yell and Drasgow, recent federal court cases reflect fewer procedural errors. Procedural errors involve a breach of procedure required to identify eligible children and involve parents at key stages of decision making. In contrast, substantive errors involve a denial of appropriate educational services or placement for the eligible child. In the cases reviewed, prevailing school districts had not committed either kind of error and had empirically supported programs in place for children with autism. Parents were granted substantial relief in the form of reimbursement or continuation of Lovaas or DTT services in fewer than 25% ($n = 4$) of the 19 published decisions.

Part C Cases

Two early intervention cases, both decided in 1999, ruled against the parents of very young children with autism (see Table 1). In *Adams v. State of Oregon* (1999), the United States (U.S.) Court of Appeals for the Ninth Circuit determined that the child's IFSP dated March 1996, which was designed by an autism consultant and based on a study of model early intervention programs for children with autism, was designed appropriately and implemented to provide him with meaningful benefit. Therefore, the court denied reimbursement to the parents for expenses associated with private Lovaas-style DTT treatment. Under his IFSP, the child was receiving 12.5 hr per week of behavioral interventions that were

Table 1
Summary of Lovaas-Type Cases in Federal Court Under IDEA Part C: 1998–2002

Name of case	Court	Relief granted to plaintiffs	Reason	Type of LEA error
Adams v. State of Oregon (1999)	9th Circuit	Reimbursement for summer provision of ABA (no other relief because school-year IEP provided FAPE).	Reduction in summer hours was based on staff needs rather than child's needs.	Substantive
Wagner v. Short (1999)	District MD	None	Lack of parental cooperation.	—
Johnson v. Special Education Hearing Office (2002)	9th Circuit	None	Parents did not meet standards for preliminary injunction to alter stay-put order that allowed 35 hr per week of DTT to continue under new supervision.	—

Note. LEA = local education agency; ABA = applied behavioral analysis; IEP = Individualized Education Program; FAPE = free appropriate public education; DTT = discrete trial training.

not limited to DTT. The court observed that his IFSP should not be judged ''in hindsight'' based on outcomes (e.g., progress resulting from private tutoring) that could not be known at the time of IFSP formulation (*Adams*, 1999, p. 1149). On the other hand, the June 1996 IFSP designed for the child was found deficient because it called for a reduction in behavioral intervention services to 7.5 hr per week during summer months due to staff vacation schedules rather than to his individual developmental needs. The appellate court ordered reimbursement to the parents for summer provision of DTT services, with the actual amount to be determined by the district court.

In *Wagner v. Short* (1999), the Maryland federal district court denied the parents' claims because of their ''failure to cooperate'' with the school district (p. 678). The parents insisted on ''intensive applied behavior analysis'' provided by a private autism organization but were not willing to share four of five private evaluations or allow the school district to evaluate their child. As a result, early intervention personnel could not finalize an IFSP. Had they been able to do so, the IFSP would have been judged by whether it was reasonably calculated to provide the child with ''developmental benefit,'' a standard analogous to the FAPE standard of ''educational benefit'' under Part B. The parents went back to court on a separate issue when their child was 6 years-of-age, and the subsequent case (*Wagner v. Board of Education of Montgomery County*, 2002) made clear that the earlier proposed private treatment had been Lovaas-based DTT. The subsequent case is discussed under the Part B cases.

A third case involving a young boy with autism dealt with the transition between Part C and Part B services (*Johnson v. Special Education Hearing Office*, 2002). Like *Wagner v. Short*, the case appeared to involve a Lovaas dispute even though the name Lovaas was not mentioned in the decision. The parents were seeking continuation of 35 hr per week of in-home DTT for their preschooler, using the same private vendor that had been providing services under his IFSP. The school

Table 2

Summary of Lovaas-Type Cases in Federal Court Under IDEA Part B: 1998–2002

Name of case	Court	Relief granted to plaintiffs	Reason	Type of LEA error
Renner v. Board of Education of Ann Arbor (1999)	6th Circuit	None	FAPE provided by existing TEACCH-like method.	—
Dong v. Board of Education of Rochester (1999)	6th Circuit	None	FAPE provided by existing TEACCH method.	—
T.H. v. Palantine Community Consolidated School District (1999)	Northern District IL	Reimbursement to parents for 38 hr per week in-home Lovaas program.	IEP not calculated to provide meaningful benefit because not individualized for the student.	Substantive
Burilovich v. Board of Education of Lincoln Consolidated Schools (2000)	6th Circuit	None	FAPE provided by existing TEACCH-like method.	—
Gill v. Columbia 93 School District (2000)	8th Circuit	None	FAPE provided by existing method.	—
Board of Education of County of Kanawha v. Michael M. (2000)	Southern District WV	Final determination pending; remanded for proof from parents that in-home Lovaas program was calculated to provide meaningful benefit.	LEA could not show IEP was calculated to provide meaningful benefit; burden then shifted to parents.	Substantive
Pitchford v. Salem-Keizer School District No. 24J (2001)	District OR	None	FAPE provided by existing TEACCH method.	—
Jaynes v. Newport News School Board (2001)	4th Circuit	Reimbursement for private Lovaas program.	Failure to inform parents of right to due process hearing; parental placement was proper because child benefited.	Mixed procedural/ substantive
Amanda J. v. Clark County School District (2001)	9th Circuit	Reimbursement ordered for LEA's failure to provide procedural safeguards; hearing decision reinstated.	LEA failed to share evaluation information with parents.	Procedural
M.E. v. Board of Education for Buncombe County (2002)	Western District NC	None (on remand from 4th Circuit).	Parents did not meet burden of proof to show IEP would not have provided FAPE.	—

Table 2
Continued

Name of case	Court	Relief granted to plaintiffs	Reason	Type of LEA error
C.M. v. Board of Education of Henderson County (2002)	Western District NC	None (on remand from 4th Circuit).	FAPE offered under TEACCH method.	—
Wagner v. Board of Education of Montgomery County (2002)	District MD	School district ordered to propose a proper stay-put placement; no reimbursement ordered at this stage of the proceeding.	Collapse of in-home Lovaas services without sufficient alternative.	Mixed procedural/ substantive
Tyler v. Northwest Independent School District (2002)	Northern District TX	None	Preschool program was calculated to provide FAPE to child with PDD/ autism.	—
M.M. v. School District of Greenville County (2002)	4th Circuit	None	Preschool program provided FAPE.	—
L.B. v. Nebo School District (2002)	District UT	None	Preschool program provided FAPE.	—
J.P. v. West Clark Community Schools (2002)	Southern District IN	None	Preschool program provided FAPE.	—

Note. LEA = local education agency; FAPE = free appropriate public education; TEACCH = Treatment and Education of Autistic and Communication Handicapped Children; IEP = Individualized Education Program; PDD = pervasive developmental disorder.

district proposed to establish continuity between the boy's IFSP and his IEP by continuing the 35 hr per week of in-home DTT with a different provider. The parents requested a due process hearing and filed a request for a ''stay-put'' order to maintain the exact IFSP placement and program pending the outcome of the hearing. The hearing officer's order indicated that the school district had not violated the IDEA stay-put requirement by using a different vendor and supervisory services while providing a comparable placement and program to the one in the boy's IFSP. The U.S. Court of Appeals for the Ninth Circuit affirmed the hearing officer's ruling and upheld the district court's denial of the preliminary injunction sought by the parents. In short, a transfer of responsibilities from one educational agency to another did not, in itself, constitute a change of placement.

Part B Cases

As shown in Table 2, a number of Part B cases have involved disputes between the Lovaas and TEACCH or TEACCH-like methods of instructing preschool-age children with autism. TEACCH, begun at the University of North Carolina at Chapel Hill, is a cognitive-based program for children with autism that aims to improve the child's adaptation to the environment. In contrast to the home-based Lovaas method, TEACCH is classroom-based and emphasizes an integration of both cognitive and behavioral principles including behavior analysis (Schopler, 1997). The TEACCH program structures the environment to accommodate deficits commonly associated with autism. The physical space of a TEACCH classroom has clear visual and physical boundaries between activity areas, and auditory and visual distractions are minimized so that children can identify and remember activities and relationships between activities. Children are provided with visual schedule systems that help them anticipate and predict activities and compensate for problems with memory and language as independence is fostered. Activities are adapted to the needs of children and build on their relative strengths (Schopler, Mesibov, & Hearsey, 1995) and positive reinforcement or rewards are provided at high rates for desired behaviors. In addition, parent-professional collaboration is central to the TEACCH philosophy (Schopler, 1997).

TEACCH methods have been adopted in many states as a less intensive, more cognitive and social approach to autism interventions than the strict discrete trial training of the Lovaas method. Research supports the theoretical underpinnings of the model but outcome data for the effectiveness of TEACCH have been limited to parental evaluations and anecdotal and informal statistical information (Schopler, 1997). Less criticism has been directed to TEACCH, which does not require the same intensiveness of instruction or generate the emotional reaction associated with Lovaas claims of autism cures.

Cases decided in favor of school districts. In each of four TEACCH vs. Lovaas disputes in federal court, three of which were in the Sixth Circuit, the court declined to decide whether Lovaas or TEACCH-like methods would be more effective for the student involved (*Burilovich v. Board of Education of Lincoln Consolidated Schools,* 2000; *Dong v. Board of Education of Rochester Community Schools,* 1999; *Pitchford v. Salem-Keizer School District No. 24J,* 2001; *Renner v. Board of Education of Ann Arbor,* 1999). As long as the student's IEP met the *Rowley* standard (or a higher FAPE standard set by a state), the courts declined to interfere in the school district's judgment. The courts noted that the Lovaas method was the subject of professional debate and that no consensus had emerged within the field about the best method for treating young children with autism. In all four cases, the plaintiffs were receiving TEACCH or TEACCH-type interventions, often coupled with DTT for a portion of each day. In three of the cases, the courts noted that 40 hr per week of DTT urged by the parents was not tailored to the specific needs of the student, given the age of the child and the child's need to develop social relationships (*Burilovich,* 2000; *Pitchford,* 2001; *Renner,* 1999).

Two other cases, *Gill v. Columbia 93*

School District (2000) and *Tyler v. Northwest Independent School District* (2002), dealt with similar methodological disputes but provided less identifiable descriptions of the instructional method(s) selected by the school districts. In affirming the decision of the district court in the *Gill* case, the U.S. Court of Appeals for the Eighth Circuit noted that although the young boy's verbal skills had improved more rapidly under the parents' home-based Lovaas therapy, his social skills had declined. In response to issues of parental choice of methodology in the IEP process, the appellate court stated, ''Parents who believe that their child would benefit from a particular type of therapy are entitled to present their views at meetings of their child's IEP team, to bring along experts in support, and to seek administrative review . . . but it does not empower parents to make unilateral decisions about programs the public funds'' (p. 1038). Parental reimbursement was denied in the *Gill* case.

In *Tyler* (2002), the district court also dismissed claims for reimbursement for intensive, in-home Lovaas therapy and ruled that the school district's IEP, which included 6 hr per week of the requested 25 hr per week of in-home behavioral therapy, had produced significant educational benefit. The court ruled that the school was meeting the *Rowley* standard by its selection of multiple methods and was not obligated to deliver Lovaas treatment alone.

In all six of the above cases, the school district was providing some one-to-one behavioral intervention and addressing not only language and cognitive skills but also social skills. In each case, the court refused to determine whether the Lovaas method was superior to the school district's methods if the district's choice could be determined to provide FAPE.

Two other district court cases, both in North Carolina, raised TEACCH vs. Lovaas issues, but were complicated by issues of inadequate notice (*C.M. v. Board of Education of Henderson County*, 1999; *M.E. v. Board of Education for Buncombe County*, 1999). In *C.M.* (1999), expert witnesses disagreed about how much benefit the child was receiving from her private Lovaas programming. Experts for the parents found child gains and mastery of IEP goals to be far greater than did school district experts, who found her performance with her Lovaas teacher to be prompt-dependent and rote without evidence of true comprehension. The district court ruled that FAPE would have been provided by the TEACCH method under the 1996–1997 proposed IEP. It dismissed claims concerning the 1995–1996 IEP as untimely. The TEACCH method also was proposed by the school district in *M.E.* (1999), but the parents rejected it and sought reimbursement for Lovaas therapy in their home. The district court ruled that the parents' request for a due process hearing was time-barred because it was not within North Carolina's 60-day period for requesting the hearing.

On appeal, these two cases were consolidated by the U.S. Court of Appeals for the Fourth Circuit (*C.M. v. Board of Education of Henderson County, 2001*). The court upheld the 1996–1997 FAPE ruling in the *C.M.* case but overturned the district court rulings that had barred claims in both cases as untimely. According to the appellate court, ''in neither case did the school system's letters adequately notify the parents that school authorities had reached a final decision that could be challenged only in a due process hearing, which had to be requested within 60 days''(*C.M.*, 2001, p. 387). The court remanded both cases to the district court for further proceedings. On remand, the district court dismissed both cases in their entirety after consideration of all unresolved issues (*C.M. v. Board of Education of Henderson County, 2002*; *M.E. v. Board of Education for Buncombe County, 2002*).

Another Fourth Circuit case rejected parental reimbursement requests for in-home Lovaas training for their young daughter with autism (*M.M. v. School District of Greenville County, 2002*). The court focused on progress made under the girl's IEP and reversed the district court's holding that the preschooler's 1995–1996 IEP denied FAPE because it included only 1 day per week of preschool, along with limited amounts of physical ther-

apy, occupational therapy, and speech therapy. The district court had held that the IEP was not reasonably calculated for M.M. to benefit educationally, but the administrative rulings had found that she actually made progress during the 1995–1996 school year. The Fourth Circuit faulted the district court for not deferring to the hearing officers, especially when no evidence in the record documented that M.M.'s progress was in large part due to the Lovaas training. Moreover, the parents had preferred the 1 day per week preschool program over a more extensive preschool program because it allowed them to continue their Lovaas in-home program. The Fourth Circuit noted that ''[a]s a general matter, it is inappropriate, under the IDEA, for parents to seek cooperation from a school district, and then to seek to exact judicial punishment on the school authorities for acceding to their wishes'' (*M.M.*, 2002, p. 533, n.14).

M.M.'s parents also contested IEPs proposed for subsequent years, but the Fourth Circuit upheld the district court's decision that the 1996–1997 proposed IEP could have provided benefit had the parents allowed its implementation. The court held that the school's failure to have a completed and signed IEP was a harmless error resulting from lack of cooperation by the parents, who withdrew their daughter from the public school. Challenges to subsequent IEPs were dismissed for what the court judged to be a variety of procedural failures by the parents.

Finally, two cases decided in the last 6 months of 2002 also ruled in favor of school districts and against parents seeking 40 hr per week of ABA-DTT. In *L.B. v. Nebo School District* (2002), the parents asserted that their child required 40 hr per week of ABA and insisted that their child's least restrictive environment was a private preschool with children who are developing typically and a full-time shadow aide for the child (another phase in the Lovaas program). The court upheld the school district's proposed IEP in a public preschool that included children with and children without disabilities and that would have provided L.B. with 15 hr per week of ABA. The court found that the child was relying heavily on her shadow aide at the private preschool program, making the placement more restrictive than the public preschool. The court stated that (a) the amount of reliance a child should appropriately place on an aide, and (b) the number of hours of ABA needed to confer educational benefit, reflected methodological disputes in which the court should not become involved. The court upheld the hearing officer's ruling that the proposed IEP, which included speech therapy, occupational therapy, one-to-one instruction, and a summer preschool program was structured to provide L.B. with FAPE.

A significant decision in December 2002 in favor of a school district occurred in *J.P. v. West Clark Community Schools,* in which the court set forth an explicit standard for deciding methodological disputes affecting children with autism. J.P.'s parents claimed that the ABA-DTT approach ''should be recognized by the court as the only reasonable way to teach autistic children like J.P.'' (*J.P.*, 2002, p. 2). In deciding that the school district's approach was reasonably calculated to confer meaningful education benefit, the court stated that its decision needed to be fact-specific and required evidence from educational experts. Rejecting the parents' argument that the school district's approach to intervention was too ''eclectic'' to qualify as a methodology, the court outlined the following legal standard for determining whether a particular intervention approach was sound: (a) Can the school district ''articulate its rationale or explain the specific benefits'' of using that approach for the given child? (b) Do the teachers and special educators involved have ''the necessary experience and expertise to do so successfully''? and (c) Are there ''qualified experts in the educational community who consider the school district's approach to be at least adequate under the circumstances''? (*J.P.*, 2002, p. 59). The school district met each of these requirements. It had developed a program that used a variety of TEACCH techniques, involved both one-to-one and structured classroom time, and incorporated ABA-DTT methods. J.P.'s service providers could articulate the purpose of the elements of his program

and demonstrated their understanding of autism and J.P.'s needs. Witnesses with expertise in ABA, DTT, and TEACCH services testified to the effectiveness of the school's program used with J.P.

Cases decided in favor of parents. In contrast to the previous cases, two federal court cases held that proposed IEPs for children with autism were not calculated to provide meaningful benefit. In *T.H. v. Palatine Community Consolidated School District* (1999), the program offered by the school district consisted of 10 hr per week in a cross-categorical preschool class, 90 min per week of speech and language therapy, 60 min per week of social work, and 60 min per week of occupational therapy. The hearing officer found that the offered program was not based on the recommendations of autism experts and did not provide sufficiently intense, one-to-one training. The district ''chose the early childhood program because it was the only available school-based placement for [T.H.]'' (*T.H.*, 1999, p. 837). The district's plan did not include a behavior management plan and failed to provide education during an extended school year. District staff stated that they were uncomfortable with the parents' proposed Lovaas-DTT method but were unable to articulate an alternative methodology. In its ruling, the District Court for the Northern District of Illinois stated that neither of the IEPs crafted by the district ''constituted an appropriate placement for [T.H.] given his unique needs and capacities'' (*T.H.*, 1999, p. 843). The district was ordered to reimburse the parents for the costs of their 38-hr per week in-home Lovaas program.

Like the *T.H.* case, the District Court for the Southern District of West Virginia in *Board of Education of the County of Kanawha v. Michael M.* (2000) determined that the school district had not met its burden of proving that Michael's IEP was reasonably calculated to provide him FAPE. Although both sides agreed that the goals and objectives of the IEP were reasonable, the court stated, ''the entire dispute rests on the issue of whether the methodology in the IEPs was reasonably tailored to accomplish the goals set forth in the IEPs'' (*Board of Education of the County of Kanawha v. Michael M.*, 2000, p. 611). The school argued that Michael had made progress towards his IEP goals during the year when the parents' home-based Lovaas program was in effect. The court observed that it was more important to determine whether IEPs, ''at the time of creation, were reasonably calculated to provide some educational benefit'' (*Board of Education of the County of Kanawha v. Michael M.*, 2000, p. 609). According to the court, determining whether progress was the result of the school's IEP or the parents' home-based program was not needed. The school district's itinerant autism teacher and kindergarten teacher, however, were unable to provide any supporting materials or testimony to back up their conclusion that the methodology used by the school provided FAPE; they could not show that it was generally accepted by the education community or was recognized by other experts as reasonable. After hearing detailed testimony from the parents' expert witnesses, the court concluded that the school district did not meet its burden to show that Michael's IEP was reasonably tailored to his needs. The court then shifted the burden of proof to the parents, stating they would be entitled to reimbursement for the home-based program only if they could ''prove that the home-based supplemental Lovaas program was reasonably calculated'' to provide FAPE (*Board of Education of the County of Kanawha v. Michael M.*, 2000, p. 612). This issue was scheduled for further briefing.

These two decisions favoring parents involved school districts that could not explain the rationale for their choice of methodology adequately. Furthermore, they could not offer empirically based support for the choice, or could not demonstrate that the proposed services were tailored to meet the student's unique needs.

Another Part B case, *Wagner v. Board of Education of Montgomery County* (2002), was decided several years after the earlier Part C *Wagne*r case in 1999. The parents sought a preliminary injunction ordering the school district to provide an appropriate stay-put placement while proceedings were ongoing.

They also sought reimbursement for their unilaterally arranged, private Lovaas services during a 4-month period of time when IEP-based DTT services by a district-approved private provider collapsed. This time the court's decision was mixed. The court ordered the school district to provide a proper stay-put alternative to the failed services but declined to order reimbursement because, at the preliminary injunction stage of the proceedings, the court could not ascertain whether the parent's choice of provider was proper.

Two other cases ruled for the parents because of serious procedural errors by the school district. In *Amanda J. v. Clark County School District* (2001), failure to share evaluation information with parents identifying their daughter's possible autism constituted a serious enough procedural failing to generate a decision by the Ninth Circuit that FAPE had been denied. Similarly, in *Jaynes v. Newport News School Board* (2001), the Fourth Circuit ruled that reimbursement to parents for a private Lovaas program was proper because of (a) repeated failure by the school district to inform the parents of their right to a due process hearing when they were dissatisfied with their son's lack of progress in a district program designed for children with various disabilities, and (b) benefit received by the student from his private Lovaas therapy.

PUBLIC POLICY ISSUES

All 19 of the federal cases involving Lovaas or DTT methodology decided between the 1997 amendments to IDEA and mid-December 2002 have involved children who were either eligible for or involved in early intervention, or who were in preschool programs when the cases were initiated. Thus, early childhood special education programs have been propelled into the national legal and public policy debate regarding developmental benefit or FAPE and young children with autism. The mixed nature of the court decisions has created uncertainty in the policy arena as early intervention and preschool special education professionals grapple with new issues the cases have raised and their implications for the provision of meaningful developmental or educational benefit within the early childhood context.

Developmental Delay Classification and Autism

Consistent with IDEA's 1997 extension of the developmental delay category for optional use by states with children birth through age 9, the Division for Early Childhood (DEC) of the Council for Exceptional Children adopted a policy statement in December 2000 recommending the use of the developmental delay category through age 8. The recommendation was based on several facts: (a) The development of young children is better described by developmental metrics than by a more educational or academic focus, (b) the use of standardized and norm-referenced measures is problematic with young children and can result in unnecessary miscategorization, (c) discrete categorical labeling might be premature in the early grades because children must acculturate within the school community and could have had limited opportunities to learn and practice school behaviors, (d) informed team decisions that utilize professional judgment and family input should contribute to eligibility decisions, and (f) the use of the developmental delay category during the early childhood years facilitates a broader, whole-child perspective for intervention (Division for Early Childhood, 2000).

Because the Lovaas method and certain other specialized programs have been developed and used specifically for children with autism, the question arises of whether a child with a classification of developmental delay (DD) can receive such services. The federal courts have not addressed whether children with DD classification can lay claim to the same intensive interventions developed for young children diagnosed with autism. School districts, early intervention providers, and parents might be hesitant to use the DD label, in situations where autism is suspected, for fear the courts will determine that schools and providers could not tailor a program for a child with autism if they failed to recognize and categorize the autism.

Although the risks associated with the premature classification of autism are exacerbated because parents and service providers fear under-identification and a concomitant loss of appropriate and timely intervention without that classification, it is difficult to assert that the recommendations of DEC do not hold true for children with suspected autism. Regardless of label, thorough and functional evaluations in all areas should be completed, and parents should be fully informed of any assessment information that points toward autism. Failure to provide and interpret fully all assessment and evaluation data for parents is neither ethical nor consistent with IDEA, as seen in *Amanda J. v. Clark County School District* (2001). Research has demonstrated that diverse early intervention strategies appropriate for young children with autism can result in significant developmental gains (Dawson & Osterling, 1997). The use of the DD category need not preclude the use of appropriate intervention designed to address autistic-like characteristics. On the contrary, the crux of IDEA is that services are determined based upon individual need, not label, but the central theme of the Lovaas cases has been services based upon the diagnosis and label of autism. How the courts will resolve FAPE disputes for children with developmental delays rather than more recognizable disability conditions remains to be seen.

Family-Centered Intervention and Parental Choice

Central to Part C services is the premise that services should be delivered in a family-centered manner (McBride, Brotherson, Joanning, Whiddon, & Demmitt, 1993; McGonigal, Kaufmann, & Johnson, 1991). The IFSP should be developed collaboratively with parents and other family members and designed to reflect the ''family's resources, priorities, and concerns'' (IDEA, Supp. III 1997, Sect. 1436 (a)(2)). Consistent with Part B services, the IFSP is developed by a team rather than unilaterally by the parents; by definition, however, it is a ''family plan.'' Although the IFSP is team-designed, the power to reject IFSP services ultimately remains with the parents. If they do not consent to a particular service or service location, it cannot be provided. Other services delineated in the IFSP for which consent has been obtained may still be provided (IDEA, Supp. III 1997, Sect. 1436 (e)). Policy conflicts arise when genuine disagreement occurs over type and intensity of intervention strategies. Questions of whether services are family-centered, family-driven, or agency-driven have moved to the forefront of policy debate as parents have adamantly requested intensive, in-home DTT that might be contrary to what other team members believe is in the best interests of the child in question. We have not located any federal court decisions that have addressed the question of whether parental preference with respect to methodology is more important in Part C cases than Part B cases.

Methodological Debate

In general, courts have left decisions regarding choice of methodologies to educators provided the two-part test outlined in *Rowley* was met. The IDEA amendments of 1997 and regulations guiding their implementation, however, raised the possibility that methodological debates would increase. For instance, the regulations state, ''If, in considering the special factors described, the IEP determines a child needs a particular device or service (including an intervention, accommodation, or other program modification) in order for the child to receive FAPE, the IEP team must include a statement to that effect in the child's IEP'' (IDEA B Regulations, 1999, Sect. 300.346(c)). The regulations further define specially designed instruction to mean adaptation of ''the content, *methodology* [italics added], or delivery of instruction to address the unique needs of the child that result from the child's disability'' (IDEA B Regulations, 1999, Sect. 300.26(b)(3)). These changes parallel language in Part C of IDEA dealing with the Individualized Family Service Plan (IFSP), which calls for ''a statement of specific early intervention services necessary to meet the unique needs of the infant or toddler and the family, including the frequency, intensity, and

method [italics added] of delivering services'' (IDEA, Supp. III 1997, Sect. 1436(d)(4)).

In an analysis accompanying the definition of specially designed instruction, the Department of Education observed that case law has recognized instructional methodology as an important consideration in determining what constitutes appropriate education. The analysis stated that a particular methodology might be what is ''individualized'' in a student's program (U.S. Department of Education, 1999). Nonetheless, in the past, the courts have indicated that they will not substitute a methodology preferred by parents for programs developed by school personnel that are based on sound educational practices and that meet the procedural requirements of IDEA (U.S. Department of Education, 1999). No cases discussed in this paper alter this trend, although most of the court decisions reported here have concerned issues that arose before the 1998 effective date for the new IEP requirements.

In multiple cases reviewed in this paper, the methodological debate centered on the merits of two methodologies for children with autism, Lovaas and TEACCH. Experts representing each methodology have presented their respective body of research and theory, and the courts, in what appears to be an expert vs. expert arena, have been asked to decide questions regarding methodological superiority that to date have eluded specialists in the field of special education. In the majority of decisions reviewed, the courts continued to defer to school districts but required justification of IEP-based teaching methods as data based and calculated to address the individual needs of a child with autism. In other words, increasingly, school districts must demonstrate why courts should defer to their judgment.

RECOMMENDATIONS

The Lovaas cases represent significant and escalating disagreements between families and various agencies charged with delivering early intervention or educational services. Conflicts have been based on both the procedural and substantive provisions of IDEA. While the outcomes of cases have differed, several requirements have been consistently upheld and a number of recommendations have emerged from the collective decisions: (a) Practitioners should base service determinations on the needs of individual children, rather than the needs of agencies or on the blanket adoption of a given program; (b) agencies must have available individuals qualified to assess children suspected of having autism; (c) programs for children with autism should reflect current, empirically validated research; (d) agencies should have individuals available who are knowledgeable about and skilled in delivering the various programs and educational techniques appropriate for individuals with autism; (e) progress toward goals must be measured; (f) the need for extended school year services for Part B children must be carefully considered; and (g) practitioners must develop individualized programs that address all areas of need, regardless of whether they are commonly associated with the child's identified disability.

Parents should have the opportunity to be participating partners during assessment, eligibility determination, program development and implementation, and program evaluation. Failure to involve parents at these stages will result in serious procedural violations of IDEA, and it is unrealistic to expect partnerships to develop if ignored until the final stage of the IEP and IFSP processes. To be full participating partners in IEP and IFSP processes, parents need to have an understanding of IDEA, especially FAPE under Part B. To meet this need, parent training centers should continue to provide specific training for family members on the legalities of early intervention and special education and enhance outreach efforts to ensure that increasing numbers of parents are aware of such training and its accessibility to a wide range of family members. In light of the court decisions that have cited a lack of ''cooperation'' on the part of parents, it is important that parent training also include a component on the responsibilities of parents in relation to early intervention and educational agencies.

The dilemmas presented by the cases re-

viewed in this paper defy simple answers. It is critical that the issues not be seen as a win-lose dichotomy. Solutions do not lie in teaching agencies how to develop ''bullet proof'' programs or teaching parents how to sue school districts successfully. Dilemmas presented by the cases also cannot be solved through parsing the meaning of ''developmental or educational benefit'' to their barest minimum. Further, the complex nature of autism mandates that the solutions lie not in ''cookie cutter'' programs, however intensive or expensive, but rather must be found in diverse, empirically validated interventions tailored to meet individual needs. To this end, a continuing need exists for improved preservice and inservice training for those who deliver interventions. In addition, coordinated empirical inquiry is needed to document the efficacy of various intervention programs and their ability to impact symptoms of disabilities including autism and autism spectrum disorders. Dilemmas surrounding the diagnosis and treatment of autism can be solved only when individualized, research-based programs that adhere to the spirit of IDEA are built in partnership with families to provide young children with disabilities, including autism, services that promote meaningful lifelong benefits.

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