Best Practices for Designing and Delivering
Effective Programs for Individuals with

Autistic Spectrum Disorders

Recommendations of the Collaborative Work Group on Autistic Spectrum Disorders

Sponsored by the California Departments of Education and
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FOREWORD

The purpose of this document is to define and clarify issues in providing appropriate and effective interventions for individuals with autism and autism-related disorders. For the purpose of this report, the entire range of these disorders is referred to as ”autistic spectrum disorders,” or ASD.

The recommendations in this document reflect a consensus of the work group of ”best practices” in the design and delivery of effective programs for individuals with ASD.

The recommendations were collaboratively developed by an interagency work group consisting of administrators, professionals, researchers, and parents of children with autism. Representatives from the following participated in the work group:

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3. CALIFORNIA STATE COUNCIL ON DEVELOPMENTAL DISABILITIES
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10. PROTECTION AND ADVOCACY, INC.
11. PARENTS OF INDVIDUALS WITH AUTISTIC SPECTRUM DISORDERS

It is the intent of this collaborative work group to encourage shared responsibility and collaboration among parents, schools, regional centers, and other agencies transcending traditional organizational boundaries to facilitate a seam- less model of service delivery.

Acknowledgments

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Introduction

In California, as well as throughout the nation, there has been a marked increase in the number of children diagnosed with autism and pervasive developmental disorders (PDD). National statistics indicate that autism and PDD occur in approximately five to 15 of every 10,000 births.

Between the 1994 and 1995 school years, data from the California Department of Education's Management Information System (CASEMIS) reported an increase of 549 students, or 25.6 percent, with autism. In July 1996, the Department of Developmental Services, through its regional center system, was serving 3,838 children diagnosed with autistic disorder.

In the diagnostic manual used to classify disabilities, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994), ”autistic disorder” is listed as a category under the heading of ”Pervasive Developmental Disorders.” A diagnosis of autistic disorder is made when an individual displays six or more of twelve symptoms listed across three major areas: social interaction, communication, and behavior. When children display similar behaviors but do not meet the criteria for autistic disorder, they may receive a diagnosis of Pervasive Developmental Disorders-NOS (not otherwise specified). In this document, the term ”autistic spectrum disorders” (ASD) will be used to cover all of these similar neurological disorders. Please see Appendix A (page 27) for more thorough definitions of these terms.

This entire spectrum of autistic disorders comprises a highly complex and unique disability only recognized by Congress in the 1990 reauthorization of the Individuals with Disabilities Education Act (IDEA, now Public Law 101-476). In that year, autism was officially listed as a specific disability eligible for special education programs and related services. Before 1990, children diagnosed with ASD were most often classified with ”other health impaired” or ”multihandicapped” students. With the 1990 reauthorization, local educational agencies were mandated to specifically address the difficult educational needs of autistic children.

In October 1993, California fully implemented the federal Part C (formally Part H) program known as Early Start. This program provides early intervention services to infants and toddlers with disabilities (including autism) and delays or at risk or developmental delays from birth to thirty-six months of age. Both regional centers and infant and preschool programs faced the challenge of developing appropriate interventions for young children with ASD.

Best Practices for Designing and Delivering Effective Programs for Individuals with Autistic Spectrum Disorders was developed to address the complex and unique needs of children with ASD. Parents, educators and other professionals have been faced with problematic issues of choosing effective intervention methodologies, attempting to coordinate assessment and planning across agencies, and obtaining appropriate training and consultation for staff. Often, the assessment of a child had focused only on one facet of development, such as behavior or communication. Previously, program planning had not been consistently coordinated between home, school, and community.

This document responds to requests for information and resources from the special education local plan area (SELPA) administrators and Association of Regional Center Agencies (ARCA). It is not intended to be a comprehensive publication on individuals with ASD, but rather a summary of suggested strategies for addressing common issues in program development, transition planning, provision of effective staff development, and program evaluation. Appendices have been in- cluded to supplement information provided in the major sections of the document. State and national resources for ASD, as well as suggested readings, have been pro- vided as additional information for parents, educators, and service providers.

It is the hope of the work group that school districts, regional centers, parents, and professionals will work collaboratively to develop and implement proposals identified in this document. Examples of interagency components, agreements, and memoranda of understanding have been included in the appendices to further the goal of providing effective, timely, and individualized services for every child with autism.

Guiding Principles

In appropriately written, individualized education program or intervention plan for an individual with autism is based on knowledge of current, relevant research, effective practices, and recognition of the wide range of characteristics that are classified as symptoms of various autistic spectrum disorders (ASD).

Methods or combinations of approaches are available for the education and treatment of individuals with ASD. The selection of interventions and the development of curricula are dependent upon a variety of factors relating to the needs of the individual and the family. The individualized family service plan (IFSP), individualized program plan (IPP), individualized education program (IEP), and/or any other service plan reflect informed, comprehensive assessment procedures and can be delivered in settings designated by the program team.

The ongoing appropriateness and effectiveness of each plan is contingent on periodic review of each person’s progress as well as the identification and provision of needed resources and staff training.

The following principles of best practice are intended to institute shared responsibility and collaboration among parents, schools, and regional centers. They apply to therapy or instructional intervention directed at individuals from infancy through age twenty-one who have a diagnosis of ASD.

Principles of Providing Services for Individuals with Autistic Spectrum

Disorders

- An effective therapy/treatment or instructional program is:
- Based on current research and effective practices;
- Inclusive of a variety of methods and approaches in intervention and program planning;
- Based on comprehensive assessment results;
- Determined by a multidisciplinary team that includes parents;
- Reflective of the individual's areas of need, which drive the curriculum or service plan;
- Outcome based;
- Provided by appropriately trained and competent personnel, which can include parents as appropriate; and
- Inclusive of entrance and exit criteria.

Any intervention or instructional program that is not effective in meeting documented needs of the child/student is revised or discontinued.

A program based on these guiding principles and the components outlined in the following sections can maximize the student's development of academic skills, social comfort, and competence, including the ability to communicate with others, and independence in the performance of functional life skills.

PARENTAL INVOLVEMENT

A collective, collaborative process between professionals and parents requires - each party to share their expertise and resources, respecting the other's "efforts and contributions towards the development of a comprehensive intervention plan. While trust and mutual respect evolve over time and should not be seen as prerequisites for beginning to work together effectively, the willingness of both parents and professionals to begin their relationship with confidence in the other's abilities is the first step toward that process.

From the outset, parents are going to be interacting with a service delivery system that is complex and sometimes frustrating. Parents will be coping not only with the day-to-day stress of their child's behavior, and often nighttime sleep disorders, but also with the course of unpredictable outcomes associated with autistic spectrum disorders.

All parents should be expected to participate in the development and implementation of their child's program to the extent that they are able. Most parents are tremendously motivated to help their children but vary greatly in how the motivation manifests itself. Some have the time, money, temperament, and educational background to "specialize" in one variant of a disability to an extent that professionals usually cannot. Such parents will often have current knowledge about ASD treatments that can be shared with professional staff. Other parents, also as motivated, are temporarily or permanently in positions in which they must rely heavily on the expertise and resources of educational and other service agencies.

Best Practices

Parents need to have confidence that professionals with whom they deal will:

- Be knowledgeable in the area of autism;
- Carefully consider and openly inform them about the range of educational and service options for children with ASD from the beginning of the relationship;
- Report progress, regressions, and plateaus;
- Offer intervention recommendations based on their professional expertise in ASD that deal specifically with the child's unique needs; and
- Work collaboratively with families and other agencies to provide appropriate services that meet the needs of each child and fit into the family's capabilities.

Growing knowledge and public awareness of ASD have created a situation in which many professionals are learning and trying new approaches. It is essential for parents to recognize that professionals have studied and practiced strategies that can be extremely effective with their children. Furthermore, treatment is often a ”trial-and-error” process in which even the most skillful interventions do not always lead to immediate desired results. Subsequently, more frequent review of the service plan may be required to modify and/or create new strategies.

To enhance the child's abilities, generalize skills, and maximize potential, parents are often required to extend communication beyond the traditional parent- teacher or parent-professional models. It is imperative to successful collaboration that the following occur:

- Parents and professionals are honest with each other about their long-term goals for the child. These long-term goals guide professional recommendations and parents' expectations.
- Both parents and professionals refrain from making assumptions about the other's level of knowledge and accept responsibility for openly sharing and receiving information.
- High-quality training with frequent, consistent follow-up is given jointly to parents and professionals. This allows each party the skills necessary to help the child make gains, create strategies to solve problems, reinforce appropriate behaviors, and generalize new skills across domains.

If all parties come together with a commitment to open communication and child advocacy, the goal of mutual trust and respect can be met. With mutual trust and respect, parents and professionals can work effectively in a cooperative and collaborative environment. Our high expectations for children with autism can be realized through this supportive process.

Identification and Referral

More and more school professionals and service providers have concluded that to be successful in their work there must be a commitment to a high degree of professional sharing. Specifically, there must be sharing of educational tools, professional skills and, most importantly, a shared responsibility for all children with ASD. There was general consensus that collaboration among all service agencies is an effective and unifying means to achieve this end.

Parent-professional partnerships add to the strength of effective service delivery systems and intervention plans. The child is best understood in the context of the family environment. Adjustments to this environment are the key to educational, behavioral, or adaptational changes in the child. Thus, the agents of change, including teachers, service providers, and community members extend to the family and other key individuals in the child's world.

Collaborative Process for Identification and Referral

- Once an agency receives a referral, that agency, with parental consent, initiates a collaborative identification and information-sharing process with other responsible agencies.
- Agencies respond to families in a timely manner.
- Agencies assist families by offering support in understanding autism.
- Agencies assist families in accessing services by sharing and providing information and program options available for the child and family.
- Parents are encouraged to be full partners in the collaborative process.

Please see the Appendices for information on Resources and Suggested Readings.

Assessment

Comprehensive assessment and evaluation set the foundation for the overall quality and appropriateness of final recommendations in an individualized family services plan (IFSP), an individualized program plan (IPP), and an individualized education program (IEP) that may include transition services as appropriate. The success of an individualized early intervention and education program begins with accurate assessment. A thorough developmental assessment not only identifies the child's strengths and needs from which realistic teaching objectives are designed, but also establishes a baseline against which measures of progress can be made. More important, preintervention assessment data, when interpreted by experienced professionals and educators and shared with parents, shape parents' expectations about the course and outcome of treatment.

The stress of receiving a confirmed diagnosis of autism and possibly mental retardation complicates the task of communicating developmental information.

Nevertheless, accurate assessment data, presented to parents in an objective, sensitive, and caring manner, is indispensable preparation for contemplating an early intervention or educational program. It is the assessment team's responsibility to gather, present, and openly discuss relevant information needed by parents of a child diagnosed with ASD. Professionals are responsible for sharing the information with parents to reach a mutual and realistic expectation of instructional outcomes as well as an understanding of alternative approaches.

Assessment and intervention are ongoing processes; they require the in- formation gained to be continuously fed back into the system to influence the intervention plan and, ultimately, the outcome.

Collaborative Aspects of Comprehensive Assessment

- Parents are encouraged to actively participate in the assessment process to assure that any assessment is reflective of the child's functioning within the family setting or from the parent's perspective.
- Agencies collaborate in the assessment process to reduce duplication, cost, and stress on the child and family.
- Participating agencies are encouraged to jointly plan the assessment process, which determines program eligibility and service needs.
- Results of the assessment are integrated into the IFSP, IPP, and/or IEP.
- The need for ongoing reassessment is determined by the collaborative team's review of progress (or suspected lack of progress) in achieving individual program objectives and curriculum goals.

Assessment Domains

Assessment domains may differ as a result of an individual's age, developmental level, diagnosis, and areas of need. The domains may include, but are not limited to, the following:

- Cognition/developmental levels
- Social/emotional skills
- Sensory regulation
- Motor skills
- Communication skills
- Play/leisure-time activities
- Preacademic/academic skills
- Prevocational/vocational skills
- Self-help, independent-living skills
- Community-based skills
- Behavior

Methods of Assessment

Methods of assessment are individualized based on age, developmental level, diagnosis, and areas of need and may include:

- Standardized assessment tools
- Developmental assessment approaches
- A developmental history
- A medical history
- A family interview
- A review of records
- Natural and structured observations in multiple settings
- Functional analysis of behavior
- Documentation of symptomology
- Family assessment

Please refer to the Appendices for specific diagnostic and assessment instruments appropriate for children with ASD.

Program Characteristics

Individual programs will differ from child to child because of the uniqueness of the autistic disorder. Programs require a structured, collaborative effort as determined by the IEP, IFSP, and/or IPP team process to meet the needs of the individual and family.

A consensus has emerged among researchers, practitioners, and educators that appropriate intervention/education begins early, usually by thirty months. Teaching objectives are comprehensive and the child is given opportunities to generalize learned behavior. Individual differences must be recognized in deter- mining program intensity.

Characteristics of Effective Programs

- Founded on the techniques of research-based methods and curricula
- Clearly defined (operationally defined) and have entrance and exit criteria (i.e., standards for mastery of goals and objectives)
- Supervised by staff trained to understand the implications of autism
- Inclusive of parents and address training issues, decision-making, and follow-up service provisions
- Conducted in a variety of settings
- Consistent across environments (i.e., home, school, community)
- Designed to allow the child to transition to settings or activities which promote more independent functioning
- Staffed (student/teacher/therapist/child ratio) to provide sufficient support to allow the individual to demonstrate progress in meeting IFSP/IPP/IEP goals, objectives, and outcomes

Program Planning

Positive outcomes are a direct result of intensity and consistency of intervention across home, school, and community environments. The range of options can be expanded through interagency collaboration.

Best Practices

- Agencies and parents identify programmatic needs based on the individual's assessment information.
- Goals and objectives are established in priority areas according to assessment findings, cover the child's strengths and needs, and include:
  - Child and family/parent priorities and needs;
  - Skills with functional outcomes in such areas as communication, sensory regulation, social relating, imitation, generalization, attention, and replacement of inappropriate behaviors;
  - Defined criteria for changing program components (setting, supports, services, etc.); and
  - All domains relevant to the child's age and developmental level, which may include motor skills, academic functioning, generalization, and maintenance of skills.
- Specification of necessary service and program supports (e.g., staff ratios and other variables) are identified.
- Agencies responsible for services and/or program delivery are identified.
- The number of days of service in the calendar year is considered.
- Specific identification of frequency and duration of services is made.
- Service options and related services considered are specifically identified in writing.
- Procedures for promoting generalization and maintenance of skills are made.
- The instructional setting and environment are determined by the IFSP, IPP, and/or IEP and are based on a comprehensive assessment that includes evaluation of potential environments and individual needs. Setting options need to be age-appropriate and may include, but are not limited to:
  - Combinations through nonpublic schoo1s/agencies;
  - Community-based programs;
  - District/county-operated special education programs;
  - District special education settings and classrooms;
  - General education settings and classrooms;
  - Home-based programs;
  - Home-based programs implemented primarily by parents in conjunction with classroom program(s); or
  - Any combination of any of the above.

- Data collection (measurement of the child's performance/behavior) format and schedule (e.g., daily, weekly, quarterly, etc.) is agreed upon.
- Actual number of hours/days are determined based on the assessment and recommendation of an interdisciplinary team. Days and hours are determined by age, individual goals, and objectives of the child.
- The number of school days per year is defined by the IEP team.

See the Appendices for a sample checklist for developing program services.

Curriculum, Instruction, And Plan Implementation

In California, all pupils, including those with autism, require access to the school district's core curriculum. Children with autism require disability- specific adaptations and modifications to access the district's core curriculum. Curriculum modifications, along with age-level expectations and IEP goals and objectives, form the basis for effective program planning. For young children, curriculum and interventions are defined by developmental stages and milestones and are outlined in the IFSP.

Curriculum design and emphasis need to reflect the unique learning styles and abilities of each child.

Curriculum

Access to curriculum is dependent upon the following:

- Results of a comprehensive assessment
- Method of instruction
- Use of a specially-designed approach that considers learning style
- Careful selection of appropriate learning materials
- Development of an environment which supports maximum learning
- Appropriate objectives for child development
- Measured methods of criteria for evaluation
- Selection of modified, parallel, or formalized curricula
- Coordination of program across home, school, and community environments
- Staff background and experience

Instructional Design

Instruction (methods, tools, and materials) and environment must be selected, adapted, modified, and varied to allow the child to demonstrate progress according to the standard measures identified by the curriculum and the IFSP and/or the IEP. This will be accomplished through emphasis on the child's strengths and by ad- dressing the areas that most interfere with learning (e.g., hyper/hypo-sensitivity to sensory processing – tactile, auditory, or visual).

Programs that appear to result in growth in areas such as social engagement, language, coping, and reduction of difficult behaviors have the following characteristics:

- Applied behavioral analysis is usually needed to assist a child to gain skills and reduce negative or undesirable behaviors.
  - A functional behavioral analysis approach is applied to challenging behavior, looking for the communicative intent of behavior.
  - The intervention is planned to acknowledge the communicative intent.
  - Positive behaviors are reinforced to reduce negative behaviors.
  - Replacement behaviors are used (e.g., substitute a simple acceptable behavior when a child begins to tantrum).
- An individualized approach is used to select a developmentally appropriate method and level of program.
  - Several intervention methods (such as discrete trial, environmental modifications, naturalistic teacher moments, or inclusion with typically developing peers) are considered in the selection.
  - No single approach is likely to be right for every child.
  - The child is watched to see what interventions work.
- The curriculum is organized around normal developmental expectations.
  - The child’s level of development is analyzed in cognitive skills, adaptive behavior, language skills, fine and gross motor skills, and socialization and play domains. Activities are planned at the child’s level.
  - The curriculum is language- and communication-intensive.
  - Socialization and play are actively stimulated.
  - Only functional and meaningful tasks are used.
  - Basic skills are taught before more complex skills. Task analysis techniques are used to be sure the precursors for a task have been mastered.
- A highly structured and neatly organized, controlled environment is used.
  - A predictable routine with a schedule for each child is provided.
  - Concrete clues, including meaningful visual stimuli to help the child figure out what is expected and to increase independence, are used.
- Data are recorded to monitor progress and to troubleshoot.
- A formalized assessment of skills (cognitive, language, socialization, adaptive behavior, fine and gross motor, and play) is conducted at regular intervals.
  - Assessment results are used as a guide for planning what skills to teach next.
  - Data are provided on the success of the interventions employed.
  - Outcomes of children with differing profiles in language and cognition are considered.
- Generalization and maintenance of skills are built into the program.
- Mainstreaming opportunities with typically developing peers are built into the program.

- Parent training and family support are used.
- Education about options for intervention is provided.
- Training is culturally acceptable to individual families.
- Collaboration of all team members is used.
- Related services are included (i.e., speech, occupational therapy, adapted physical therapy, and/or augmentative communication).
- Ongoing teacher/therapist training is included. Consider what new and experienced personnel need to know.
- Transitional support is provided when the child leaves one program and moves to the next.
    - The skills needed in the next school/program situation are taught and support needed is considered.
- Integration of research and practice is used.
    - Follow-up of children with ASD as they grow older is conducted to note factors which have contributed to successful or less successful outcomes.

Environment

Environmental influences on individuals with ASD are of great importance. A variety of environmental and situational factors influence the behavior of all children and adolescents. Because these variables may have even greater significance for students with ASD, a conscious effort must be made to carefully analyze the student and his or her environment as an ongoing component of the instructional process.

The team and teacher should take the following physical environmental considerations into account when implementing the IEP/IFSP:

- Physical layout of the classroom with visually clear areas and boundaries;
- Selected work areas that best lend themselves to that being taught (e.g., reading may need to be taught in an area that uses natural light if high frequency sounds distract the individual);
- Boundaries needed by the student (e.g., reading may need to be taught consistently on a designated carpet);
- Specific schedules that allow the student to anticipate and predict activities;
- Individual work systems that convey:
    - What work is to be done
    - How much work is to be done
    - How the student will know when he/she is finished
    - What happens after the work is completed
- Visual organization of instruction to allow the individual to use the visual learning modality, which is often stronger than auditory; and
- Routines that allow the student to carry out the task in a systematic and consistent manner.

Plan Implementation

The medical and neurological consequences of ASD prevent these children from learning in the usual way. The difficulty with developing educational/intervention programs for children with ASD results from the multiple symptoms, varied severity, and pervasive nature of the disorder. The key characteristics that must be addressed include, but are not limited to, the following:

- Disturbance in socialization
- Inability to spontaneously model behaviors and deficits in observational learning
- Repetitive and self-stimulatory behaviors
- Other maladaptive behaviors, including aggression, self-abuse, excessive isolation, repetitive and ritualistic behaviors
- Disturbances of attention
- Deficits in all forms of communication Limited self-help skills
- Sensory hyper- and hypo-sensitivity

In planning appropriate educational and intervention programs that meet the unique needs of students with ASD, it is vital to use information and assessment data from many reliable resources. The assessment will yield current levels of functioning. Although all domains need to be considered, the unique profile of the individual with ASD calls for emphasis in the areas of communication skills, social-emotional, behavioral, and sensory regulation.

Ethical and Professional Considerations

Regional centers, school districts, and other public agencies are responsible for developing and coordinating treatment/educational services for individuals with ASD. Families that receive autism intervention services expect high-quality, professional consideration from the professionals and paraprofessionals serving their children. Parents need to be aware of the conduct and attitude of instructional staff as these could affect their child’s welfare.

The following practices, to be fused with the standing ethical requirements of districts and regional centers, promote professional and ethical conduct by persons providing services to the families of individuals with ASD.

Responsibility for Confidentiality

Staff who come to the parent’s home will have access to confidential information about a child and his/her family. The following principles are vital to the roles of a paraprofessional and a professional:

- The child’s right to privacy must be respected.
- Case discussions are conducted in a professional manner and in an appropriate

place.

- All assessment data (such as psycho-educational assessments, psychological reports, IEPs, IPPs, IFSPs, correspondence, etc.) are kept in a locked, confidential file, and all data are safeguarded against loss at all times.
- The child's name, address, school placement, case history, or unusual incidents are only discussed with individuals who are professionally involved with the child's case.
- Individuals providing services to a child with ASD in an in-home educational program discuss the program in a public setting only after explicit, written parental consent is obtained.
- Staff do not speak for any agency, parent, or other party.

Parent Relationships

Parents are consumers of the services offered by the regional center and school district; professional and paraprofessional staff must maintain a professional relationship at all times. Professional boundaries must be preserved at all times.

- Do not discuss personal life with parents. Contact with the child's family should be limited to the context of the in-home/educational program.
- Socializing and/or baby-sitting are not professionally appropriate
- or endorsed by any of the sponsoring agencies.
- Photographs or videotapes of the child or child's family for educational
- purposes may be taken only with the written consent of the parents;
- Avoid comparing one child's level of development, progress, or
- program to that of another child.
- Always speak with parents in a professional manner.
- Listen to what the parent has to say regarding the program. Some parents have more extensive experience with behavior management than staff have; even if they do not know technical terms, parents are certainly more familiar with their children.
- Always attempt to involve parents in the program as much as possible. If the parent has ideas or questions about the program as a whole or about specific teaching procedures, encourage him or her to ask questions at team meetings or write down questions to discuss at the next higher-level consultation.

Aversive Interventions

Under no circumstances should any form of aversive stimulation be used, even if the parents request its usage. California Education Code Sections 56520 to 56524, ”Behavioral Interventions,” and Title I7, Subchapter 8, Section 50800, ”Peer Review of Behavior Modification Interventions That Cause Pain or Trauma,” prohibit the use of aversive behavior interventions.

If abuse of any kind is suspected, follow the mandated procedures for reporting abuse [Penal Code 11166, paragraphs (a) and (b)].

Limitations of Instructional Assistants' Activities

Instructional assistants may be hired by a school district or a regional center to provide one-on-one intervention services to individuals with ASD in the home, school, and/or community. Instructional assistants are not trained, qualified, or legally supervised to be therapists to a parent or family member. The role of "therapist" should be courteously avoided. Parents may ask for advice, or they may wish to discuss their own problems.

- Refer matters that suggest the need for therapeutic intervention to the child's regional center service coordinator, teacher, school psychologist, vendor, or agency providing instructional assistants.
- Instructional assistant training is limited to implementing teaching procedures (i.e., to conducting behaviorally-based intervention/ educational procedures with individuals with ASD).
- If parents ask about their child's diagnosis, prognosis, progress, medical status, or other children's in-home/educational programs, refer those questions to the appropriate source (e.g., pediatrician, psychologist, school psychologist, speech and language specialist).

In the School Setting

The fieldwork or volunteer instructional assistant may have occasion to visit a child's school. The child's parent should always be consulted prior to approaching a classroom setting. The parent will obtain permission from the child's teacher and explain the purpose of the instructional assistant's activities.

- Remember that the instructional assistant's role in a classroom is to assist and support, not to instruct or evaluate, the teacher. It is important to be aware that a classroom situation is entirely different from one-on-one behavior training.
- The instructional assistant should at all times, respect and follow the teacher's guidelines, instructions, programs, and routine. If the instructional assistant is in disagreement with school procedure, speak to the appropriate school representative, the parent, or the regional center service coordinator.
- Under no circumstances should the instructional assistant be a disruptive influence in a classroom.

Attendance

Instructional assistants are expected to be at all scheduled one-on-one teaching sessions and/or meetings (at the child's home, school, or regional center) and are expected to be on time. If the instructional assistant is going to be late, or anticipates missing a session, he or she must make an effort to inform the parent 24 hours in advance.

The instructional assistant should exercise self-discipline. The job comes with a lot of responsibility. The instructional assistant works often with only the child and possibly a parent present.

Data Collection and Analysis

Data collection is the basis for any behavioral intervention. Data ensure objectivity and supply a basis of comparison between procedures and programs. Data also provide accountability in intervention, showing clearly whether or not progress is occurring. There are many procedures, the use of which cannot be justified, with- out clear data-based improvement in the child. Data are also a vital aspect of the early intervention concept as a whole.

- Data should be used to evaluate the instructional assistant’s procedures on a day-to-day basis.
- The instructional assistant is expected to keep clear and careful records of all sessions.
- It is very important that the instructional assistant be as careful and scientific in data collection as possible.

Limitations of Instructional Assistants’ Training

The training that instructional assistants receive will be valuable and beneficial and it will prepare him or her for more advanced professional supervision, but it does not qualify the instructional assistant legally or professionally as a behavior analyst or behavior therapist. The instructional assistant is not permitted by law to engage in unsupervised private therapy of any type (see *Laws and Regulations Relating to the Practice of Psychology,* issued by the Board of Psychology).

Training Components

Ensuring that administrators, teachers, parents, direct-service providers, and support staff are prepared with the knowledge and skills necessary to deliver ’services is considered a necessary component in the overall design of an appropriate individualized program. This preparation may include initial and ongoing training and support for staff and families.

Individuals who plan and provide training should disseminate information on training opportunities to parents, professionals, and agencies in the spirit of collaboration.

It is understood that educational staff may have a wide variety of training needs, depending on each individual’s knowledge level of autistic spectrum disorders, as well as each person’s educational and instructional experience. Training needs can be met in a variety of ways, including, but not limited to, professional consultation; demonstration teaching; planned presentations and trainings at in service sessions, workshops, and professional conferences; and attendance at university classes.

Needed Knowledge and Skills

It is recommended that educational/intervention staff working with children who have ASD have the following knowledge and skills to best meet their students' needs:

- Are familiar with a variety of assessment methods.
- Use assessment information to design interventions.
- Apply positive behavioral management techniques during assessment and instruction.
- Have knowledge of strategies to improve communication skills.
- Have knowledge of techniques to improve social interaction.
- Have knowledge of accommodations and interventions related to sensory differences.
- Are aware of current legal issues affecting services to children with ASD.
- Understand differences in the learning profile of children with ASD.

Areas and Topics for Training

Training can be tailored to meet the needs of individuals within a service area or special education local plan area (SELPA). Following are selected areas and topics for training:

- Accommodations for sensory difference
- Adapting curriculum
- Assessment and evaluation procedures
- Augmentative/alternative communication
- Charting pupil progress
- Classroom organization/management
- Characteristics and implications of ASD
- Characteristics of different intervention approaches/methods
- Collaborative planning and teaching
- Current legal issues
- Current research
- Data-based decision making
- Developmental assessment
- Discrete trial training
- Effective teaching strategies, e.g., visual strategies
- Functional analysis of behavior
- Laws and regulations impacting services to students with ASD
- Parent-professional collaboration

  - Positive behavioral interventions
- Role of play/leisure/recreation in program planning and implementation
- Strategies to improve social interaction
- Transitions (infant/preschool/elementary school/ high school/community)

APPENDIX A
DEFINITIONS OF AUTISM AND AUTISTIC SPECTRUM DISORDERS

The term ”autistic spectrum disorders” (ASD) refers to the five diagnostic categories described in the Diagnostic and Statistical Manual of Mental Disorders (4th ed.) (American Psychiatric Association, 1994) under the heading Pervasive Developmental Disorders (PDD). These five disorders are:

- Autistic Disorder
- Asperger’s Disorder
- Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS)
- Childhood Disintegrative Disorder
- Rett’s Disorder

The term ”spectrum,” used in the context of ASD, suggests a range of related qualities or activities. The same term, used in reference to the Pervasive Developmental Disorders, captures the notion that PDDs share related characteristics (i.e, that each specific PDD disorder, although different from the other four, shares some similarities).

Autistic spectrum disorders implies a class of related developmental disorders that overlap but are clinically distinct and separately diagnosed. These disorders overlap in the sense that a portion of their clinical features are shared. The boundaries (i.e., the formal diagnostic criteria) that separate the PDDs are widely debated among clinicians and research investigators. It is generally conceded, however, that Autistic Disorder (classical autism) is the prototypical and most severe form of ASD. Most of the time, when parents and professionals are referring to ASD, they are talking about Autism, PDD-NOS, or Asperger’s Disorder. The assumption is that with careful assessment the PDDs can be differentially diagnosed.

Definition of Autism

(Taken from *The Advocate,* the Autism Society of America’s newsletter.)

Diagnosis of autistic features in children who do not qualify for classical autism has increased during the past decade. The Autism Society of America’s definition of classical autism offers the core features of autism:

"Autism is a severely incapacitating, lifelong, developmental disability that typically appears during the first three years of life. The result of a neurological disorder that affects functioning of the brain, autism and its behavioral symptoms occur in approximately fifteen out of every 10,000 births. Autism is four times more common in boys than girls. It has been found throughout the world in families of all racial, ethnic, and social backgrounds. No known factors in the psychological environment of a child have been shown to cause autism.

"Some behavioral symptoms of autism include:

1. Disturbances in the rate of appearance of physical, social, and language skills.
2. Abnormal responses to sensations. Any one or a combination of senses or responses is affected: sight, hearing, touch, balance, smell, taste, reaction to pain, and the way a child holds his or her body.
3. Absence or delay of speech and language, although specific thinking capabilities may be present.
4. Abnormal ways of relating to people, objects, and events.

"Autism occurs by itself or in association with other disorders that affect the function of the brain, such as viral infections, metabolic disturbances, and epilepsy. It is important to distinguish autism from retardation or mental disorders since diagnostic confusion may result in referral to inappropriate and ineffective treatment techniques. The severe form of the syndrome may include extreme self-injurious, repetitive, highly unusual, and aggressive behavior. Special educational programs using behavioral methods have proved to be the most helpful treatment for persons with autism. Autism is treatable. Early diagnosis and intervention are vital to the future development of the child."

Definition of Autistic Disorder

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) definition is more specific and is the formal standard for diagnostic assessment. The following information is based on the diagnostic features of Autistic Disorder and the formal criteria for diagnosis presented in the DSM-IV.

299.00 Autistic Disorder

Diagnostic Features

The essential features of Autistic Disorder are the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests. Manifestations of the disorder vary greatly depending on the developmental level and chronological age of the individual. Autistic disorder is sometimes referred to as early infantile autism, childhood autism, or Kanner's autism.

The impairment in reciprocal social interaction is gross and sustained. There may be marked impairment in the use of multiple, nonverbal behaviors (e.g., eye-to- eye gaze, facial expression, body postures, and gestures) to regulate social interaction and communication (Criterion A1a). There may be failure to develop peer relation- ships appropriate to developmental level (Criterion A1b) that may take different forms at different ages. Younger individuals may have little or no interest in establishing friendships. Older individuals may have an interest in friendship but lack understanding of the conventions of social interaction. There may be a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., not showing, bringing, or pointing out objects they find interesting) (Criterion A1c). Lack of social or emotional reciprocity may be present (e.g., not actively participating in simple social play or games, preferring solitary activities, or involving others in activities only as tools or ”mechanical” aids) (Criterion A1d). Often an individual’s awareness of others is markedly impaired. Individuals with this disorder may be oblivious to other children (including siblings), may have no concept of the needs of others, or may not notice another person’s distress.

The impairment in communication is also marked and sustained and affects both verbal and nonverbal skills. There may be delay in, or total lack of, the development of spoken language (Criterion A2a). In individuals who do speak, there may be marked impairment in the ability to initiate or sustain a conversation with others (Criterion A2b) or a stereotyped and repetitive use of language or idiosyncratic language (Criterion A2c). There may also be a lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level (Criterion A2d). When speech does develop, the pitch, intonation, rate, rhythm, or stress may be abnormal (e.g., tone of voice may be monotonous or contain question-like rises at ends of statements). Grammatical structures are often immature and include stereotyped and repetitive use of language (e.g., repetition of words or phrases regardless of meaning; repeating jingles or commercials) or metaphorical language (i.e., language that can only be understood clearly by those familiar with the individual’s communication style). A disturbance in the comprehension of language may be evidenced by an inability to understand simple questions, directions, or jokes. Imaginative play is often absent or markedly impaired. These individuals also tend not to engage in the simple imitation games or routines of infancy or early childhood or do so only out of context or in a mechanical way.

Individuals with Autistic Disorder have restricted, repetitive, and stereotyped patterns of behavior, interests, and activities. There may be an encompassing preoccupation with one or more stereotyped and restricted pattern of interest that is abnormal either in intensity or focus (Criterion A3a); an apparently inflexible adherence to specific, nonfunctional routines or rituals (Criterion A3b); stereotyped and repetitive motor mannerisms (Criterion A3c); or a persistent preoccupation with parts of objects (Criterion A3d). Individuals with Autistic Disorder display a markedly restricted range of interests and are often preoccupied with one narrow interest (e.g, with amassing facts about meteorology or baseball statistics). They may line up an exact number of play things in the same manner over and over again or repetitively mimic the actions of a television actor. They may insist on likeness and show resistance to or distress over trivial changes (e.g., a younger child may have a catastrophic reaction to a minor change in the environment, such as a new set of curtains or a change in place at the dinner table). There is often an interest in nonfunctional routines or rituals or an unreasonable insistence on following routines (e.g., taking exactly the same route to school every day). Stereotyped body movements include using the hands (e.g., clap- ping, finger flicking) or whole body (rocking, dipping, and swaying). Abnormalities of posture (e.g., walking on tiptoe, odd hand movements and body postures) may be present. These individuals show a persistent preoccupation with parts of objects (but- tons, parts of the body). There may also be a fascination with movement (e.g., the spinning wheels of toys, the opening and closing of doors, the turning of an electric fan or other rapidly revolving object). The person may be highly attached to some inanimate object (e.g., a piece of string or a rubber band). The disturbance must be manifested by delays or abnormal functioning in at least one of the following areas prior to age three years: social interaction, language used in social communication, or symbolic or imaginative play (Criterion B). There is typically no period of unequivocally normal development, although one or two years of relatively normal development has been reported in some instances.

In a minority of cases, parents report regression in language development, generally manifested as the cessation of speech after a child has acquired from five to ten words. By definition, if there is a period of normal development, it cannot extend past age three years. The disturbance must not be better accounted for by Rett's Disorder or Childhood Disintegrative Disorder (Criterion C).

The DSM-IV provides additional information about autism as it relates to associated features, age and gender features, prevalence, course, familial pattern, and differential diagnosis.

Diagnostic Criteria for 299.00 Autistic Disorder

The following are diagnostic criteria for Autistic disorder taken from the DSM-IV:

Criterion A

A total of six (or more) items from sections 1, 2, and 3, with at least two from section 1, and one each from sections 2 and 3:

1. Qualitative impairment in social interaction, as manifested by at least two of the following:
    - (a) Marked impairment in the use of multiple, nonverbal behavior, such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
    - (b) Failure to develop peer relationships appropriate to developmental level
    - (c) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)
    - (d) Lack of social or emotional reciprocity
1. Qualitative impairments in communication as manifested by at least one of the

following:

  - (a) Delay in, or total lack of, development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication, such as gesture or mime)
  - (b) In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
  - (c) Stereotyped and repetitive use of language or idiosyncratic language
  - (d) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level

1. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
   - (a) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
   - (b) Apparently inflexible adherence to specific, nonfunctional routines or rituals
   - (c) Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping, twisting, or complex whole-body movements)
   - (d) Persistent preoccupation with parts of objects

Criterion B

Delays or abnormal functioning in at least one of the following areas, onset prior to age three years:

1. Social interaction
2. Language as used in social communication
3. Symbolic or imaginative play

Criterion C

The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

If the criteria for Autistic Disorder are not met and the child has autistic features, the PDD-NOS diagnostic label can be used.

299.80 Pervasive Developmental Disorder, Not Otherwise Specified (Including Atypical Autism)

The following are criteria for PDD-NOS taken from the DSM-IV:

This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behavior, interests, and activities are present. The criteria are not met for a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder. For example, this category includes ”atypical autism” – presentations that do not meet the criteria for Autistic Disorder because of late age at onset, atypical symptomatology, subthreshold symptomatology, or all of these.

For the other PDD diagnostic criteria including Asperger’s Disorder, see the DSM-IV.

Definition of Autistic-Like Behaviors from the California Code of Regulations (CCR)

This definition is to be used to determine eligibility for special education and related services rather than for the purpose of diagnosis of autistic spectrum disorder.

CCR § 3030(g): A pupil exhibits any combination of the following autistic-like behaviors, including, but not limited to:

1. An inability to use oral language for appropriate communication.
2. A history of extreme withdrawal or relating to people inappropriately and continued impairment in social interaction from infancy through early childhood.
3. An obsession to maintain sameness.
4. An extreme preoccupation with objects or inappropriate use of objects or both.
5. An extreme resistance to controls.
6. A display of peculiar motoric mannerisms and mobility patterns.
7. A display of self-stimulating, ritualistic behavior.

Federal Definition of Autism

Code of Federal Regulations 1308

1308. 15

A child is classified as having autism when the child has a developmental disability that significantly affects verbal and nonverbal communication and social interaction, that is generally evident before age three, and that adversely affects educational performance.

APPENDIX B

DIAGNOSTIC AND ASSESSMENT INSTRUMENTS APPROPRIATE FOR USE WITH CHILDREN WITH AUTISTIC SPECTRUM DISORDERS

The following instruments are used by educators, clinicians, and researchers to assess children suspected of, or previously diagnosed with, a pervasive developmental disorder. The instruments were selected for this list because they are used to measure specific dimensions of a child’s development, environment, or family. The instruments listed provide measures of development in different domains of functioning. Rate of change in those domains is sometimes used as a baseline or as a follow-up measure of developmental progress or response to educational programming. Some of the instruments listed below are critically reviewed in Burros’ Mental Measurement Yearbook.

Each instrument’s author is referenced for the convenience of the reader. To obtain the instrument or training in the use of an instrument, refer to the publisher’s - catalogue or author’s comments. For convenience, instruments are categorized under headings, listed alphabetically, that describe part or all of the purpose of the instrument. The following list of assessment instruments represents a sample of instruments most familiar to professionals working with children with autism.

Diagnostic Assessment

Autism Diagnostic Interview - Revised

The Autism Diagnostic Interview-Revised (ADI-R) is a semi-structured, investigator-based interview for caregivers of children and adults for whom autism or pervasive developmental disorders is a possible diagnosis. Two studies (Lord, Rutter, R LeCouteur, 1994; Lord, Storoschuk, Rutter, R Pickles, 1993) were conducted to assess the psychometric properties of the ADI-R. Reliability was tested among 10 autistic (mean age 48.9 months) and 10 mentally handicapped or language-impaired children (mean age 50.1 months), and validity was tested among an additional 15 autistic and 15 nonautistic children. Results indicated the ADI-R was a reliable and valid instrument for diagnosing autism in preschool children. Inter-rater reliability and internal consistency were good, and inter-class correlations were very high.

A standard diagnostic interview is conducted at home or in a clinic. The ADI-R is considered by some professionals in the field as a measure of high diagnostic accuracy. It takes several hours to administer and score. The ADI-R is recognized as one of the better standardized instruments currently available for establishing a diagnosis of autism. It is a semi-structured interview administered to subjects’ caregivers which determines whether or not an individual meets the Diagnostic and Statistical Manual of Mental Disorders (3rd ed., revised) criteria for autism. The authors of the ADI-R plan to update the scoring procedure so it reflects DSM-IV criteria. The assessment begins with a home visit by a therapist who interviews the child’s parents. A home visit provides a chance to meet the child and to get a sense of the parents’ priorities. This interview may be scheduled as part of the in-clinic assessment (Rutter, Lord, & LeCouteur, 1990).

Prelinguistic Autism Diagnostic Observation Schedule

The Prelinguistic Autism Diagnostic Observation Schedule (PL-ADOS) (DiLavore, Lord, & Rutter, 1995) is a semi-structured observation scale for diagnosing children who are not yet using phrase speech and who are suspected of having autism. The scale is administered to the child with the help of a parent. This instrument provides an opportunity to observe specific aspects of the child's social behavior, such as joint attention, imitation, and sharing of affect with the examiner and parent. PL-ADOS scores are reported to discriminate between children with autism and children with nonautistic developmental disabilities. The resulting diagnostic algorithm is theoretically linked to diagnostic constructs associated with International Classification of Diseases (10th revision) and DSM-IV criteria for autism.

Childhood Autism Rating Scale

The Childhood Autism Rating Scale (CARS) was developed by the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) program staff in North Carolina to formalize observations of the child's behavior throughout the day. This 15-item behavior-rating scale helps to identify children with autism and to distinguish them from developmentally disabled children who are not autistic. Brief, convenient, and suitable for use with any child older than two years of age, the CARS makes it much easier for clinicians and educators to recognize and classify autistic children. Developed over a 15-year period, with more than 1,500 cases, CARS includes items drawn from five prominent systems for diagnosing autism. Each item covers a particular characteristic, ability, or behavior. After observing the child and examining relevant information from parent reports and other records, the examiner rates the child on each item. Using a seven-point scale, he or she indicates the degree to which the child's behavior deviates from that of a normal child of the same age. A total score is computed by summing the individual ratings on each of the 15 items. Children who score above a given point are categorized as autistic. In addition, scores falling within the autistic range can be divided into two categories: mild-to-moderate and severe. Professionals who have had only minimal exposure to autism can easily be trained to use CARS. Two training videos showing how to use and score the scale are available from Western Psychological Services (WPS) (Schopler, Reichler, DeVellis, & Daly, 1988; Schopler, Reichler, & Renner, 1986).

Autism Behavior Checklist

The Autism Behavior Checklist (ABC) is a general measure of autism. It is not as reliable as the CARS or ADI-R. Correlations between the ABC and CARS ranged from 0.16 to 0.73 in a study by Eaves and Milner (1993). The CARS correctly identified 98 percent of the autistic subjects; it identified 69 percent of the possibly autistic as autistic. The ABC correctly identified 88 percent of the autistic subjects, while it identified 48 percent of the possibly autistic as autistic. In two separate studies, teachers' ratings on the ABC failed to reveal a common set of characteristics of students with high functioning Autistic Disorder (Myles, Simpson, & Johnson, 1995) and Asperger's Disorder (Ghaziuddin, N., Metler, Ghaziuddin, M., Tsai, & Luke, 1993).

Checklist for Autism in Toddlers

The Checklist for Autism in Toddlers (CHAT) is a screening instrument designed to detect core autistic features to enable treatment as early as eighteen months. The most effective treatment currently available for autism is early educational intervention, beginning as soon as possible after a child’s diagnosis. Unfortunately, intervention rarely begins before the age of three years because few autistic children are diagnosed before they reach preschool age. CHAT offers physicians a means of diagnosing autism in infancy so that educational programs can be started months or even years before most symptoms become obvious. According to the authors, ”We stress that the CHAT should not be used as a diagnostic instrument, but it can alert the primary health professional to the need for an expert... referral.”

This first study (Baron-Cohen, Allen, & Gillberg, 1992) using the CHAT revealed that key psychological predictors of autism at thirty months are showing two or more of the following at eighteen months: (a) lack of pretend play, (b) lack of protodeclarative pointing, (c) lack of social interest, (d) lack of social play, and (e) lack of joint-attention. The CHAT detected all four cases of autism in a total sample of 91 eighteen-month-old children. The authors recommend that if a child lacks any combination of these key types of behavior on examination at eighteen months, it makes good clinical sense to refer him or her for a diagnostic assessment by a specialist with expertise in autism.

A second study (Baron-Cohen, Cox, Baird, Swettenham, Nightingale, Morgan, Drew, & Charman, 1996) concluded that ”consistent failure of three key items from the CHAT at eighteen months of age carries an 83.3 percent risk of autism, and this pattern of risk indicator is specific to autism when compared to other forms of developmental delay.” In the second study, research data on 16,000 children suggested that children who failed three items on the CHAT are at high risk of being autistic. The items include protodeclarative pointing (pointing at an object to direct another person’s attention to it – not to obtain the item, but simply to share an interest in it); gaze monitoring (turning to look in the same direction as an adult is looking); and pretend play. The false positive rate for detection of autism using the CHAT is estimated at 16.6 percent.

Real Life Rating Scale

The Real Life Rating Scale (RLRS) (Freeman, Ritvo, Yokota, & Ritvo, 1986) is a scale used to assess the effects of treatment on 47 behaviors in the motor, social, affective, language, and sensory domains among autistic persons. The RLRS is applicable in natural settings by nonprofessional raters, is rapidly scored by hand, and can be repeated frequently without affecting inter-observer agreement. Data are presented on inter-rater agreement among novice and experienced observers. Instructions for the scale, target behaviors, and definitions are appended to the journal article.

Pervasive Developmental Disorder Screening Test

The Pervasive Developmental Disorder Screening Test (PDDST) (Siegel, 1996) is designed to be administered in settings where concerns about possible autistic spectrum disorders arise. Different ”stages” of the PDDST correspond to representative populations in (a) primary care clinics; (b) developmental clinics; and (c) autism clinics. The PDDST is designed as a screening test and is a parent report measure. As such, it does not constitute a full clinical description of early signs of autism but does reflect those early signs that have been found to be reportable by parents and correlated with later clinical diagnosis.

Stage One

Primary care screening is designed for use in primary care pediatric settings where the vast majority of parents express initial complaints about symptoms that prove to be significant in diagnoses of ASD. The index population is patients who were clinically screened and then referred to an autism specialty clinic (and who eventually received diagnoses of Autistic Disorder, PDD-NOS, or another developmental disorder but with at least a few autistic symptoms; N=379). The control population is high-risk preterm infants (at risk of mild-to-moderate neurological dysfunction; N=198).

Stage Two

Developmental disorders clinic screening is designed for use in developmental clinics where children are often first assessed for possible developmental disorders. The index population is patients with diagnoses of Autistic Disorder or PDD-NOS; N=318. The control population is patients clinically screened as appropriate for an autism evaluation but who eventually received nonautistic spectrum disorder diagnoses, such as mental retardation or developmental language disorders; N=62.

Stage Three

ASD screening is designed for use in specialty clinics for children suspected of ASD. The index population is patients with diagnoses of Autistic Disorder; N=201. The control population is patients with diagnoses of PDD-NOS; N=59.

Autism Screening Instrument for Educational Planning (2nd ed.)

The Autism Screening Instrument for Educational Planning (2nd ed.) (ASIEP- 2) (Krug, Arick, & Almond, 1993) is a major revision of one of the most popular individual assessment instruments available for evaluating and planning for subjects with autistic behavior characteristics. Standardized and researched in diagnostic centers throughout the world, ASIEP-2 uses five components to provide data on five unique aspects of behavior with individuals from eighteen months through adult- hood. The components of the ASIEP examine behavior in five areas: Sensory, Relating, Body Concept, Language, and Social Self-Help. The ASIEP-2 samples vocal behavior, assesses interactions and communication, and determines learning rate. In combination, ASIEP-2 subtests provide a profile of abilities in spontaneous verbal behavior, social interaction, educational level, and learning characteristics. Revisions to the ASIEP-2 include a new decision matrix, a new norming table section, and simplified administration of the Prognosis of Learning Rate Subtest. The author reports a strong intercorrelation among the ASIEP-2 subtests and the utility of the battery to distinguish among groups of subjects with a variety of disabilities. ASIEP-2 components have been normed individually. Percentiles and standard scores are provided for the five subtests.

Diagnostic Checklist for Behavior-Disturbed Children (Form E-2)

The Form E-2 Diagnostic Checklist (Rimland, 1971), developed at the Institute for Child Behavior Research, was proposed as an assessment instrument that differentiates between cases of ”classical” autism and a broader range of children with ”autistic-like” features. Questions on Form E-2 reference behaviors in children between birth and age six years. This questionnaire is completed by the child’s parents. The form is intended to be used to identify autism for ”biological research.” Rimland is clear that Form E-2 is not designed to determine whether or not a child is autistic for the purposes of being admitted to an educational or rehabilitative program.

Gilliam Autism Rating Scale

Designed for use by teachers, parents, and professionals, the Gilliam Autism Rating Scale (GARS) (Gilliam & Janes, 1995) helps to identify and diagnose autism in individuals ages three through twenty-two years and to estimate the severity of the problem. Items on the GARS are based on the definitions of autism adopted by the DSM-IV. The items are grouped into four subtests: stereotyped behaviors, communication, social interaction, and developmental disturbances. The GARS has three core subtests that describe specific and measurable behaviors.

An optional subtest (Developmental Disturbances) allows parents to con- tribute data about their child’s development during the first three years of life. Validity and reliability of the instrument are high. Coefficients of reliability (internal consistency, test-retest, and inter-scorer) for the subtests are all in the 0.80s and 0.90s. Behaviors are assessed using objective, frequency-based ratings. The entire scale can be completed in five to ten minutes by persons who have knowledge of the child’s behavior or the greatest opportunity to observe him or her. Standard scores and percentiles are provided.

Developmental Assessment

Psychoeducational Profile-Revised

The Psychoeducational Profile-Revised (PEP-R) (Schopler, Reichler, Bashford, Lansing, & Marcus, 1990) offers a developmental approach to the assessment of children with autism or related developmental disorders. It is an inventory of behaviors and skills designed to identify uneven and idiosyncratic learning patterns. The test is most appropriately used with children functioning at or below the preschool range and within the chronological age range of six months to seven years. The PEP-R provides information on developmental functioning in imitation, perception, fine motor, gross motor, eye-hand integration, cognitive performance, and cognitive verbal areas. The PEP-R also identifies degrees of behavioral abnormality in relating and affect (cooperation and human interest), play and interest in materials, sensory responses, and language.

The PEP-R kit consists of a set of toys and learning materials that are presented to a child within structured play activities. The examiner observes, evaluates, and records the child's responses during the test. There are 131 developmental and 43 behavioral items on the PEP-R. The total time required to administer and score these items varies From 45 minutes to 1.5 hours. Because it is not a test of speed, variations in total testing time depend on the child's levels of functioning and any behavior management problems that arise during the testing situation. At the end of the session, the child's scores are distributed among seven developmental and four behavioral areas. The resulting profiles depict a child's relative strengths and weaknesses in different areas of development and behavior. The Developmental Scale tells where a child is functioning relative to peers. The items on the Behavioral Scale have the separate, but related, assessment function of identifying responses and behaviors consistent with a diagnosis of autism. The PEP-R provides a third and unique score called emerging. A response scored ”emerging” is one that indicates some knowledge of what is required to complete a task, but not the full understanding or skill necessary to do so successfully.

The Adolescent and Adult Psychoeducational Profile (AAPEP) extends the PEP-R to meet the needs of adolescents and adults.

Southern California Ordinal Scales of Development

The Southern California Ordinal Scales of Development (SCOSD), which is available from Western Psychological Services, was developed by the California Department of Education, Diagnostic Center in Southern California (1985). The developmental scales of cognition, communication, social affective behavior, practical abilities, gross motor, and fine motor abilities are based on two fundamental principles. First, they draw extensively on the developmental theories of Jean Piaget. Each scale is divided according to the levels and stages that Piaget describes in his writings on human development. Second, the SCOSD incorporates assessment techniques that aim to minimize the constraints of traditional, standardized ability testing. When possible, the examiner is encouraged to observe the child in his or her natural environment, using materials that are readily available and familiar. In interpreting the results of assessment, the examiner arrives at a total picture of the child's abilities in terms of the particular developmental scale.

The SCOSD is criterion-referenced rather than norm-referenced. Assessment procedures are flexible, rather than fixed, and the scoring system takes into account the quality as well as the quantity of responses.

Developmental Play Assessment Instrument

The Developmental Play Assessment Instrument (Lifter, Sulzer-Azaroff, Anderson, R Edwards-Cowdery, 1993) is an instrument used to assess the play develop- ment of children with disabilities relative to the play of nondisabled children. The developmental quality of toy play is evaluated according to the level of pretend play and the frequency and variety of play activities within the level identified.

Brigance Inventory of Early Development

The Brigance Inventory (Brigance, 1978) is criterion-referenced rather than norm-referenced. While useful for assessment purposes, its value is in identifying instructional objectives, serving as a guide for measuring those objectives, and providing an ongoing tracking system. The Brigance Inventory is intended for informal assessment of several aspects of child development and is for children functioning at developmental levels from birth to seven years of age. Major areas assessed include general knowledge and comprehension, speech and language, preacademics, self-help, and psychomotor skills. Within these major areas, there are 98 subtests of sequenced developmental skills.

The Brigance Inventory permits different administrations to be used, such as observation, direct testing of the child, or reports from caretakers, child-care workers, or teachers. To elicit the child’s maximum performance, clinicians are encouraged to allow children to respond in any possible fashion, such as pointing, eye localizations, or verbalizing. Clinicians are encouraged to adapt materials to best meet the needs of the child to get a response.

Reliability and validity measures of the Brigance Inventory are limited, as is true of most criterion-referenced instruments. There is no reported reliability or validity data in the manual.

The value of the Brigance Inventory lies in its ability to identify a child’s pattern of strengths and weaknesses in several areas. The items are representative of a curriculum appropriate for an early childhood program and thus are easily linked to instructional planning and intervention (Bagnato, 1985). Another benefit of relating items to teaching and planning is that repeated assessments with the Brigance Inventory can pinpoint areas of gains and losses. The obvious caution here is to avoid teaching to the test since the items are so very specific. (See an article by Gory, 1985, for a review of the Brigance Inventory.)

Adaptive Assessment

Vineland Adaptive Behavior Scales

The Vineland Adaptive Behavior Scales (VABS) (Sparrow, Balla, & Cicchetti, 1984) comes in three forms varying in degree of detail and proposed setting. There is the Survey Form, the Expanded Form, and the Classroom Edition. The VABS is administered by interviewing the child’s parents, teachers, or care providers. The scales range in age from birth to nineteen years. Raw scores from communication, daily living skills, socialization, motor skills, and maladaptive behaviors are converted to standard scores with a mean of 100 and a standard deviation of 15. The Adaptive Behavior composite score includes the domains noted above and reflects overall adaptive ability.

Questions have been raised about the scales' standardization and the accuracy of standard scores across the age range. One problem is lack of uniformity of scores across various ages. Depending upon the child's age, means and standard deviations differ. Thus, comparing the same child's performance on reassessment is compromised, as is the accuracy of any composite score. Differences among domain scores may be more apparent than real because of variable scores. There is considerable over- lap among the various domains with both communication and daily living domains containing questions about the child's language ability.

Communication Assessment

Sequenced Inventory of Communication Development (Rev. ed.)

The Sequenced Inventory of Communication Development (Rev. ed.) (SICD- R) (Hedrick, Prather, R Tobin 1984) tests a variety of early communication skills, giving a broad perspective of the semantic, syntactic, and pragmatic aspects of a child's receptive and expressive language. It combines parental report items with behavioral items that incorporate materials and methods to keep children's attention. The test provides for assignment of communication ages and for determining initial goals in communication programming. (Available from University of Washington Press, Seattle, Wash.)

The Nonspeech Test for Receptive/Expressive Language

The Nonspeech Test (Huer, 1988) is designed to provide a systematic way for observing, recording, and summarizing the variety of means in which an individual may communicate. This tool determines a person's skills as a communicator, whether speech or nonverbal means are used for communication. It allows for easy development of IEP objectives from the test response forms. (Available from Don Johnston Developmental Equipment, Inc.)

Assessing Semantic Skills Through Everyday Themes

The Assessing Semantic Skills Through Everyday Themes (ASSET) (Barrett, Zachman, & Huisingh, 1988) is a test of receptive and expressive semantics for pre-school and early elementary children. It is built around six common themes, which represent aspects of everyday life that are familiar and important to preschool and early elementary children. Test items emphasize vocabulary that is meaningful and relevant to the experiences of young children. There are five receptive and five expressive subtests, which are designed to elicit responses by questions or directions from the examiner, that refer to the illustrations in the picture stimuli book. Nonverbal performances on receptive vocabulary tasks can be compared to verbal responses on the expressive subtests. This evaluation instrument provides standardized analyses of receptive, expressive, and overall vocabulary abilities. (Available from LinguiSystems, Inc., Moline, Ill.)

Expressive One-Word Picture Vocabulary Test CRev. ed.)

The Expressive One-Word Picture Vocabulary Test (Rev. ed.) (Gardner, 1990) measures the child's ability to verbally label objects and people. The child must identify, by word, a single object or a group of objects on the basis of a single concept. This is a standardized test that provides age equivalents, standard scores, scaled scores, percentile ranks, and stanines. (Available from Academic Therapy Publications, Novato, Calif.)

Receptive One-Word Picture Vocabulary Test (Rev. ed.)

The Receptive One-Word Picture Vocabulary Test (Rev. ed.) (Gardner, 1990) obtains an estimate of a child's one-word hearing vocabulary based on what the child has learned from home and school. It provides information about the child's ability to understand language. This is a standardized test that provides age equivalents, standard scores, scaled scores, percentile ranks, and stanines. (Available from Academic Therapy Publications, Novato, Calif.)

Clinical Evaluation of Language Fundamentals – Preschool

The Clinical Evaluation of Language Fundamentals – Preschool (CELF-P) (Wiig, Secord, R Semel, 1992) is a tool for identifying, diagnosing, and performing follow-up evaluations of language deficits in preschool children. It assesses receptive and expressive language ability, including semantics, morphology, syntax, and auditory memory. It is standardized for ages three years and zero months through six years and eleven months. (Available from The Psychological Corporation, San Diego, Calif.)

ECOScales

The ECOScales Manual (MacDonald, Gillette, R Hutchinson, 1989) provides a model for evaluating the interactive and communication skills of preconversational children and their caregivers. The model is designed for both program planning and progress monitoring as well as for determining the child's performance. The ECOScales assessment approach assumes the adult is an active participant in the child learning to communicate. The ECOScales is an interactive approach which charts development from early play to conversations. Five levels of interactive development and delays are considered. The ECOScales Manual identifies disorders, not in terms of linguistic performance alone, but in terms of interaction skills and their role in fostering communication.

Peabody Picture Vocabulary Test (Rev. ed.)

The Peabody Picture Vocabulary Test (Rev. ed.) (PPVT-R) (Dunn & Dunn, 1981) measures an individual's receptive vocabulary for standard American English. It measures one facet of general intelligence: vocabulary. It takes a relatively short period of time to administer and may be used as an initial screening device. (Available from

American Guidance Service, Circle Pines, Minn.)

Reynell Developmental Language Scales

The Reynell Developmental Language Scales (Reynell, 1987) is a language test for children from one to seven years. The Reynell measures comprehension (receptive language) and expressive language and is widely used with language-delayed children. This test will be given to all subjects at intake, at 12 months into treatment, at 24 months into treatment, and at follow-up to provide an index of the rate of growth in language functioning.

Preschool Language Scale (3rd ed.)

The Preschool Language Scale (3rd ed.) (PLS-III) (Zimmerman, Steiner, & Pond, 1992) has two standardized subscales, Auditory Comprehension and Expressive Communication, which allows evaluation of a child's relative ability in receptive and expressive language. When comparing scores, one can determine whether deficiencies are primarily receptive or expressive in nature or whether they reflect a delay or disorder in communication. Precursors of receptive skills (with a focus on attention abilities) and precursors to expressive skills (with a focus on social communication and vocal development) are also assessed. Supplemental measures include the Articulation Screener, the Language Sample Checklist, and the Family Information and Suggestions Form. (Available from The Psychological Corporation, San Diego, Calif.)

Infant/Toddler Assessment

Bayley Scales of Infant Development C2nd ed.)

New norms were recently developed for the Bayley Scales of Infant Development (2nd ed.) (BSID-II) (Bayley, 1993). The BSID-II allows diagnostic assessment at an earlier age. The BSID-II was designed to identify children who have a cognitive or motor delay and suggests needed forms of intervention. The BSID-II has been renormed on a stratified random sample of 1,700 children (850 boys and 850 girls) ages one month to forty-two months, grouped at one-month to three-month intervals, closely paralleling the 1988 U.S. Census statistics on the variables of age, sex, region, race and ethnicity, and parental education. The Behavior Rating Scale (formerly the Infant Behavior Record) was revised in both structure and content. The Mental Scale yields a normalized standard score called the Mental Development Index, evaluating a variety of abilities, including sensory-perceptual acuities, discriminations, and response acquisition of object constancy memory, learning, and problem solving, vocalization, beginning verbal communication, mental mapping, complex language and mathematical concept formation. The Motor Scale assesses degree of body control, large-muscle coordination, fine motor manipulatory skills, postural imitation, and motor quality.

The Behavior Rating Scale provides information to supplement the Mental and

Motor scales. The 30-item scale rates the child’s relevant test-taking behaviors and measures attention, arousal, orientation, engagement, and emotional regulation.

Mullen Scales of Early Learning

The Mullen Scales of Early Learning (MSEL) (AGS Edition, 1997) assesses early cognitive ability and motor development. This new standardized version of the MSEL combines the old Infant Mullen and the Preschool Mullen into one instrument that allows comprehensive assessment of language, motor, and perceptual abilities for children of all ability levels. Test ages range from birth to five years, eight months. This revised and updated version includes five additional scales, including Gross Motor, Visual Reception, Fine Motor, Expressive Language, and Receptive Language. Test scores provide an objective foundation for intervention planning and serve as baseline data for a continuum of appropriate teaching methods and interactions. The MSEL evaluates visual and language abilities at both receptive and expressive levels and provides a framework in which to examine infant development and interactional patterns. This test identifies uneven learning patterns and children who need support (visual and auditory) for weaknesses in reception and memory and indicates when input should be reduced because of sensory overload. The scale helps facilitate appropriate parent/child interactions, and assists in identifying the instructional approach, which links the ISP to the IFSP.

The publisher reports that it takes 15 minutes to assess a one-year-old using all five scales; 25-35 minutes to assess a three-year-old; and 40-60 minutes to assess a five-year-old. Mullen ASSIST computer software is available for scoring and report writing. (Available from American Guidance Service, Circle Pines, Minn.)

Early Coping Inventory

Early Coping Inventory (Zeitlin, Williamson, & Szczepanski, 1988) is an observation instrument to assess the coping behaviors that are used by infants and toddlers in everyday living. Analysis of a child’s scores provides information about level of coping effectiveness, style, and strengths and weaknesses. The inventory has 48 items divided into three categories: sensorimotor organization, reactive behavior, and self-initiated behavior. It is designed to be used for children between ages four to thirty-six months, or for older children who function within this developmental range. (Avail- able from Scholastic Testing Service, Inc., Bensenville, Ill.)

Standardized Tests of Intelligence

Wechsler Preschool and Primary Scale of Intelligence (Rev. ed.)

The Wechsler Preschool and Primary Scale of Intelligence (Rev. ed.) (WPPSI- R) (Wechsler, 1989) is a frequently used intelligence test for children from three to seven years of age. It represents the gold standard for assessment for a multitude of situations.

In addition, use of the WPPSI-R during preschool years dovetails smoothly with use of the Wechsler Intelligence Scale for Children (Rev. ed.) as children enter school and require reassessment.

The WPPSI-R contains the 11 original WPPSI subtests and an additional performance subtest, Object Assembly, which consists of colorful, appealing puzzles. Animal Pegs (formerly Animal House) and Sentences are now optional subtests. A design-recognition task was added to the Geometric Design subtest so that it now has two parts: Visual Recognition/Discrimination for younger children and Drawing of Geometric Figures for older children. The WPPSI-R provides norms for 17 age groups divided by three-month intervals from three years through seven years, three months. The norms are based on a standardization sample of 1,700 children stratified by age, race, sex, geographic region, parents' education, and parents' occupation. Subtest scaled scores are expressed as standard scores with a mean of 10 and standard deviation of 3.

Wechsler Intelligence Scale for Children (3rd ed.)

While retaining the basic structure and content of the revised edition, the Wechsler Intelligence Scale for Children – Third Edition (WISC-III) (Wechslgr, 1991) has up- dated normative data, improved items and design, and an added optional subtest. The WISC-III includes numerous additional statistical tables and relevant validity information. The WISC-III continues Wechsler's concept of intelligence as a global but multifaceted entity that can be inferred from a child's performance on a series of tasks. It is valuable for psychoeducational assessment, diagnosis, placement, and planning. WISC-III can be used to diagnose exceptionality among school-aged children and has a strong place in clinical and neuropsychological assessment and in research. Like the WPPSI-R, the WISC-III is widely used and generally regarded as the best standardized measure of intelligence. (Available from The Psychological Corporation, San Diego, Calif.)

Differential Ability Scales

The Differential Ability Scales (DAS) (Elliott, 1990) measures overall cognitive ability and specific abilities in children and adolescents. It is better suited for intellectually higher-functioning children with autism. The DAS assesses multidimensional abilities in children ages two years and six months to seventeen years and eleven months. It is administered individually and takes 45 to 65 minutes for the full cognitive battery. The achievement test takes 15 to 25 minutes to administer.

The seventeen cognitive and three achievement subtests yield an overall cognitive ability score and achievement scores. The three achievement subtests are Basic Number Skills, Spelling, and Word Reading. The DAS allows the examiner to explore differences among the various cognitive abilities as well as differences between cognitive abilities and academic achievement. Colorful, manipulative materials enhance the testing for preschoolers. The Preschool Level measures reasoning as well as verbal, perceptual, and memory abilities and is suitable for ages two years and six months to six years. The school-age level contains a variety of tasks suitable for children ages seven years to 17 years and 11 months.

Stanford-Binet Intelligence Scale (4th ed.)

The Stanford-Binet Intelligence Scale (4th ed.) (SBIS-IV) (Thorndike, Hagen, & Sattler, 1986) has a new format and scoring system, mostly new items, and a new national standardization. The SBIS-IV is for individuals ages two years to adult. It provides scores in four areas: Verbal Reasoning, Abstract and Visual Reasoning, Quantitative Reasoning, and Short-Term Memory; and a Composite Score that is equivalent to the Wechsler Scales Full Scale IQ. Standard scores with means of 100 and standard deviations of 16 are available for each of the four areas. The areas are composed of one or more subtests; the exact subtests administered depend on the individual's age and his or her performance. The subtests have a mean of 50 and standard deviation of 8.

Tests of Nonverbal Intelligence

Columbia Mental Maturity Scale (3rd ed.)

The Columbia Mental Maturity Scale (3rd ed.) (CMMS-III) (Burgemeister, Blum, & Lorge, 1972) is useful in evaluating children who have sensory or motor defects or who have difficulty speaking and, to some extent, reading. The test does not depend on reading skills. It provides age deviation scores (standard scores) for chronological ages between three years and six months and nine years and eleven months. The age deviation scores range from 50 to 150, with a mean of 100 and standard deviation of 16. A second score, the Maturity Index, indicates the standardization age group most similar to that of the child in terms of test performance.

The task is to have the child select the one drawing that is different from the others on each card. However, autistic children may have difficulty understanding the concept of pointing to the ”one that does not belong.” This untimed test usually takes 15 to 20 minutes to administer and is simple to score. The child is required to make perceptual discriminations involving color, shape, size, use, number, missing parts, and symbolic material. Tasks include simple perceptual classifications and abstract manipulation of symbolic concepts. The CMMS-III appears to measure general reasoning ability, although there is some evidence that it may be more of a test of the ability to form and use concepts than a test of general intelligence (Reuter & Mintz, 1970).

The scale provides a means for evaluating intelligence through the use of non-verbal stimuli. It can be useful as an aid in evaluating children with disabilities and may be less culturally loaded than some other intelligence tests. However, the scores obtained on the CMMS-III are not interchangeable with those on the SBIS-IV, WISC- R”or WPPSI-R.

Merrill-Palmer Scale of Mental Tests

The Merrill-Palmer Scale of Mental Tests (MPSMT) (Stutsman, 1931) is for children from one year and six months to six years. The MPSMT is widely used as a nonverbal test instrument for assessing visual-spatial skills (e.g., Howlin & Rutter, 1987) and can be used for young autistic children at the beginning of intervention, at 12 months, and at 24 months into the intervention. Visual-spatial skills are an area of strength for many children with autism. The MPSMT enables a more detailed assessment of visual-perceptual functioning than is provided by the BSID-II or WPPSI=R

Leiter International Performance Scale

The Leiter International Performance Scale (LIPS) (Leiter, 1948) measures intelligence independent of language ability for children age three years and older. Administration time is 30 to 45 minutes. Because directions are communicated by pantomime, the LIPS is widely used with non-English-speaking subjects, illiterate or disadvantaged individuals, and those with speech, hearing, or other medical disabilities. The LIPS provides activities which foster attention and allow observation of a student's approach to problem solving and his or her emotional reactions. The subject matches blocks with corresponding characteristic strips positioned in the sturdy wooden frame. Level of difficulty increases at each age level. The LIPS yields a Mental Age and IQ data. The LIPS scale has four tests at each year level. The scale has a number of limitations, including uneven item difficulty levels, outdated pictures, a small number of tests at each year level, and use of the ratio IQ. The most serious difficulties are the outdated norms, inadequate standardization, and lack of information about the reliability of the scale for various age levels. Because the norms underestimate the child's intelligence, Leiter (1959) recommended that five points be added to the IQ obtained on the scale.

While the LIPS has a number of limitations, it does merit consideration as an aid in clinical diagnosis (rather than as a measure of general intelligence), especially in testing language-handicapped children who cannot be evaluated by the SBIS-IV, WISC-III, or WPPSI-R. However, although the test may be less culturally loaded than some other intelligence tests, there is no evidence that it is a culture fair measure of intelligence.

Test of Nonverbal Intelligence (2nd ed.)

The Test of Nonverbal Intelligence (2nd ed.) (TONI-II) (Brown, Sherbenou, & Johnsen, 1990) is a language-free measure of cognitive ability. It measures abstract figural problem solving in children age five years and older. Administration time is 10 to 15 minutes. The TONI-II contains 55 problem-solving tasks that progressively increase in complexity and difficulty. Each item presents a set of figures where one or more of the items is missing. The child with autism must be able to examine the differences among the figures, identify problem solving rules that define the relationship, and select a correct response.

The TONI-II is a language-&ee measure of intelligence, aptitude, and reasoning. Because the subject does not have to read, write, speak, or listen during test administration, it is ideal for assessing (a) individuals with speech, language, or hearing impairments; (b) those who have suffered brain injury or have other academic handicaps; and (c) those who do not speak English. Two equivalent forms make the TONI-II ideal for situations where both pre- and postmeasures are desirable.

The TONI-II yields quotient scores and percentile ranks. It was normed on more than 2,500 subjects. Reliability and validity data are provided for normal, mentally retarded, learning disabled, deaf, and gifted subjects.

Academic Screening

Wide Range Achievement Test 3 (WRAT3)

The Wide Range Achievement Test 3 (WRAT3) measures reading, spelling, and arithmetic in persons from five to seventy-four years old. Two equivalent forms make pre- and post testing possible. The test takes 10 to 15 minutes to administer. The WRAT3 provides a good method for measuring basic academic skills in children who perform below their peers.

Behavior Assessment

Achenbach Child Behavior Checklist

The Achenbach Child Behavior Checklist (ACBC) is for children four to eighteen years old and is completed by an adult informant. It has two major scales – externalizing and internalizing behaviors – each of which has four subscales. It has been used as a follow-up measure. The child's primary caregiver (in most cases, the client's mother) serves as the informant. There is a separate version of this test developed for teachers, the Teacher Report Form (Achenbach, 1991).

Analysis of Sensory Behavior Inventory (Rev. ed.)

The Analysis of Sensory Behavior Inventory (Rev. ed.) (ASBI-R) (Morton & Wolford, 1994) is designed to collect information about an individual's behaviors as they are related to sensory stimuli. Six sensory modalities are assessed: vestibular, tactile, proprioceptive, auditory, visual, and gustatory-olfactory. Ratings can be made about both sensory-avoidance and sensory-seeking behaviors within each modality. Information obtained from this tool may be helpful in completing a functional analysis of behavior and in designing effective intervention strategies, including accommodations and reinforcers for the individual.

Sensory processing differences are frequently seen in persons with severe disabilities and problem behaviors. Analyzing these differences may assist in understanding puzzling behaviors which have proven difficult to change. Interventions which accommodate to individual differences frequently result in improved adaptive functioning. (Available from Skills with Occupational Therapy, Arcadia, Calif.)

The Personality Inventory for Children

The Personality Inventory for Children (PIC) (Wirt, Lachar, Klinedinst, & Seat, 1977) is a true-false questionnaire for children ages three to sixteen years which consists of thirteen clinical and three validity scales. The PIC is administered to parents. The scales measure areas of emotional disturbance in children, such as anxiety, withdrawal, depression, and reality distortion. This inventory can be completed by the child's primary caregiver.

Family Assessment

These measures focus primarily on aspects of the family. These instruments are used to determine pre- and posttest changes and are not specifically used to tailor the course of individual programming for a family or child.

Behavioral Vignettes Test

The Behavioral Vignettes Test (BVT) is a multiple-choice test (20 items) used to evaluate a parent's, school therapist's, or special education teacher's functional knowledge of behavioral principles. The BVT can be used as a pre- and posttest measure of change in persons undergoing training in teaching self-help, social, and play skills. (Baker, 1989)

Parenting Satisfaction Scale

The Parenting Satisfaction Scale (PSS) (Guidubaldi & Cleminshaw, 1996) facilitates clinical assessment of parent-child relationships. The PSS assists in identifying a troubled parent-child relationship and can be useful in assessing a parent's response to the effect of intervention and, if suggested, conducting family therapy. The PSS is a 45-item standardized assessment of parents' attitudes toward parenting. Scores derived from this scale allow a clinician or researcher to define, compare, and communicate levels of parenting satisfaction in three domains: (a) Satisfaction with the spouse's or ex-spouse's parenting performance in the parenting role; (b). The parent's satisfaction with the relationship with her or his own child; and (c) Satisfaction with the parent's own performance in the parenting role. To improve family communication and increase empathy toward family members, teachers may have a parent's spouse or children complete the scale as he or she believes the parent would respond. Information derived from family members can then be compared with the parent's own responses to identify areas of concordant or discordant perceptions and determine areas in which clinical intervention could improve relationships. The PSS can be completed for siblings of the child with autism. The PSS can be administered in 20 minutes.

Parenting Stress Index (3rd ed.)

The Parenting Stress Index (3rd ed.) (PSI-III) (Abidin, 1983) identifies stressful areas in parent-child interactions. It is administered individually and takes 20 to 30 minutes to complete. There is a short form that takes 10 minutes. This screening and diagnostic instrument assumes that the total stress a parent experiences is a function of child characteristics, parent characteristics, and situations that are directly related to the role of being a parent. Child characteristics are measured in six subscales: distractibility, hyperactivity, adaptability, reinforces parent, demandingness, mood, and acceptability.

The parent personality and situational variables component consists of seven subscales: competence, isolation, attachment, health, role restriction, depression, and spouse. The PSI is particularly helpful in assessing early identification of dysfunctional parent-child systems, prevention programs aimed at reducing stress, intervention and treatment planning in high stress areas, family functioning and parenting skills, and assessment of child-abuse risk.

The PSI Short Form is a derivative of the full-length test and consists of a 36-item, self-scoring questionnaire-profile. It yields a Total Stress score from three scales: parental distress, parent-child dysfunctional interaction, and difficult child.

The Parental Stress Scale

The Parental Stress Scale (PSS) (Berry R Jones, 1995) is a newly developed general measure of stress. Analyses of responses completed by 1,276 parents suggested that the PSS is reliable, both internally and over time. Initial evaluation of the PSS showed a stable consistency for assessing stress across parents of differing parental characteristics. The validity of PSS scores was supported by predicted correlations with measures of relevant emotions and role satisfaction and significant discrimination between 129 mothers of children in treatment for emotional-behavioral problems and developmental disabilities compared with mothers of children not receiving treatment. Factor analysis suggested a four-factor structure underlying responses to the PSS.

Questionnaire on Resources and Stress

The Questionnaire on Resources and Stress (QRS) (Holroyd, 1974; 1987) consists of 55 items on 11 scales: parental affliction, pessimism about child development, overprotection/dependency, anxiety about the future of the child, social isolation, burden for members of the family, financial problems, lack of family integration, intellectual incapacitation, physical incapacitation, and need for the care of the child. The QRS contains 285 items in 15 rational nonoverlapping scales. It was administered to parents of 43 individuals with disabilities four-sixteen years old evaluated in an outpatient psychiatry clinic. The QRS is used in research to assess ecological causes of stress and general levels of stress in families. There is a short form of the QRS (see Randall, Sexton, Thompson, & Wood, 1989). Holroyd (1988) reviewed studies that have used the QRS for families with members with disabilities to compare parents of clinical groups with normal controls, parents of children with different clinical conditions, and pre- and postintervention. These studies are examined in terms of the relationship of 15 QRS scales to child variables (e.g., age, degree of disability); parent variables (e.g., marital status, educational level); and family variables (e.g., nationality/culture). It is concluded that the QRS fulfills requirements for an acceptable level of validity.

Family Adaptability and Cohesion Evaluation Scales III

The Family Adaptability and Cohesion Evaluation Scale (FACES III and FACES IV) (Olson, 1986; 1994) provides measures of perceived cohesion and adaptability of families. This instrument is relatively well researched. It has been used to assess, for example, the differences between ”the ideal and the real representation of family,” as perceived by parents and adolescent children. FACES has been used to assess marital satisfaction. Combined with the Clinical Rating Scale, a related family assessment instrument, these two assessment tools can be used for making a diagnosis of family functioning and for assessing changes over the course of treatment.

Family Assessment Interview

The Family Assessment Interview (FAI) (Koegel, Koegel & Dunlap, 1996) is a simple protocol for collecting information from families in preparation for selecting and designing an intervention plan. Items in this brief instrument are designed to enable a ”good contextual fit” for the intervention strategy. Interview data based on family members’ ideas and reactions to the function of problem behaviors, support strategies, and issues for implementation are actively solicited throughout the assessment and support plan development process. The family assessment interview focuses on information about the ways in which the family structures its daily patterns and routines. It helps identify the family’s successful strategies for addressing problem behaviors. Sources of stress for the family are identified and discussed.

Child Improvement Locus of Control Scale

The Child Improvement Locus of Control Scale (CILC) (DeVellis, DeVellis, Revicki, Lurie, Runyan, & Bristol, 1985) assesses belief about a child’s ability to improve. The instrument is based on two research studies to develop and validate the CILC scales. In the first study, 145 parents (average age 37.8 years) of autistic children completed a questionnaire tapping beliefs about their children’s improvement. In Study 2, 175 parents of physically ill children were given the CILC items. The following relationships were observed: (a) parental beliefs in child influence increased with child age; (b) belief in external factors (chance and divine Influence) was greater among African American parents; and (c) belief in parent influence decreased with illness severity.

Family Environmental Scale

The Family Environmental Scale (FES) (Moos & Moos, 1981; Moos, 1974) is an inventory which assesses behavior patterns within the family on subscales, such as control, active-recreational orientation, intellectual cultural orientation, and cohesion. Norms are available on large national samples of distressed families as well as smaller samples of families with autistic children. The FES can be given to parents at the beginning and middle of the child's intervention program. It assesses family dynamics at key points during the intervention process. The questionnaire can be completed by both of the child's parents if both participate in the child's care.

Other Assessment Options

Standardized videotape assessment

A critical component of progress assessment is objective behavioral measurement documented by an ongoing videotaped database – a luxury afforded by school laboratory programs. Each child is videotaped daily for five minutes according to a systematic sampling procedure arranged to track children across different activities, times of day, and days of the week. The unique feature of the video database is that there are no contrived observational conditions; children are videotaped at preset times wherever they happen to be, doing whatever they happen to be doing. Video-tapes are scored by a highly trained intervention team to obtain objective, reliable measures of language, social, and engagement variables.

Videotaped formal and informal language samples are obtained; they are then evaluated by the speech pathologist to determine age appropriateness of communication in the area of social development.

Complete medical examination

A comprehensive neurological and physical examination with laboratory tests that include blood and urine screening, thyroid and liver function, and complete blood count (CBC) is recommended to rule out medical conditions that might interfere with a child's ability to learn. Tests used to detect debilitating medical conditions associated with ASD are electroencephalogram (EEG), electrocardiogram (EKG), imaging techniques, and chromosome studies where indicated.

Audiometric assessment

Impairments in auditory processing and hearing acuity should be ruled out before formal intervention procedures begin. Depending on the child's level of communication and awareness, audiological testing should be used to verify that hearing, especially in the speech range, is within normal limits. If the child's active participation in audiological testing is not possible, auditory evoked-response (AER) studies can be performed. Research has shown that in a subgroup of children with autism, AER studies detect significant deviations in auditory processing. In addition, the audiologist will interview the child's parents for information related to hearing ability.

APPENDIX C
SERVICE PLANNING

Program planning procedures for children are designed by law to be collaborative between parents and professionals whether undertaken under the guidelines of the regional center or local educational agency. To plan appropriately for children with autistic spectrum disorders, staff/team should take particular care to address all of the areas of the process, openly discussing each area, and to create complete documentation.

The following checklist is presented as a series of questions to guide parents and professionals in preparing and planning for quality services for children. The steps recommended include both those required by law and some that are best practices. By using these questions, staff can develop a cooperative and collaborative process of service planning.

Checklist for the Service Planning Process

1. Have timelines been met and was staff responsive to a referral or request for service?
2. Has multidisciplinary and transdisciplinary planning been thorough and coordinated?
3. Was the multidisciplinary and transdisciplinary assessment conducted by personnel with background experience and skills in the areas listed below?
   (a) Child development
   (b) Autistic spectrum disorders
   (c) Behavior
   (d) Communication
   (e) Knowledge of similar children and a variety of programs
   (f) Specific experience with the child in a variety of settings and situations
1. Are the following documented in the assessment report?
   (a) Determination and statement of eligibility
   (b) Behavior implications
   (c) Assessment in all areas related to the suspected disability
   (d) Child's developmental levels
1. Are all the required components of the IEP, IFSP, and IPP documented?
   (a) Current level of performance
   (b) Measurement of existing objectives and progress
   (c) Goals and objectives in all areas related to assessment
   (d) Description of how new objectives will be measured and used to determine progress
   (e) Description of the continuum of program options considered appropriate (at least three):

    - General education program
    - Resource specialist program
    - Designated instruction and services (DIS) and related services
    - Special classes and centers
    - Nonpublic schools and agencies
    - State special school
    - Infant and preschool services
    - Transportation
    - Availability of a variety of general education programs, such as art, music, industrial arts, consumer and homemaking education, and vocational education
  - (f) Placement settings in the LRE, including, but not limited to:
    - District general education
    - District special education
    - County office of education-operated classes
    - Community schools
    - The home
    - Nonpublic special education schools
    - A combination of settings
  - (g) Discussion of new or existing services and programs, including opportunities for visitation
  - (h) Description of services and settings:
    - Frequency and duration of service
    - Date of initiation of service
  - (i) Long-term goals of the parents
  - (j) For IFSPs, include:
    - Family concerns, priorities, and resources
    - Outcomes and criteria for evaluation
  - (k) Settlement of all other issues
  - (l) Signatures (parents and professionals)

1. Did services address all areas of identified need?
   - (a) Communication
   - (b) Gross and fine motor skills
   - (c) Behavior
   - (d) Child development
   - (e) Implications of autistic spectrum disorders
   - (f) Social development
   - (g) Cognitive development
   - (h) Transitions between placements
   - (i) Transition from school to work
   - (j) For IFSPs, include family participation
1. Were the service options discussed to be provided by qualified, specially trained

personnel?
   (a) Teacher
   (b) Other professionals
   (c) Supervised paraprofessionals

1. Does the program description provide for coordination, collaboration, ongoing training, and supervision of all service providers and parents?
2. Does the documentation and data collection described in the child's or student's plan provide for the documentation of necessary information?
   (a) Data collection:
      - Objectives met
      - Services provided
      - Curriculum measures
      - Other outcome measures
   (b) Child- or student-specific:
      - Baseline data
      - Previous data
      - Current data
   (c) Program-specific:
      - History of success (how defined)
      - History of student progress
1. Does the documentation establish timelines and identify criteria for making decisions?
   (a) Establish timelines:
      - Initiation of service
      - Periodic assessment and data collection
      - Dates for reevaluation
   (b) Decision-making criteria:
      - Program effectiveness
      - Transition criteria
      - Decision points and indicators
      - Rationale for LRE
      - Employee evaluation
      - Entrance and exit criteria
1. Were responsibilities assigned?
   (a) Staff
   (b) Contractors
   (c) Parents
   (d) Leadership of case management
1. Were dates set for further program evaluation and planning?

APPENDIX D

Best Practices for Designing and Delivering Effective Programs for Individuals with Autistic Spectrum Disorders

DEVELOPMENT OF APPROPRIATE AND INDIVIDUALIZED OBJECTIVES AND MEASUREMENT CRITERIA

Comprehensive assessment and measurable goals and objectives are essential in planning appropriate and meaningful education and developmental interventions for the child with autistic spectrum disorders. Information from reliable sources needs to be considered when reporting the baseline data from which goals and objectives will be developed. Goals and objectives reflect assessment data, emerging strengths, and areas of deficit.

Goals based upon the identified levels, strengths, and needs of the child in the developmentally appropriate domains should be established to enhance development of those domains.

Identifying Sensory Processing Issues

It is necessary to identify not only the child's place in the developmental continuum but also the child's primary information processing modality and sensory processing issues. Both research and experience suggest that most persons with autism process information more efficiently visually than they do auditorily. Likewise, sensory processing issues (which vary from child to child, but which are present in every person with autism) may impede both learning and behavior control when they are not recognized, understood, and addressed. It is of particular importance that sensory issues are identified and properly addressed because these issues affect how the child will respond to the environment, whether in early intervention, home or school settings, or in the community.

Long-Range Planning

Goals for the learner with autism need to be developed with a reference to long range expectations. The goals ensure the longitudinal consistency that is vital to successful planning and achievement. While those expectations may be general in nature, they nonetheless provide context for individualization. The goals:

(a) Must be realistic for the child;
(b) Should have home/c1assroom relevance; and
(c) Reflect parents' priorities and needs.

Planning for Transition

All transitions require considerable planning, whether from activity to activity, home to school, class or program to program, or school to postschool environments. Each previous environment needs to address the development of skills that the child will need to participate in and benefit from each subsequent environment. No child needs this kind of longitudinal consistency more than the autistic child.

Relating Assessment Data to Objectives

In writing goals and objectives, it is necessary for baseline and assessment (current level of functioning) data to be included on the page on which the objective is written because it provides a ready reference and a reminder as to why the objective was chosen and why that objective needs to be carried out in a particular way. For the child with autism, identifying the conditions under which the objective is expected to be met provides a critical support that can make the difference between success and failure in meeting that objective.

Development of Appropriate and Individualized Objectives and Measurement Criteria

Objectives are used to describe what a given student is expected to accomplish in a particular area within some specified time period and to determine the extent that the student is progressing toward those accomplishments. The IPP, IEP, and ITP objectives provide general benchmarks for determining progress toward meeting annual goals.

For example, objectives require the following characteristics:

(a) Relate to assessment information and current levels of performance (baseline);
(b) Are observable, measurable, and easily understood;
(c) Show a sequential progression through the skill to meet the goal; and
(d) Describe the natural conditions under which the student will perform the activity.

Periodic review of the goals and objectives occur as often as needed. This review will provide a service implementor with supportive data needed to make a determination of the success of the intervention and strategy.

Contents of the IFSP must include the following information as appropriate to the child's needs:

(a) Child's present sensory, health, and developmental status
(b) Family concerns, priorities, strengths, and resources
(c) Desired outcomes
(d) Criteria, procedures, and timelines for reaching outcomes
(e) Frequency, intensity, location, methods, and natural environments for delivery of needed or required early intervention services
(f) Dates for initiation and duration of needed services
(g) Agencies responsible for providing needed services
(h) Name of service coordinator
(i) Other needed and nonrequired services (steps for transition to other appropriate services at age three years)

The contents of the IEP, as appropriate, must include the following data:

(a) Present levels of performance (baseline data)
(b) Special education and related services needed

(c) Dates when the services will begin and end
(d) Amount of time and ways to join the regular class
(e) Transition plan into regular education
(f) Annual goals and short-term instructional objectives
(g) Ways to decide if short-term objectives have been met
(h) Specially designed physical education, as appropriate
(i) Prevocational career educational goals, when appropriate
(j) Employment skills goals
(k) Ways to meet high school graduation requirements
(l) Alternative graduation standards for graduation
(m) Specialized services, materials, and equipment needs
(n) Transportation needs
(o) Programs and services for bilingual students
(p) An extended school year

APPENDIX E
INTERVENTIONS: APPROACHES AND METHODOLOGIES

Appendix E briefly discusses issues to consider while deciding which approach to employ in the treatment/education of children with autism. The topics discussed in this section are presented simply to prompt the reader's awareness of the available options. For the interested reader, a vast applied research literature is available. Today, more information is available about autistic spectrum disorders (ASD) than any other childhood developmental disorder. Program designers can review the published literature and rejoice in the detailed descriptions of effective intervention methods specifically devised for teaching children with autism (see the suggested reading list on page 107).

Approaches

The approach that works best for the child with autism is the one that is the most specific to a given child's needs. Specificity in planning an individualized education program is most likely to determine the success or failure of an intervention and education program. Specificity is achieved by considering the developmental strengths, needs, and excesses for each child. Children with autism demonstrate highly individualized learning styles both across and within students (Schreibman, Koegel, Charlop, & Egel, 1990). The learning style of each child with autism is unique. One child may require a higher level of intrusive instruction, whereas another may be overstimulated by that same level of stimulation. For example, the reaction, tolerance, or sensitivity of the teacher's voice volume or the duration and intensity of touching may vary considerably among children with autism. Other factors, such as stimulus overselectivity (Dunlap, Koegel, & Burke, 1981), the child's motivation for a particular form of stimulation, capacity for sequential learning, and propensity for self-stimulation, contribute to the success or failure of the child's program – whether in the classroom or at home. Functional patterns of communication, self-injurious behavior, and social awareness need to be assessed for each child to achieve an optimal educational outcome. All of these differences must be considered while selecting an approach to educating the child with autism.

Children with autism learn in complex ways. Their learning needs, like their autistic symptoms, transform as they develop. To focus on one approach or method of instruction, which might temporarily produce a desired result, could ultimately restrict a child's growth. In recent years, there has been debate over the question of how goals and objectives for young children with autism should be attained. One extreme focuses on the functional needs of a child and, as a consequence, gives limited consideration for normal social language development (Sailor, et al., 1989). On the other hand, developmentally oriented clinicians and educators have focused on approaches that attempt to move children along a developmental track that focuses on relationships and communication (Greenspan, 1992). Addressing this polarization of approaches, Prizant and Wetherby (1993) write:

> ”Functional approaches (which tend to be behaviorally oriented) and developmental approaches need not be viewed as mutually exclusive. That is, for communication enhancement activities to be most relevant for young children with autism and their families, approaches must be guided by both a child's developmental capacities in communication and social-cognitive abilities, as well as by the child's and family's immediate and future needs. These needs may include increasing functional skills to enhance independence in the child and reducing stress on the family by providing appropriate tangible and psychosocial supports. Furthermore, the unique learning style and patterns of abilities and disabilities in autism must be taken into consideration. In our experience, however, many educators and clinicians tend to lean heavily toward either developmental approaches or functional and behavioral approaches, to the virtual exclusion of integrating the best practices from both approaches.”

Olley and Stevenson (1989) also argue that a combination of both approaches may be best because curricula scope and sequence are well defined.

The child with autism benefits most from learning opportunities that occur across all environments. The ultimate learning environment is one that integrates learning opportunities in the child's home, community, and school. An intervention and educational program that occurs primarily in one environment is necessarily limited.

Children with autism benefit most when intervention is planned, systematic, individualized, and implemented at home, school, and the community. Intervention programming across environments is possible through a network of support services. A network of support services is formed and maintained by the efforts of service providers from regional centers, parent organizations, nonprofit helping organizations, advocacy groups, informed professionals in the community, and the school district. Services designed to support the effective learning environment, especially generalization of mastered skills, should be implemented at home, at school, and in the community. Such support services include behavioral parent training, respite care, medical intervention for treatment of hyperactivity and sleep disorder, counseling, and behavior management for aggression or self-injurious behavior.

School districts provide specific special education services related to the student's individualized education program when the instruction and services are necessary for the pupil to benefit educationally from his or her instructional program. These may include psychological services, occupational therapy, physical therapy, speech and language therapy, and others which may be provided directly by the school district or through contractual agreements with community agencies.

The following is a brief summary of several different approaches to intervention programming. Discussion about these different approaches serves only as a "snap- shot" of recommended best practices. The particular combination of approaches selected will likely be determined by a number of factors specific to the child, family, school district, and community. Most often, these factors include the availability of qualified specialists, the philosophy and values of the family, the internal strength and resilience of the family, and the child's developmental strengths and needs. No single approach is optimally effective. Undoubtedly, each approach involves aspects of the others.

Developmental Approach

Developmental concepts can be applied to the diagnosis and treatment of children with autistic spectrum disorders. For example, Bryna Siegel, an advocate of the developmental approach (Siegel, 1991), relates what is known about the symptoms of Autistic Disorder to what is known about the developmental level at which each of the child's symptoms can appear. Siegel discusses the use of a developmental level as a way of organizing observations and accurately diagnosing ASD. When there are differences between mental- and chronological-age levels, consideration must be given to whether or not the behavior is atypical (i.e., deviant or typical for that developmental level).

Proponents of a developmental approach to treatment (Greenspan, 1992) emphasize the child's "ability to relate to others with warmth, pleasure, empathy, and growing emotional flexibility" as legitimate goals. The challenge in a strictly developmental approach is to help the child with autism to learn to "attend, relate, interact, experience a range of feelings, and, ultimately, think and relate in an organized and logical manner." Design of the treatment program takes the child's ability to process (regulate) sensations into account. Treatment is relationship-based, is focused on opportunities for spontaneous relating, and relies on affect cueing to achieve results. It is assumed that cognitive potential cannot be understood until interactive experiences are routine.

The developmental approach requires direct and vigilant observation of interactive play between the child and caregiver, as well as between the child and therapist, to identify ”emerging capacities” for warm, intimate, interpersonal relating. Without this knowledge, incorrect diagnoses and inappropriate treatment recommendations may be given.

The developmental approach places an emphasis on what happens during specific periods of development. For example, the acquisition of reciprocal gesturing occurs between ages twelve and twenty-four months. If a child’s problems in processing information prevent the child from learning nonverbal communication with another person, that deficit should not necessarily be taken as an absolute and biologically caused deficit. The developmental approach attempts to ”re-establish the developmental sequence which went awry.” According to Greenspan (1992), ”following the child’s lead and supporting his spontaneity, internal motivation, affective expression in free play, and unstructured interactions are the vehicles for accomplishing” developmental sequence. Greenspan (1992) makes the following treatment and educational recommendations for infants and young children with ASD:

- Each child should have a multidisciplinary team comprised of a mental health professional, speech pathologist, occupational therapist, and special educator. Intensive work with the child and family (e.g., speech therapy, occupational therapy) is the core of the program.
- During part of every day, an early intervention program should focus on the interaction patterns of the infant or young child and the parents.
- A professional should consult with the parents and other caregivers at least once a week to help with family dynamics and interactive patterns at home.
- Children with disabilities should be integrated into adequately staffed, developmentally appropriate early childhood care and educational programs with (a) typically developing children of a similar chronological age or developmental level, (b) one or two preschool children with disabilities in a group, or (c) five typically developing children. Grouping children with disabilities with each other may not be in the interest of any individual child, especially if a child’s disability includes difficulties in communication or social interaction. As the child tries to communicate, he needs someone who can communicate back.
- Early interventionists, child-care providers, and teachers should be trained in techniques for mobilizing socially and emotionally appropriate peer-to- peer interaction, particularly between children with disabilities and typically developing children.

Applied Behavior Analysis

The behavior-analytic approach holds that ”autism is a syndrome of behavioral deficits and excesses that have a neurological basis, but are nonetheless amenable to change in response to specific, carefully programmed constructive interactions with the environment” (Green, 1996). The emphasis on well-sequenced, structured teaching and on evaluation methods characteristic of applied behavior analysis make it uniquely well suited to the goal of effective instruction. A large body of research has shown that children with autism do not learn naturally from typical environments, but most can learn a great deal given appropriate instruction (Harris & Handleman, 1994; Koegel & Koegel, 1995; Lovaas & Smith, 1989; Schreibman, 1988; and Schreibman et al., 1993). Behavior analysis has long been the mainstay of applied research for children with autism (see Schreibman, Koegel, Charlop, & Egel, 1990, for a comprehensive review).

Intervention programming that uses a behavior-analytic approach attempts to systematically teach small, observable steps that define a skill. Skills for which the child demonstrates readiness to learn are broken down into small steps. Each step is taught by presenting an external stimulus or instruction. If the child responds correctly, his or her response is followed by a predetermined positive consequence. If a reinforcement assessment has been conducted and a potent reinforcer is discovered for a given child, then that reinforcer functions effectively to strengthen the response. Research has shown that intervention and educational programming based on the principles and practices of applied behavior analysis can produce rapid, complex, and durable improvements in cognitive, social-communication, play, and self-help skills. Application of behavior-analytic principles are very effective in replacing and/or reducing maladaptive behavior (Siegel, 1996).

Applied behavior analysis begins with an instructional orientation. The child with autism needs desperately to learn competencies that are observable and replicable. Skills selected for teaching should be effective in helping the child to manage his or her environment. The function of the skills selected and taught should be appropriate to the child's age and developmental level. The principal aim of intervention with the child with ASD must be to establish an expanding repertoire of meaningful skills that the child can use in daily interactions.

The behavior-analytic approach has extremely important implications for the understanding of problem behaviors as well as for the focus of early intervention programs. In particular, an understanding of the purposes (e.g., communicative functions) of a child's problem behaviors should inform interventionists of specific objectives for early instruction in communication.

Biological and Medical Approaches

Children with autism vary greatly in their degree of need for medical intervention. They may be healthy, energetic, and have a normal sleep pattern or they may have one or more medical problems. The DSM-IV (American Psychiatry Association, 1994) recognizes that neurological abnormalities are reported in a significant percentage of children with autism.

Associated laboratory findings: when Autistic Disorder is associated with a general medical condition, laboratory findings consistent with the general medical condition will be observed. There have been reports of group differences in measures of serotonergic activity, but these are not diagnostic for Autistic Disorder. Imaging studies may be abnormal in some cases, but no specific pattern has been clearly identified.

Electroencephalograph abnormalities are common even in the absence of seizure disorders.

Associated physical examination findings and general medical conditions: various nonspecific neurological symptoms or signs may be noted (e.g., primitive reflexes, delayed development of hand dominance) in autistic spectrum disorders. The condition is sometimes observed in association with a neurological or other general medical condition (e.g., encephalitis, phenylketonuria, tuberous sclerosis, Fragile X syndrome, anoxia during birth, maternal rubella). Seizures may develop (particularly in adolescence) in as many as 25 percent of cases.

Because of these and other medical problems, including immune system dysfunction (Tsai & Ghaziuddin, 1992) and neurochemical abnormalities (e.g., raised levels of serum serotonin), medical interventions are being sought out as adjunctive treatments for children with autism (Anderson & Hershino, 1987). Following a surge in medical research, different medical treatments are being developed each year. Par- ent-supported organizations such as Cure Autism Now (CAN) are working to bring more medical research to the forefront about autism. A great deal of research is taking place in the genetics of autism.

For a comprehensive review of drug studies and autism see Recent Advances in Pharmacotherapy of Autism and Related Conditions (McDougle, Price, & Volkmar, 1994). Repetitive behavior disorders, including abnormally restricted patterns of interest, adherence to rituals, stereotyped motor behavior, object stereotypes, compulsions, and repetitive self-injury have been targeted as possibly responsive to drugs that act by inhibiting the uptake of central serotonin (Lewis, 1996).

Psychotherapies

There is no evidence of a psychogenic cause of autism (Rimland, 1964). The efficacy of psychoanalytic treatments is also questionable. The effectiveness of several psychotherapeutic approaches, including holding therapy, gentle teaching, and ”options,” is discussed by Smith (1996) in a chapter entitled, ”Are Other Treatments Effective?” Smith concluded there was no scientific evaluation of these therapies using autistic children.

Sensorimotor Therapies

Sensory approaches include auditory integration training (AIT) (Rimland & Edelson, 1995) and sensorimotor integration training (Ayers, 1979). An overview of AIT is presented in education training, mental retardation, and developmental disabilities (Berkell, Malgeri, & Streit, 1996) as a treatrnent for hyperacusis (hypersensitive hearing) in individuals with autism, including a review of relevant research, descriptions of the treatment procedure and technology involved, and consideration of current controversies surrounding AIT. The efficacy of AIT remains questionable (Smith, 1996).

Cook (1990) reviewed sensory integration theory and explained how it can be used to help children with autism. Cook discussed how children with autism process sensory information, how it affects their behavior, and how activities that incorporate their sensory needs assist in moving the children toward more self-directed behaviors. There are two basic approaches to the use of activities with children with ASD: the task model or skills-sequence approach and the component model or the modality- processing model. Suggestions are given by Cook on setting up activity programs and documenting change.

Ray, King, and Grandin (1988) tested a nine-year-old boy with autism for 17 days over a four-week period by allowing five minutes of stimulation using a swing and sensory integration therapy. Data showed the percentage of vocalizations was significantly greater during the time the child used the swing and that the child acquired 13 new words during the study period.

Use of structured physical activities, such as rhythm, body awareness, perceptual-motor development, and swimming, has been suggested as beneficial activities to engage autistic children (Kraft, 1983). Smith (1996) concluded that ”sensory integration therapy does not appear to enhance language, control disruptive behavior, or otherwise reduce autistic behaviors – it may offer enjoyable, healthy, physical activity.”

Play

Play can be an intervention method to promote skills or an evaluation tool to aid in developmental assessment or diagnosis (Wulff, 1985). Children with autism often choose play activities that are self-stimulating, repetitive, or both. Play has a role in facilitating language and cognition. Play groups should be designed to facilitate positive social interactions, either verbal or nonverbal. Play group design allows the clinician to structure activities to accommodate the child’s level of functioning and create unique opportunities for new skills.

Wolfberg and Schuler (1993) describe a multifaceted model to promote peer play. They evaluate the impact of the model on the social and cognitive dimensions of play in three males with autism (ages seven years). Their model demonstrated decreases in isolated play, collateral gains in more social forms of play, decreases in stereotyped object play and collateral gains in functional object play. While no symbolic play was observed in any of the children during a baseline period prior to intervention, two children demonstrated symbolic play in the final condition. Measures of generalization and social validation indicated advances in play behavior that were not limited to the play groups but were observed in other contexts and were accompanied by language gains.

Atlas (1990) describes diagnostic and therapeutic uses of a play procedure suitable for consultative use with children with autism. A study of 26 children with ASD (ages four years and five months to fourteen years and three months) found that children’s performances in play correlated with performances across other symbol modalities of language, gesture, and drawing in terms of symbolization levels.

The appropriateness of play therapy has been questioned. Nevertheless, there are a number of case studies of play therapy used to treat autism. Lowery (1985) reported two cases of children with ASD treated in weekly play therapy for one year. The children, a male and a female, were both six years old when they began treatment. Both appeared to function in the moderate range of mental retardation. Attachment behavior was an issue in both cases. Lowery's approach demonstrated that these children's capacity to form relationships developed in play therapy. Impairments in play were distinguished from disturbances in play. Lowery suggested that aloofness is not a fundamental impairment in children with autism. It is further suggested that autistic aloofness is a concept of dubious usefulness and possible harm.

Stahmer and Schreibman (1992) used a self-management treatment approach to teach three children (ages seven to thirteen years) with autism who exhibited inappropriate behaviors in playing with toys in the absence of a treatment provider. After self-management training, generalization and maintenance of the behavior, changes were assessed. Because of the detrimental effects of self-stimulation (e.g., arm flap- ping, toy spinning, twirling) on learning, the relationship between self-stimulatory behaviors and appropriate play was measured. Results indicated that the children learned to exhibit appropriate play skills in unsupervised settings and generalized appropriate play skills to new settings. Two of the children had maintained their gains at a one- month follow-up. In addition, self-stimulatory behaviors decreased as appropriate play increased.

Thorp, Stahmer, and Schreibman (1995) assessed the effects of teaching sociodramatic play to three boys (ages five years and four months; eight years and two months; and nine years and nine months) with autism. Training was conducted using a variation of pivotal response training, a program used to teach language to children with autism. Measures of play skills, social behavior, and language skills were obtained before and after treatment and at a three-month follow-up session. The correlation between language and pretend play was explored, as was the relationship between sociodramatic play and social competence. Positive changes were observed in play, language, and social skills. These changes generalized across toys and settings, al- though little generalization to other play partners occurred.

An indirect approach to play intervention focuses on teaching older siblings of children with autism to facilitate play skills learning. Celiberti and Harris (1993) assessed the effectiveness of a treatment program to teach siblings to use behavioral skills while playing with their brother or sister with autism. They predicted that siblings could acquire behavioral skills, these skills would maintain over time, and the skills would generalize to untrained contexts. Three sibling pairs (ages ranging from two years and eleven months to ten years and three months) participated in sibling training. Siblings were trained to elicit play and play-related speech, to praise appropriate play behaviors, and to prompt the child with autism when he or she failed to respond. Generalization and follow-up measures indicated the siblings were able to generalize the skills to a novel toy and maintain the skills at three-, six-, and sixteen- week follow-up assessments.

Methodologies

As research findings are applied to children with autism, orderly, regular, and systematic means of teaching are documented and offered as methodologies. Certain methods become popular and are sought out by parents and professionals. Some methods are older than others. New methods replace older ones as more research discovers more efficient ways of promoting learning. This section sketches several popular methods of teaching. Application of these methods require greater understanding and training. Fortunately, most popular methods are backed by training opportunities offered by the advocates of the method. The following is a thumbnail sketch of several popular methods.

Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH)

The following is a summary of the highlights of the TEACCH approach. For a complete description of the TEACCH program, see Schopler (1989). The TEACCH program takes a developmental approach by recognizing differences in rate and nature of development within and between children. Teaching objectives are based on individual developmental patterns. TEACCH advocates emphasize that goals for treatment include both the child and family members. Objectives include changing the behavior and skill level of the child as well as developing an environment that matches the child's needs. By accommodating the learning environment to the deficits caused by autism, independent functioning is fostered and frusuation and behavior problems are avoided (Schopler, 1989). ”The role of TEACCH is to support the needs of each family in whatever way makes the most sense for the family and the child. Structured teaching provides the primary basis for educational continuity in the TEACCH pro- gram” (Lord, Bristol, & Schopler, 1993).

The TEACCH model recognizes a direct relationship between assessment and design of the intervention program. Assessment includes formal testing, observation, and careful collection of information from parents and teachers. Detailed assessment underscores the importance of individualizing programs for children and their families. Assessment serves the critical function of formally determining which children have Autistic Disorder. ”About 60 percent to 75 percent of the children accepted for assessment are later diagnosed as autistic using standard diagnostic criteria” (Lord, Bristol, & Schopler 1993). The Childhood Autism Rating Scale (CARS) (Schopler, Reichler, & Renner, 1988), the Autism Diagnostic Interview (ADI) (Le Couteur, Rutter, Lord, Rios, Robertson, Holdgrafer, & McLennan, 1989), the Prelinguistic Autism Diagnostic Observation Schedule (PL-ADOS) (DiLavore, Lord, & Rutter, 1992), or a combination of the three is used to determine whether the child meets the formal criteria for Autistic Disorder according to the DSM-IV. Observations made during the evaluation phase provide valuable information for the design of the child's educational program. A fourth instrument, the Psychoeducational Profile Revised (PEP- R) (Schopler, Reichler, Bashford, Lansing, & Marcus, 1990) establishes developmental levels in seven areas and is administered by a ”psychoeducational therapist.”

The guiding principles of the TEACCH program are:

- To maximize adaptation by teaching new adaptive skills
- To develop environmental modifications to accommodate the child’s deficit
- To maintain parent-teacher collaboration
- To provide continuity of structured teaching from preschool to adult years
- To prevent behavior problems from developing

TEACCH’s structured teaching caters to the child’s visual processing strengths by organizing the physical structure of the room and posting picture schedules for reminding the child when classroom activity takes place. The emphasis is on learning to be a student and developing appropriate social and communicative behaviors. There are integrated programs in which children with autism participate in regular preschool or day-care centers. Some children receive TEACCH programming at home through parents implementing the home-teaching program.

Parent-teacher collaboration is achieved by the parent participating as an assistant teacher in the classroom once or twice a week. Parent-teacher collaboration is conducive to generalization and application of skills from setting to setting.

Successful education of the child with autism demands a continuum of services. According to Lord, et al. (1993), a continuum of services can best be conceived ”as covering a wide range of different approaches and different sites for children within the same age group.”

Lord, et al. (1993) describe the notion of continuum in this manner: ”Within one community that has good ’regular’ day care centers, a good medical base, and excellent speech pathologists, TEACCH may be most effective as a backup for early intervention workers who are able to place young autistic children in integrated programs. Children may already be receiving high-quality treatment on a regular basis from private or public health speech pathologists, for whom we can provide consultation or inservice training. In another community, a categorical classroom for autistic children may be developed because of the needs of three or four young children who require high degrees of supervision and intense structure. TEACCH therapists may be actively working with parent volunteers in the classroom. In this situation, the role of TEACCH may be to advocate for reverse mainstreaming and a continued focus on spontaneous communication and social interaction within the specialized setting. In another community, a group of mothers who are at home may each come in biweekly to work as cotherapists with the TEACCH staff; another role of the center may be to provide a mothers’ support group as well as a monthly weekend activity group for siblings.”

Other service provision goals of TEACCH include coordination of training with community professionals and working with professionals to develop and implement educational plans for individual children and their families. In general, TEACCH can be described as eclectic in its approach and developmental in the way it uses teaching techniques.

Intensive Behavior Intervention (IBI)

”Effective treatment for severe behavioral disorders is seen to require early intervention carried out during all or most of the child’s waking hours, addressing all significant behaviors in all of the child’s environments by all significant persons for many years” (Lovaas, 1993). This statement describes the basic idea of intensive behavior intervention.

A formally conducted intensive program provides 37 to 40 hours a week of structured learning opportunity. Lovaas asserts that effective treatment requires a comprehensive educational program; i.e., one that addresses all of the child’s behavioral deviations and individual learning style (Lovaas, 1996). Intensive 40-hour-a-week programs evolved from years of research that determined that more really is better, at least for some children with autism (Lovaas R Smith, 1988). Studies indicate that 10 hours a week is inadequate (Lovaas R Smith, 1988). There is evidence that children improve significantly with 20 hours a week (Anderson, Avery, DiPietro, Edwards, & Christian, 1987), but they did not progress as much as children who received 40 hours a week.

Intensive programs refer to more than the number of hours the child is in treat ment each week. Training, curriculum, evaluation, planning, and coordination are also ”intensive.” Intensity must be considered on several levels, including duration of treatment (e.g., number of hours per day or per week; the number of weeks of intervention in a year), the number of environments in which teaching occurs (e.g., school, home, community), and the educational validity of interventions provided. An intensive program is difficult to achieve and demands total commitment on everyone’s part. Maintaining quality control over the child’s program is an essential part of an intensive program. For example, if a child begins an intensive program that has the quality controls recommended by Lovaas, it is possible to determine whether that child is an appropriate subject for a 40-hour-a-week program within the first six months of treatment.

The majority of the 40 hours in an intensive program, at least during the first 6 to 12 months of intervention, should emphasize the remediation of speech and language deficits (Lovaas, 1977). Later, this time may be divided between promoting peer integration while continuing to remediate speech and language deficits.

There is little or no evidence to show that children with autism learn in group situations. Research findings indicate that children with autism learn only in one-on-one situations for approximately the first six months of treatment (Koegel, Rincover, R Egel, 1982).

The logic of intensive behavioral programming is based on the fact that no single treatment program is sufficient to optimize treatment outcome (Lovaas, 1996). An intensive program consists of hundreds of programs. In a high-quality, well-managed intensive intervention, ”each program is designed to teach one skill or concept and is taught in conjunction with four to ten other programs simultaneously” (Lovaas, 1996).

Most communities lack the resources, and families experience limitations that prevent delivery of services as intensive as those of Lovaas. The issue is about assessing each child’s response to programming to determine whether reasonable progress is occurring. There is evidence that less intensive services are beneficial to children with autism (Shienkopf and Siegel, in press). Although outcome data for most autism preschool programs are still preliminary (e.g., Strain’s LEAP program), the data have all revealed some benefit. As more data become available the effect of intensity will become clearer. Quality of teaching expertise, creativity, and use of research-based techniques may turn out to be as important as intensity.

Natural Language Methods

Significant gains for teaching language, including speech intelligibility, have occurred in the past few years. Speech and language pathologists often integrate communication training with the child’s behavior program to provide a coordinated opportunity for structured and naturalistic language learning (Parker, 1996). Camarata (1996) defines naturalistic language intervention ”as procedures paralleling those employed to teach typically functioning children that produce measurable (and socially valid) change in the morphological, syntactic, semantic, pragmatic, and speech intelligibility aspects of the linguistic system of children with disabilities.”

The chief focus of skill development for children with autism is communication because it is the most pervasive area of developmental delay. Communication is most crucial for socialization and cognitive development, and it relates to the occurrence of problem behaviors. Instruction in communication is designed to provide a generative tool that will serve many immediate needs throughout the child’s life.

In the Natural Language Paradigm, specific targets are taught in a variety of social settings using natural reinforcers (e.g., continual interaction) with a communication partner or access to desired objects rather than using token or food reinforcers. Natural Language Paradigm (NLP) was designed for use with autistic children in an educational or clinical setting (Koegel, O’Dell, & Koegel, 1987). It is thought to produce more generalized speech for children with autism. NLP is similar to the ”mand-model” (teaching the child to signal or ask for something) in that teachers systematically prompt verbalizations with mands, model verbalizations if necessary, and provide reinforced, appropriate verbalization during play and preschool activities. NLP procedures differ from other natural language programs by combining several of the positive features of both traditional operant procedures and natural language procedures. Play sessions are specifically presented in which massed opportunities are provided for the child to use speech, and all verbal attempts are reinforced even though they may not be as elaborate or intelligible as those previously emitted.

A rapid exchange of toys continues between the child and therapist while a wide variety of words and phrases are modeled for the child. NLP is a child-initiated protocol designed to increase motivation by varying tasks (Dunlap, 1984), increase responding by providing direct reinforcers (Koegel & Williams, 1980), and enhance generalization through loose structure and multiple exemplars (Stokes & Baer, 1977).

Pivotal Response Training

Pivotal Response Training (PRT) was developed to overcome problems of stimulus overselectivity and motivation (Schreibman, Stahmer, & Pierce, 1996). Stimulus overselectivity occurs when the child's expanse of attention is too narrow to permit efficient learning. Motivation is limited in children with autism and prevents generalization of learned responses. In PRT the intervention goes beyond targeting a single behavior and instead focuses on a set of specific procedures that increase responsive- ness to simultaneous multiple stimulus cues. The logic of teaching pivotal target behaviors is that educators might indirectly affect a large number of individual behaviors. Such an intervention is thought to be more efficient in the time and effort required of the child and clinician and also more effective in terms of promoting generalized gains. *See How to Teach Pivotal Behaviors to Children with Autism: A Training Manual* (Koegel, Schreibman, Good, Cerniglia, Murphy, R Koegel, 1989) for detailed instruction on the use of PRT techniques.

Picture Exchange Communication System

The Picture Exchange Communication System (PECS) is a communication training program to help children with autism acquire functional communication skills. Children using PECS are taught to give a picture of a desired item to a communicative partner in exchange for the item, thus initiating a communicative act for a concrete outcome within a social context (Bondy & Frost, 1994).

The goals of PECS include the identification of objects that may serve as reinforcers for each child's actions and the learning of responses to simple questions with multipicture systems. Special educators can quickly learn how to incorporate picture systems into a schedule-following program for students, how to combine picture systems with time-based reward systems, and how to promote spontaneity in the classroom.

Procedures for introducing the PECS to very young children, who may not display any functional or socially appropriate communication skills, are empirically tested and described in detail in the manual that accompanies this method of teaching communication skills. Test results showed that at a five-year follow-up, 25 of 85 children who were 5 years or younger when PECS training started and who used the PECS for more than one month, continued to use a combination of speech and pictures or use a complex printed word system. Of the remaining children, 41 used speech as their sole communication system.

Other methods worthy of review and consideration for designing intervention and educational programs for children with autism include communication-based interventions. An instructional strategy that identifies functionally equivalent alternatives to a child's problem behaviors is known as Functional Communication Training (FCT) (Carr, Levin, McConnachie, Carlson, Kemp, & Smith, 1994). In FCT, targeted skills for instruction that are selected as equivalent alternatives to problem behavior should fit within a customary communicative system, be easy to perform, and be effective in producing the desired outcomes.

APPENDIX F
INTERAGENCY AGREEMENTS

Interagency agreements may also be known as memoranda of understanding or contracts. Special education local plan areas (SELPAs) may wish to augment existing plans to include various aspects needed to assess and treat children with ASD.

Standard language in an interagency agreement needs to address the basic elements, which are the parties involved, purpose, agency roles and responsibilities, modifications and amendments, and the review date of the agreement. In addition, the agencies may wish to develop language addressing contractor services, in-home tutor program's, case management responsibilities, and the role and responsibilities of educators.

The following language is provided for those areas that are supplemental to basic contractual language:

Regional Center Roles and Responsibilities

1. If a service coordinator (SC) or an intake coordinator (IC) suspects that a one- to five-year-old consumer has undiagnosed autism, the case manager or intake coordinator will make a referral to the autism screening team following the procedure described in a referral packet. If the screening tool in the referral packet indicates that the consumer may have a diagnosis of autism, the SC or IC will make a referral to an appropriate diagnostic team or center for a formal assessment and diagnosis. With the family's permission, the SC or IC will be responsible for attending both the autism screening team meeting and the formal diagnostic evaluation with the consumer and his or her family.
2. If an SC or IC has a one- to five-year-old consumer diagnosed with autism by a diagnostic team or center and that consumer has not been screened by the regional center's autism screening team, the service coordinator will immediately do the following:
    (a) Make a referral to the autism screening team.
    (b) Follow the procedure described in the referral packet.
    (c) Attend all subsequent meetings.
1. The SC or IC will be responsible for coordinating information generated by the

diagnostic team or center evaluation and regional center's autism screening team. He or she will assist the family with the implementation of the recommendations of the individualized education program (IEP) team, individualized family service plan (IFSP) team, and individualized program plan (IPP) meeting.

2. The SC or IC will offer assistance to families in gaining access to community resources for autism, such as the Autism Society of America, Family resource center, education programs, and so forth.
3. The SC or IC will attend and support the consumer during IEP, IFSP, and IPP meetings, program staffing, and other meetings regarding appropriate programs and services.
4. The SC or IC will be responsible for utilizing generic resources as required by the Lanterman Act to pay for services required by the consumer to maximize his or her developmental potential.
5. A request for purchase of service will be made when all generic resources have been utilized. The SC or IC will develop an IFSP/'IPP objective to support the purchase of a service request.
6. An IPP meeting, including the regional center and local educational agency, will be scheduled to define appropriate educational services and develop an intervention plan when considerations are made to significantly change the child's program.
7. The SC or IC will monitor the progress of the consumer through annual service and educational reports and the development of the IEP, IFSP, and IPP.

Education Roles and Responsibilities

1. The local educational agency and special education local plan area (LEA/ SELPA) acknowledges the potential appropriateness of a variety of educational approaches for students with diagnosed autism or related disorders.
2. When appropriate, the LEA will collaborate with the regional center to provide early intervention services as outlined in the memoranda of under- standing (MOU).
3. The parameters of the collaboration between the regional center and LEA will be defined in an MOU, which will contain details regarding funding agreements, business procedures, and personnel issues.
4. The SC or IC will offer assistance to families in gaining access to community resources for autism, such as the Autism Society of America, family resource center, education programs, and so forth.
5. An IFSP/IEP meeting, including the regional center and LEA, will be scheduled to define appropriate educational services and to develop an intervention plan when considerations are made to significantly change the child's program.
6. The SELPA director shall appoint representative(s) to the Early Autism Screening Team and will maintain active participation on the team.
7. An IFSP/IEP review will be held at least every six months following the initiation of the educational services, methodology, or both, to review progress and to determine

appropriateness of placement, service, and ongoing implementation.

8. During the implementation of a home-intervention program, the LEA will assign a program specialist to monitor the delivery of services. Program monitoring will include but not be limited to contact with parent and program provider, quarterly report or log review, and observations. An IFSP/IEP meeting shall be called at any time to discuss unresolved issues or concerns raised by the interdisciplinary team.
9. Representatives from education and regional centers will participate in decisions regarding entrance, continuation, or exit from an intervention program at an IFSP/IEP meeting.
10. When redefining the parameters of the service delivery plan (IFSP, IEP, and IPP), a meeting will be scheduled among all parties involved.
11. The SELPA will facilitate the coordination of training on autism and invite parents, regional center staff, and other interested parties in the community.

Example of an Interagency Service Contract

In the event that home instruction, such as discrete trial training, is decided to be in the child's best interest, the excerpts on pages 80 to 85 from the Valley Mountain Regional Center (VMRC) may be considered for use in preparing a contract agreement with a nonpublic agency or vendor.

EXAMPLE

GONTRACT FOR SERVICE AGREEMENT

In-Home Tutor Program and Behavioral Intervention Services

1. Parties

CONTRACTOR - Valley Mountain Regional Center (VMRC).
DISTRICT - The school district where the CONTRACTOR and pupil reside.
PARENT - Parent, legal guardian, or both.

2. Purpose

This is to implement the "Agreement to Furnish Contractor Services" contract between the DISTRICT and VMRC and to establish the roles of the CONTRACTOR and PARENT.

Through this agreement the CONTRACTOR contracts with the PARENT to provide In- Home Tutor Program services for the provision of operant conditioning intervention for the child in the manner described in the child's individualized education program (IEP) or individualized family service plan (IFSP). The parties acknowledge that the DISTRICT is not construed as the employer to provide operant conditioning intervention services to the child through use of an in-home tutor. Accordingly, the purpose of this Agreement is to serve as a means for providing such services to the child that are acceptable to all parties.

3. Modifications and Amendments

This contract may be modified or amended only by a written document that complies with legal mandates, executed by the CONTRACTOR and the PARENT. Changes in the educational program, services, or placement provided under the contract may be made only on the basis of revisions to the child's IEP and IFSP. At any time during the term of the contract, the PARENT or the DISTRICT may request a review of the child's individualized program, subject to all procedural safeguards. Changes in the administrative or financial agreements of the contract that do not alter the educational services or placement may be made at any time during the term of the contract, as mutually agreed in writing by the CONTRACTOR, PARENT, and DISTRICT.

4. Term

The term of this agreement shall be for the period stated in the child's IEP and IFSP or six months, whichever is less.

5. Parent's Responsibility

The PARENT agrees to:

- Be an independent employer and acknowledge that this agreement does not create the relationship of agent, servant, employee, partnership, joint venture, or association to the VMRC or the DISTRICT.
- Provide access to and copies of any books, service logs, billing notices, documents, papers, reports, records, or other matter relating to the contract and services provided hereunder on request by the DISTRICT, the CONTRACTOR, or both. þ Not bring a claim against the DISTRICT or the CONTRACTOR for inappropriate services provided to the child by the PARENT's employees. The PARENT agrees that the services provided hereunder will be provided by the PARENT's employees who were selected by the PARENT. Acquire and maintain, at his or her own cost and expense, workers' compensation insurance for persons employed by him or her with funds received under this agreement. Should the PARENT substantiate that this is a financial burden, it will be addressed at an IEP/IFSP/IPP meeting.
- Maintain adequate liability insurance of at least $300,000 per occurrence throughout the entire term of this contract. This insurance shall be primary and any insurance of the CONTRACTOR secondary in any matters raised. At the CONTRACTOR'S request, the PARENT shall provide the CONTRACTOR with a certificate of insurance showing such coverage and stating that such insurance shall not be canceled without 15 days prior, written notice to the CONTRACTOR.
- Provide appropriately trained tutors at least eighteen years old and trained to provide operant conditioning intervention specified in the child's IEP.
- Defend, hold harmless, and indemnify the CONTRACTOR and the DISTRICT and its officers, agents, and employees for all liabilities and claims for costs, dam- ages, death, sickness, or injury to persons or property, including without limitation all consequential damages from any cause whatsoever arising from or connected with services provided under this agreement and the services hereunder whether or not resulting from the intentional or negligent acts or omissions of the PARENT and his or her agents or employees.
- Forward service logs and billing statements for tutoring provided hereunder within 30 days of the end of each month to the CONTRACTOR. The PARENT is responsible for verifying accuracy of said service logs and for informing persons he or she employs of their personal responsibility for the completion and assurance of said service logs.
- Allow periodic monitoring of the child's instructional program by the DISTRICT, the CONTRACTOR, or both. As designated by an IEP team, representatives of the DISTRICT, the CONTRACTOR, or both shall have access to observe the child at work, to monitor the instructional setting, to interview the PARENT or the PARENT's employees, and to review the child's progress. The PARENT agrees that representatives of the DISTRICT, the CONTRACTOR, or both may make monitoring visits during hours of service to the child on presentation of identification.
- Notify the CONTRACTOR in writing if services are not provided for a period longer than five calendar days other than scheduled vacations or agreed upon absences.
- Not engage in practices that discriminate on the basis of race, religion, sex, national origin, age, or handicap in employment or operation of his or her service. The PARENT also indicates by signature that he or she has read and agreed to the In- Home Tutor Program Disclosure of Information attached, which is a part of this agreement.

6. Contractor Responsibilities

The CONTRACTOR agrees:

- To process payment for In-Home Tutor Program services in a timely manner upon receipt of signed service logs and billing notification from the PARENT. Payment is to be made within 60 days.
- Payment shall be at the rate of $_________ per hour for staff tutors. To authorize payment for up to _______hours per month in accordance with the child's IEP for staff tutors.

7. Compliance with the Laws

During the term of this agreement, the CONTRACTOR shall comply with all applicable federal, state, board of education, and local statutes, laws, ordinances, rules, and regulations relating to the required special education services and facilities for individuals with exceptional needs.

This contract is effective on _____________ and terminates at 5:00 p.m. on _____________, unless sooner terminated as provided herein.

8. Early Termination

Either the CONTRACTOR or the PARENT may terminate this Agreement upon 10 days written notice following the IEP/IFSP meeting. Upon termination, the obligations hereunder shall cease. The DISTRICT shall be notified immediately of such termination.

On-Site Consultant Role and Responsibilities

The on-site consultant agrees to:

- Conduct an initial three-day Workshop (18 hours) with all intervention staff members. Intervention staff members are defined as senior tutor(s), staff tutors, and parents.
- Provide ongoing training to intervention staff members as needed.
- Provide ongoing program modifications to intervention staff members.
- Coordinate the program responsibilities of the intervention staff members.
- Facilitate weekly staff meetings.
- Function as a liaison among VMRC, the District, and UCLA concerning all issues, including, but not limited to, programming, consultation, and scheduling of site visits by UCLA. Should the on-site consultant determine that a UCLA consultation is necessary, the SELPA Director shall be notified three weeks in advance of the interdisciplinary (ID) team meeting to allow for appropriate IEP and IFSP attendance staffing.
- Provide consultation and assistance to parents prior to staffing changes.
- Authorize program changes prior to implementation.
- Provide quarterly reports to service agency providers and parents.
- Contact agency providers should unresolved issues or concerns of program implementation be noted.
- Attend the following meetings as requested by the ID team: IEP, IFSP, IPP, and ID team meetings.
- Comply with the Code of Professional Ethics as attached herein.
- Provide input to the ID team regarding entry, continuation, or transition of the child throughout all phases of the program.
- Recommend a potential senior tutor to the ID team.
- Provide required monthly itemization of services to service agencies providers.

Parent Responsibilities

When implementing a Lovaas home program, the parents agree to:

- Cooperate and collaborate with the ID team throughout all phases of implementation of a home program. The ID team will consist of parent(s), an on-site consultant, and a school district representative.
- Contact a minimum of three other families, as recommended by the on-site consultant doing a home program, to arrange an observation to facilitate establishing the program.
- Participate in the identification and selection process of a senior tutor as members of the ID team. Parents will also have a voice in the ongoing evaluation and retention of the senior tutor.
- Be responsible for recruiting staff tutors. The parents will be given the opportunity to attain tutors through the FEAT organization recruiting efforts. They may have to advertise locally or contact schools, Head Start programs, and so forth, to find prospective employees. Four weeks after the program commences, parents will acknowledge that the child is receiving a minimum of 30 hours, or the program will be terminated. Special circumstances will be considered provided sufficient documentation of efforts exists.

- Have input, as members of the ID team, in the decisions regarding the hiring and retention of parent-employed staff tutors and all related employer issues and will collaborate with the on-site consultant for input prior to the action being taken.
- Attend the initial training workshop provided by the on-site consultant and acknowledge it will be done in their home. They will assure appropriate measures are taken to facilitate a successful training.
- Maintain a 30- to 40-hour-per-week program.
- Allow new families to observe the implementation on their child's program.
- Have the option of doing up to 10 hours per week of their child's intervention. Should the parents exercise this option, they will not be compensated for there participation and will be required to attend all training given and weekly clinic meetings. They must also agree to work in a collaborative manner with the senior tutor and on-site consultant.
- Make up the difference, at their option, if at any time the staff is not sufficient to attain 30 to 40 hours of intervention to ensure the child has met the 30-hour minimum requirement. Should the parent choose not to make up the difference, the deficient hours of intervention must be made up within a 30-day period. Exceptions to the 30-hour minimum will be detailed in contract. The parent agrees to continue to recruit staff during this period of time and must provide sufficient documentation of efforts made to restaff.
- Review data collection on a regular basis to demonstrate knowledge of techniques used to ensure generalization across environments.
- Be required to attend a monthly ID team meeting.
- Provide all supplies necessary for implementation of the home program. Should this prove to be a financial burden, they will seek support from other agencies, such as FEAT, the school district, and VMRC. Any reimbursement of supplies will require prior approval. Should the parent substantiate that this is a financial burden, it will be addressed at an IEP/IFSP/IPP meeting.
- Be involved in any decision to require a consultation from UCLA along with other members of the ID team. Parents will be responsible for funding the travel, lodging, and per diem costs of the UCLA consultant. Should this prove to be a financial burden, they will seek support from other agencies, such as the school district and VMRG.
- Be active members of their child's IEP, IFSP (if applicable), IPP, and ID teams.
- Recognize the importance of working in a collaborative manner with all service agencies involved, consultants, staff, and so forth, and will make every effort necessary to ensure successful implementation of the home program.
- Provide information to the university or college instructors regarding volunteer student tutors as requested and on a timely basis.
- Provide adequate liability insurance of at least $300,000 per occurrence through- out the entire duration of the home program implementation. Parents will also maintain insurance as required in the workers' compensation law of California.
- Parents will seek the advice of an insurance agent or broker to ensure compliance. Should the parent substantiate that this is a financial burden, it will be addressed at an IEP/IFSP/IPP meeting.
- Sign a contact with the service provider agencies that clearly states all parties responsibilities regarding implementation of the home program as well as specific rules that apply to the program as defined by the on-site consultant.

Senior Tutor Role and Responsibilities

The senior tutor agrees to:

- Carry professional liability insurance in the amount of $1 million/$1 million.
- Meet the minimum qualification requirements of a senior tutor, which includes a junior class standing at a university, passing of two classes in Applied Behavior Analysis, and experience

working with at least two children with autism at two or more levels of the Lovaas program. The ID team may modify these standards as deemed necessary by the on-site consultant.

- Schedule intervention hours with parent and contact tutors regarding the schedule. Parents are to be contacted 24 hours prior to a change or cancellation in the schedule.
- Assist the on-site consultant with the training of staff tutors, evaluate and monitor tutors' competency, address parent's and consultant's concerns regarding staff tutors' competency.
- Schedule the weekly staff meetings, set the agenda, and give input at meetings regarding review of the programs. The senior tutor must also ensure that all tutors are providing input about programs, evaluate the tutors' proper implementation of the program by asking the tutor to demonstrate the procedures, and include parents in the discussion at the staff meetings.
- Act as a liaison and problem-solver with the parents, staff tutors, and the on-site consultant. The senior tutor must update the consultant regarding any issues or concerns.
- Organize the log book to include staff meeting notes and ensure compliance with data entry. Every two or three months, the senior tutor must store the previous month's data in a central file,
- Be knowledgeable of accident and behavioral incident report procedures and assume responsibility for filing such reports in a timely manner. These reports should include a description of the event, relevant quotes, and resolution.
- Act as a role model for other tutors (e.g., be on time, comply with the district's dress code, maintain a professional attitude, model interventions appropriately). The senior tutor must comply with the attached professional conduct code.
- Prepare monthly written summaries for the consultant that include program and behavior data. Copies of the summaries shall be provided to the district, the SELPA, VMRC, and the parent.
- Prepare materials prior to and during implementation of the program.
- Recruit tutors and schedule workshops in collaboration with the on-site consultant.

Staff Tutors Roles and Responsibilities

Staff tutors will:

- Be at least eighteen years old.
- Be employed by the parents and complete necessary application and tax forms as requested by the parents.
- Attend the entire initial training workshop provided by the on-site consultant. Any exceptions to this must be approved by the on-site consultant and the parent.
- Be required to attend the weekly staff meetings without additional compensation, provide program input, demonstrate program procedures, be open to constructive criticism to improve skills implementation, and demonstrate follow-through of the on-site consultants' and the senior tutor's recommendations.
- Be required to work a minimum of six hours per week per child and may not exceed 15 hours per week per child.
- Be required to record complete and accurate program data as required by the program.
- Implement the program as monitored by the senior tutor and on-site consultant.
- Dress and act appropriately while working as an employee in the home program.
- Be required to report any incident that should occur out of the ordinary to the parent, senior tutor, on-site consultant, and ID team.
- Discuss any problems incurred with the parent, senior tutor, or on-site consultant to achieve resolution. Unresolved issues will be brought to the attention of the ID team.
- Be responsible for working the agreed-upon, scheduled hours – arriving and departing at the scheduled times
- Notify the parents of any necessary modifications to the schedule within 24 hours.

- Make up deficient hours within a reasonable period of time.
- Be required to leave the workroom clean and organized before departing.
- Provide a two-week notice upon decision to terminate employment.
- Maintain complete confidentiality regarding the program and the family.

APPENDIX G
CASE SUMMARIES

This appendix contains information regarding decisions and significant findings developed as a result of appeals and fair hearings related to the provision of intensive intervention services for children with autism. The first section, Regional Center Cases, contains case summaries of appeals regarding regional centers which were heard through the Office of Administrative Law; and the second section, Educational Due Process Hearings, provides an overview of cases involving local educational agencies heard through McGeorge School of Law. It is hoped that this review will be of assistance in utilizing regulations and process and also provide greater understanding of the required parameters of assessment and program planning.

There are generally three types of cases and three standards for decision making when intensive early autism treatment issues arise; they depend on the age of the child, the system from which these services are sought, or both.

Parents of children younger than three years old who may require services from a regional center under Part C (formally Part H), would need to demonstrate that the service is necessary to achieve the goals of Part C (formally Part H), which are to enhance the capacity of families to meet the special needs of their infants and toddlers with disabilities, to minimize the likelihood of the institutionalization of individuals with disabilities, and to maximize the potential for the independent living in society of persons with disabilities. [20 U.S.C. § 147 (A)(3)(4); *Government Code* § 95001 (A)(2).]

Parents of children older than three years old who are seeking these services generally pursue a local educational agency under the IDEA, and the child's family would need to demonstrate that the services are individually designed to provide educational benefit and to meet the unique needs of the child. *[Board of Education, et al., v. Rowley* (1982) 458 U.S. 175, 200.]

Parents of children older than three years old who are unsuccessful at obtaining these services from a school district may be pursuing a regional center under the Lanterman Act and would need to demonstrate that the service is necessary to sup- port integration into the mainstream life of the community, to approximate the pat- tern of everyday living available to people without disabilities of the same age, to foster the developmental potential of the person, and to achieve the most independent, productive, and normal life possible. [*Welfare and Institutions Code* § 45021]

Regional Center Cases

N-94 12201: (JOE, for regional center)

[This case raises one Part C (formally Part H) transition issue but is primarily a Lanterman Act case for early intensive autism services.] This is the case of a thirty-eight-month-old child whose parents requested continued funding for two hours of speech therapy pursuant to the child's IFSP as a transition service pending an appeal with the local educational agency. The hearing officer ordered the regional center to continue the funding. The rest of the case involved the request for funding of an intensive 60-hour-per-week program (not specified in his IFSP) for the child by an ”unvendored” behavioral service. The hearing officer denied this request on the grounds the service was not vendored. The regional center had offered 69 hours per month of programming through a ”vendored” behavioral service. The hearing officer found this not to be an abuse of discretion. The hearing officer specifically did not reach the issue of the appropriateness of the 60-hour-per-week unvendored program as opposed to the 69-hour-per-month vendored program. Therefore, this hearing decision is not of much guidance on the issue of the extent of, or limits to, the entitlement to intensive early autism intervention services under the Lanterman Act. Note:

- Services identified in the IFSP for students in transition from Part C (formally Part H) to Part B and which are being sought from the LEA are likely to be ordered to be continued by the regional center pending results of the IFSP process.
- Service requests utilizing unvendored providers are likely to fail.

N-9504038: (JOE, for regional center)

This almost four-year-old child for whom the family was purchasing 24 to 28 hours per week of services (identified as ”tutoring” services) was also receiving an- other 12 hours per month from a specialized center through the regional center for weekly visits by a behavior specialist. The parents requested from the regional center another 12 hours per month from the center to facilitate a second visit to the home each week to cut in half the amount of time that passed between consults on targeted and new behaviors. The hearing officer found no credible evidence to establish that such additional consultations would produce additional benefit or that the consults could not be done over the phone. The decision is not, therefore, instructive on the issue of whether the additional benefit of more intensive services is something to which the child would be entitled under his or her IPP. The decision is a finding only that the disputed services would not have resulted in such benefit.

N-9504095: (JOE, for regional center)

The service requested in this case was a neurobiological evaluation of a child with autism; the case does not present the issue of early intensive autism services.

N-9506168: (LOPEZ, for regional center)

The parents of this nearly four-year-old child with autism requested a one-on-one in-home behavioral program to address home-based behaviors that were threatening to the child's safety and the safety of the child's younger sibling. The regional center responded with provision of group parent behavioral training, which included child-proofing the home and techniques to ensure the safety of the younger sibling and to provide other positive interventions. The hearing officer upheld the regional center's decision. It is unclear from the decision whether the services offered by the regional center were designed to change or reduce the dangerous behaviors of the child or merely to minimize the potential consequences of the behavior. If the latter, the decision probably should have been appealed.

N-9503077: (DAVIS, for regional center)

This case presents the issue of whether a child with autism was entitled to the Lovaas method of behavior intervention under the Act. The hearing officer denied the service. The parents had begun provision of the service with their own funds and then requested the regional center to reimburse them and to assume responsibility for ongoing funding.

The decision is based on two findings by the hearing officer. First, he finds that the Lovaas method is criticized by some in the scientific community and has not been sufficiently validated by the scientific method. Second, he finds that the decision to use the method was unilateral by the family and did not involve the IPP team and an opportunity to consider the efficacy of the method and any alternatives which, presumably, might have been more cost effective. The hearing officer also found that the Lovaas method has been vendored by at least one other regional center. However, he concluded that the 21 regional centers are sufficiently autonomous that the decisions of one regional center are not sufficient to establish the validity of a method for all the regional centers.

Note:

- Lovaas services were not awarded, in part, because of purported insuffi- ciency of validation by the scientific method. (See also Case No. N- 9407109 cited below.)
- Parents should initiate requests for funding of early autism intervention services from the regional center through the IPP process as soon as possible.

N-9504112: (JOE, for regional center)

In this case, the parents of a nearly five-year-old client sought reimbursement for a Lovaas workshop and assessment. The issue of provision of the Lovaas treatment was resolved at mediation with the educational agency paying 70 percent and the regional center paying 30 percent of the cost. The hearing officer denied reimbursement for the workshop and assessment on the grounds that these costs should have been covered by the education agency as an educational service. If the regional center believed that this intervention was 30 percent noneducational, it is unclear why the hearing officer did not assign 30 percent of the responsibility for the costs of the workshop and assessment to the regional center. There is a rule of law and strong public policy prohibiting the introduction of evidence of the results of mediation for the purpose of establishing liability. However, the hearing officer does not base his failure to assign 30 percent of the cost of the workshop and assessment to the regional center on this rule.

Note:

- Results obtained in mediation are not necessarily applied in due process hearings.

N-9506007: (JOE, for regional center)

The parents of this seven-and-a-half-year-old requested 20 hours of Lovaas service per week. The hearing officer found that the ser'vice (discrete trial training) was educational in nature (drills to teach the child to imitate gestures and verbal sounds, learn labels for things and actions, and develop matching and categorizing skills). The hearing officer also found that the service had not shown significant measurable de- velopment or improvement in the child. The hearing officer also found that the ser- vice had not shown significant measurable development or improvement in the child. The denial in this case could have been based on either of the two findings.

Note:

- Goals and objectives sought to be accomplished must be concerning noneducational skill development to be awarded under the Lanterman Act.
- Child must produce evidence of benefit or likely benefit from the service sought.

N-9407109: (DAVIS, for regional centers)

This decision could not be a clearer indication of the fait accompli that awaits any child seeking Lovaas services from a regional center under the Lanterman Act before Hearing Officer Denny R. Davis. In this opinion, Mr. Davis states: "Until this regional center, indeed, until any regional center, has concluded that the Lovaas method is based on adequate scientific method, and is worthy of regional center endorsement, no funding would be warranted under the Lanterman Act."

N-9509170: (PHILLIPS, for regional center)

This case involved a request for safety awareness training for a nine-year-old child with autism and his family. The parents had not requested the service from the school because they believed it would not be provided for several years and that the training should occur in the child's neighborhood rather than at school. The parents also believed they would not be able to attend the training if it were done at school. The hearing officer decided in favor of the regional center on the grounds that the family had not sought the service from the school district.

Note:

- Parents should at least request services from the LEA and obtain a written denial before proceeding to due process hearing against a regional center for any service which could potentially be characterized as educational.

N-9802032: (JOE, for parent, in part, and regional center, in part)

This case involved a request for a 20-hour after-school and weekend discrete trial behavior intervention and training program The regional center had denied the request on the grounds that the service was educational. The hearing officer awarded ten hours of such service on the grounds that the regional center's client program coordinator may not have effectively advocated for the client to receive the after- school and weekend portion of the program from the school district at the IEP meeting. The hearing officer also found that the school was willing to provide a discrete trial skills training program during the day and that any after-school and weekend program should follow the same training techniques and goals.

Note:

- Discrete trial behavior intervention may be awarded to some degree by Mr. Joe when advocacy efforts on the part of the regional center to obtain the service from the LEA are found inadequate.

N-9509167: (JOE, for regional center)

Parents sought reimbursement for a comprehensive behavior intervention workshop. The technique taught at the workshop was not the Lovaas technique that the regional center had been hesitant to fund. At the workshop the parents received individualized instruction and training on techniques to handle their child's unusual and disruptive behaviors. Specifically addressed at the workshop were the claimant's fixations/monotropic thought patterns, compulsive and repetitious behavior, noncompliance, self-stimulatory behaviors, poor attending skills, and low frustration tolerance. The regional center asserted that the workshop was an educational responsibility. The hearing officer made no finding as to whether such training was educational or otherwise but ordered the regional center to pay for it and stated that the dispute over which agency should provide the service is an interagency dispute governed by *Government Code* Section 7585 and *California Code of Regulations*, Title 2, Section 60600. The referral of the regional center to this dispute resolution process is erroneous. The 2 CCR § 60600 dispute resolution process is specifically limited to the State Departments of Education, Health Services, and Mental Health and does not include the regional centers. (See 2 CCR § 60600(a) and Government Code § 7575 and 7576.) Moreover, this dispute resolution process is specifically limited to disputes between these agencies over the provision of occupational or physical therapy, or psychotherapy. (Title 2 CCR § 60600[a])

N-9506010 and 9506011: (JOE, for regional center primarily)

The Lovaas services were denied by the hearing officer because of the alleged experimental nature of the method. The same decision, however, awarded reimbursement for the service for a period of three months, during which time the service was under consideration by the regional center and alternative funding sources were to have been pursued. The alternative resources were not effectively pursued by the re- gional center program coordinator. However, the hearing officer subtracted funding from this award for the period of time during the months in which the child could have been enrolled in an extended school year program.

Note:

- Retroactive reimbursement for Lovaas services may be awarded by this hearing officer for periods of time during which the services are not obtainable from the LEA if the regional center has not produced evidence of having vigorously advocated provision of the service from the LEA.

N-9411092: (JOE, for parent)

This case involved a three-and-a-half-year-old's parents' request for eight hours of sensory integration therapy per month. The family had sought the service from district and county educational agencies and California Children's Services and had been denied each time. The regional center did not dispute the need for the therapy. Without specifying what generic resource was either responsible or available, the regional center denied the request on the grounds that the service was available from generic resources. Predictably, the parent prevailed. The case should never have gone to hearing.

Note:

- Where regional centers deny services on the grounds of available alternative resources and parents have pursued all the appropriate potentially available alternative resources, and where the regional center cannot identify another alternative resource, the parent is likely to prevail.

M-908068: (JOE, for regional center)

This case involved a parent's request to attend a national autism conference. The case does not raise the issue of provision of intensive early autism intervention services. The regional center's decision to deny funding was upheld by the hearing officer on the grounds that the regional center had not abused its discretion and had considered the family's needs and had provided other services in the past.

M-9602100: (JOE, for regional center)

In this case, the regional center authorized provision of the requested early autism intervention services, but there was a delay in start-up of approximately two months due to delays in or concerns about the provider's application to become a vendor for the regional center. The parents sought reimbursement for expenses they had incurred in choosing to start the program with their own funds. The hearing officer found that the delays/concerns by the regional center were warranted, and thus denied the claim. The case does not raise the issue of the entitlement to the service under Part C (formally Part

H) because the service was never denied, and the delays in start-up were found to be reasonable.

Compiled by Dale Mentink, Staff Attorney, Protection and Advocacy, Inc., Sacramento Legal Office, July 10, 1996.

Educational Due Process Hearings

Union Elementary School District (1990) SEA CA 16 EHLR 978

In this case, the parents of a three-year-old autistic child sought placement at the Clinic for Behavioral Treatment of Autistic Children at UCLA. The child's parents lived in the San Jose area and sought reimbursement for transportation between their home in San Jose and the clinic as well as lodging and associated costs for attending school at the clinic. The district offered a 17.5-hour special day class program. Mary Cote of the California Special Education Hearing Office (SEHO) ruled in the parents' favor. Among other things, she accepted the testimony of Dr. Bryna Siegel that early intervention enhances the possibility of successful remediation of autism and that autistic children are unable to learn from imitating and are not enforced (sic) by their peer groups. On the issue of whether a school district should be required to provide services beyond the normal day for the child's age category, Cote found that the applicable Education Code Section 56441.3 (b), which states, "Special education services for preschool children will not exceed four hours in a day," applies only to group services. She concluded that the student required a 40-hour-per-week program. She therefore ordered the district to fund the tuition, transportation, and lodgings required for this family to send the student to the UCLA clinic.

Significant Findings:

1. "Special education services for preschool children will not exceed four hours in a day" applies only to group services.
2. Decision-supported methodology as implemented at the UCLA clinic falls within DIS counseling.
3. Weight of expert opinion was significant.
4. *Education Code* defines that education services for preschool include home and school as appropriate environments in which to implement a pre- school-aged child's IEP.
5. Communicatively handicapped (CH) class was found to be not appropriate because:
   (a) The student was overstimulated by the classroom environment.
   (a) Language skills of the student were at a lower level than those of other students.
   (b) The student lacked the requisite attention span to benefit from small- or large-group activities.
   (c) The student required more structure than class provided.
   (d) The teacher had no experience teaching autistic children.
   (e) The student did not have appropriate behaviors in the areas of socialization and communication.

Union School District v. B. Smith, et al. (Ninth Cir. 1994) 15 F.3d 1519

In a similar case, the Ninth Circuit Court affirmed the district court's decision and the hearing ofticer's decision described above in the Union Elementary v. B. Smith, et al., case. However, the Ninth Circuit Court decision has no language concerning whether a 40-hour-per-week program is appropriate or necessary for a special education child. The Ninth Circuit Court rejected the district's argument that another place- ment which had not been formally offered to Bernard, but was available in the district, should be considered by the court in looking at what constituted an appropriate place- ment for the student. The district indicated that it did not offer that placement be- cause the parents refused to consider it. The court held that the district needed to make a formal offer of the placement under the IDEA.

Significant Findings:

1. Education services in the home or at school are appropriate environments in which to implement a preschool-aged child's IEP.
2. District offers must be in writing.
3. The district in which the parents reside remains responsible for the educa- tion of the student even though the parents rented a condo in another district.
4. Lodging for parent and child can be a related service for which the district is responsible under certain circumstances.

Calaveras Unified School District and Calaveras County Office of Education, SEA CA SM 635-93 (1994) 21 IDELR 211

This case involves a four-year-old autistic child whose parents initiated an in-home Lovaas program for him. This was in response to a district's IEP for a preschool special day class and two sessions of speech and language therapy, which did not include goals and objectives, per week.

Subsequently, the district held an IEP, adopted goals and objectives, and offered a program consisting of (a) placement in a special day class; (b) 90 to 120 minutes of speech and language therapy per week; (c) 20 hours per week of an in-home program; (d) a full-time (40 hours per week) one-on-one aide who is knowledgeable in behavior intervention; (e) development of a written behavior plan; (f) five hours per week of parent training; (g) one hour per day of mainstreaming in Head Start; and (h) direct intervention in all the student's environments, including home, school, and community. The parents still insisted that the student needed to attend the Lovaas Clinic at UCLA.

The hearing officer found some procedural violations justifying retroactive reimbursement. However, the hearing officer found that the second IEP offered the student an appropriate placement and rejected the claim that the UCLA placement should be supported by the school district.

Significant Findings:

1. Procedural errors in the initial assessment and failure to complete an appropriate IEP resulted in a finding in favor of the parent on the retroactive

payment issue.
2. The school district must discuss full continuum of placement options with parents, including home study.
3. The IEP must be geared to address the needs of the autistic student.
4. Prospective placement of 20 hours per week in SDC and 20 hours per week of a home-based program was appropriate to meet student's needs.
5. Evidence was not persuasive that it is necessary to have the behavior intervention program supervised by a psychologist.
6. The level of training for a psychologist who would supervise the aides was equivalent to Hughes Bill training in CCR 3052.
7. A ”pool of extensively trained aides” was not required as long as there were sufficient aides so that the student would not become dependent.

Delaware County Intermediate Unit No. 25 v. Martin and Melinda K. CE. D. PA., C19937 20 IDELR 583)

The parents of a five-year-old student with pervasive developmental disorder sought a hearing officer's order requiring a school district to provide the child with an educational program based on the Lovaas model. The district proposed to provide a program for the student based on the TEACCH model. According to the decision, the two instructional models are rather divergent in their approach to teaching students with PDD; in particular, the Lovaas model stresses behavioral modification techniques, and the TEACCH model emphasizes a cognitive approach to learning. The hearing officer ruled that the district's TEACCH model was inadequate to meet the student's needs, after which the district developed a more intensive TEACCH program and offered to make the enhanced program available to the student. The hearing officer held once again for the parents, and the court affirmed.

The court held, inter alia, that the student would suffer significant regression if moved from the Lovaas program, and because the child would only be able to participate in the Lovaas program for one more year, the court concluded that even the enhanced TEACCH program would be inappropriate for the student at that time. The court noted, however, that a substantial increase in the intensity of the TEACCH program, coupled with an effective mainstreaming program, might render the battle between the two programs an equal contest in which case the court would defer to the judgment of the school district.

The Lovaas program consisted of 40 hours per week of one-to-one behavior modification therapy at home plus a mainstream component. The TEACCH program initially proposed consisted of 10 hours of instruction per week plus a modified form of therapy. The intensive TEACCH program, which was expanded to 14 and then 23 hours per week, was offered too late.

Significant Findings:

1. The programs the district offered did not match or were not comparable to the

intensity of a Lovaas program.

2. The district's increased offer of services was not made in a timely manner.

Student v. Mill Valley Elementary School District CSEHO, SN 761-94, 8/15/94, Rptd. California Administrative Decisions at P 94-1843

A six-year-old autistic student was granted a six-hour-per-day instructional program plus three weekly language therapy classes, an integrated play-therapy group, and extra assignments to prevent mental regression during vacations. Reimbursement was made to the parent for past speech and language sessions.

The student's parents had requested the six-hour day and 228 school days per year to prevent regression plus therapy during vacation, cognitive therapy, and participation in an integrated play group therapy to develop socialization skills. The parents had also sought reimbursement for cognitive and speech and language therapy privately secured outside of school. The parents claimed that all of these services were necessary to provide the student with a free and appropriate public education. These claims were rejected.

This case is particularly noteworthy for its ruling on the district's obligations to a young autistic student during school breaks. The hearing officer found that a maintenance program was required whenever there was ”extended hiatus from school.” However, she declined to order more school instructional days than were included in the district's regular and extended programs. The maintenance program ordered by the school district required the district to provide assignments and activities for the parents to carry out with the students during the periods when he was not in school and if there was a break of more than two weeks. The hearing officer also required the district to provide three speech therapy sessions per week when school was not in session.

Significant Findings:

1. The student required a six-hour day, including summer school.
2. Speech therapy was required even when school was not in session (i.e., between summer school and the start of the fall semester).
3. A 219-day school year was adequate.
4. Maintenance programs are required whenever there is an extended hiatus from school.
5. Maintenance programs were described as assignments and activities.
6. Extended hiatus from school was defined as breaks of more than two weeks.

Capistrano Unified School District

The student was a four-year-old autistic boy who had been found eligible for special education at age three and placed in an SH/SDC preschool program which operated five days per week, five hours per day. The student also received adapted physical education (APE) and speech therapy. The parents began an in-home Lovaas program and subsequently asked the district to fund this program for 40 hours per week.

The district declined to fund the in-home program and offered an alternative placement in a pilot program operated by the county that would be limited to six students and would provide 25 hours per week of instruction, including 15 hours of one-on-one discrete trial training. The district argued that either class could meet the student's needs, that methodology was up to the district to decide, and that the CARD program did not meet state certification requirements to provide behavior therapy.

The hearing officer ruled that the district's original SH/SDC placement could not meet the student's needs. She also ruled that the district had never formally offered the pilot program in writing and, therefore, it was not an option. However, she determined that the student had never received the 35 to 40 hours of therapy re- quested by the parents and had made progress with fewer hours, resulting in an order to fund a 25-hour-per-week in-home program. She also rejected the district's argument regarding certification requirements.

Significant Findings:

1. Considerable weight was given to experts with extensive experience with autism.
2. The hearing officer ruled that there was no difference between students who are autistic and who are autistic-like.
3. District program offers must be in writing or options are considered nonexistent.
4. The classroom program offered was for students who are communicatively handicapped; it was not a pure autism program.
5. Discrete trial (individual) compared to a school program (group): the individual home program was found to be more tailored and individualized than a general school curriculum.

Fairfax County Public School (Virginia Hearing) (SEA VA, 1995) 22 IDELR 80

This case involved a four-year-old student with autism. The district provided the student with autism placement in a noncategorical public education preschool, which included (a) individualized group instruction; (b) personalized assistance from the district's technology office designed to assist with communication, speech, and language therapy several times a week; and (c) weekly occupational therapy. The parents unilaterally placed the student in a private school which administered the Lovaas method, described as an intensive behavioral therapy program used to educate students with autism.

The hearing officer upheld the district's finding that the only difference between the district's placement and the placement chosen by the parents was one of methodology and that such decisions were within the district's discretion. The parents were denied reimbursement for the private placement.

Significant Findings:

1. The hearing officer upheld the district's discretion to determine methodology
2. The program offered by the district was a 30-hour-per-week intensive special education program.

Note: A hearing decision from another state is not binding in California.

Tuscaloosa County Board of Education (SEA AL, 1994) 21 IDELR 826

The student in this case is a ten-year-old child with autism. The board made a change in the student's program by discontinuing the use of the services of a clinic with an assigned therapist, on a rotational basis, who employed the Lovaas method and used its own therapist, who had two backups and applied the TEACCH method. The parents unilaterally placed the child in a private school and requested a hearing.

The hearing officer found for the district. The hearing officer found that the district's change of personnel and methodology did not constitute a change in the student's IEP and, therefore, the board was not obligated to provide notice to the parent or comply with other procedural safeguards which emanated from changes in the IEP. The board had discretion to choose personnel and methodology as long as the program offered met the requirements of free, appropriate public education and that the district's provisions clearly met the student's needs.

This case makes the interesting finding regarding various programs for autistic children. The hearing officer states that the district trained a new aide in the methodology used by the district's program which is generally known as the TEACCH method. The method preferred by the parents was the Lovaas method. Apparently, the two methods are extremely similar with the primary difference being that the Lovaas method emphasizes verbal communications somewhat more and uses a method of gradually decreasing prompts to meet the goal of both methods of avoiding prompt dependence.

Significant Finding:

The district's change of personnel and methodology did not constitute a change in the IEP. Therefore the school board was not obligated to provide notice to the parent or to comply with other procedural safeguards.

Sioux Falls School District v. Koupal (South Dakota Supreme Court, Dec. 1994, 22 IDELR 26)

This autistic student had been receiving services from the school district for several years. At each IEP meeting, the parents attached to the IEP a statement that indicated that the student's teacher would complete the district's five-day training program in TEACCH. The district accepted the letter as a ”nonbinding suggestion.” Eventually, the district decided that while it would continue to provide the training, it no longer wanted to attach this statement to the IEP. The parent appealed contending that this was a change in the child's IEP, and a state-level hearing officer agreed. Upon appeal, the trial court reversed the hearing officer's decision. The trial court's decision was affirmed by the state Supreme Court, which stated, ”A parent, no matter how well-intentioned, cannot dictate to a school district, as part ofher disabled child's IEP, how teachers will be trained or how their competency will be measured.”

Significant Finding:

Districts are responsible for ensuring adequate training of personnel. However, this is not an IEP function.

In re: Child with Disabilities (Connecticut Hearing, Nov. 1995, 23 IDELR 471)

This case deals with a four-year-old autistic child who was offered a two-hour-and 15-minute, four-day-per-week program in a class with eight special education students and three typically developing peers. Speech and psychological services were also provided. The parents rejected the district's program and began a Lovaas-type program in the home. Eventually, the family enrolled the student in a parochial school for three days per week. The parents requested funding for the therapy and the private preschool. The hearing officer ruled that the district's program was inadequate to meet the student's needs and that the least restrictive environment (LRE) for a pre- school was in the home. However, once the parents enrolled the child in a preschool, the school became the LRE and the district could match this with its own program.

Significant Findings:

1. LRE for a preschool student can be the home.
2. Once a student can attend a preschool, the school becomes the LRE.

Metropolitan Nashville v. Davidson County School System (Dist. Court, Middle Tenn., 23 IDELR 232)

In February, 1993, 12 days before this autistic child turned three years old, his parents contacted the district to arrange for an assessment. The student was attending private preschool; his tuition was funded by his parents. For reasons which are not clear, the district took no action, so the parents recontacted the district in April. An IEP meeting was held in June, and the child was identified as having a language disability and was offered a summer speech program. In August, the district completed its assessment, changed the classification to "autism," and offered a 19.5-hour-per- week program plus three hours per week of speech services and two hours per week of occupational therapy (OT).

The parents appealed and requested private preschool and private therapy. The hearing officer and the court concluded that the district's long delays in evaluating and offering an appropriate program justified retroactive reimbursement to the parents. The court stated: "A six-month delay in serving this child is one-sixth of a three- year-old's life."

Significant Findings:

1. Timely and complete evaluations are required.
2. Delays in providing appropriate services can justify retroactive reimbursement.

Chester County Intermediate Unit (Pennsylvania Hearing, 1995, 25 IDELR 723)

The school district offered the family of a three-year-old autistic child a year-round, half-day, four times per week early intervention program, augmented by six hours of regular preschool and three hours per week of speech therapy. The parents claimed that the child would not benefit from a 12-hour-per-week program with no other autistic children and a four-year age span in the class. The parents sought an intensive in-home program of discrete trial training. The hearing officer and the state review panel concluded that the district's program was designed to meet the student's needs and was the LRE in which she could make meaningful progress. The hearing officer also stressed the importance for the child to have contact with normal developing social and language peers.

Significant Findings:

1. This case clearly documents the theoretical struggle between two different approaches to serving autistic children (i.e., concentrated discrete trial training and generalization by exposure to a natural environment with nondisabled children).
2. 2. The number of hours was not as important as the focus of the activities to accomplish goals and objectives.

San Diego Unified School District (SEA CA 1994) 22 IDELR 75

The student in this case is an eleven-year-old student with autistic-like behaviors. The hearing officer rejected both the placements proposed by the district, which included a combination of special day class and regular education classes or regular education class with the support from the special day class. The parents' proposals included home schooling or a private placement. The hearing officer found the home schooling would not meet the student's socialization needs and the district's placements did not provide enough support as proposed. He ordered a program that would place the student in a public school setting with an IEP tailored to meet his needs, including the provision of a one-on-one aide and daily reading and written language instruction. He ordered an IEP to be developed accordingly.

Burke County Board of Education v. Denton C4th Cir. 1990) 16 EHLR 432)

This case concerns a nineteen-year-old autistic and moderately mentally handicapped student. The fundamental issue in the case appeared to be whether the school district had an obligation to provide behavior management in the home as well as in a special school program. The hearing officer found that the district did not have that obligation. The hearing officer noted that the in-home aide's principal responsibility was to provide basic care for the student, including helping him bathe, dress, and eat. It was also noted that the aides were providing entertainment for the student by taking him shopping or to the park.

Contributed by Jan K. Damesyn, Kronick, Moskovitz, Tiedemann, C'r Girard; G. R. Roice & Associates, Educutional Consultunts, May 19, 1995; and School Study Section Northern California Meeting,

APPENDIX H

ENVIRONMENT

Environmental influences on individuals with autistic spectrum disorders is of great importance. A variety of environmental and situational factors influence the behavior of all children and adolescents. Because these variables may have even greater significance for students with autism, a conscious effort must be made to carefully analyze the student and his or her environment as an ongoing component of the instructional process. To do this, all individuals who come into contact with the child need to understand the term ”environment.”

For the individual with autism, environment may be defined as that which directly affects the child through his or her senses. Most people build up shelter or protection devices for themselves from stimuli which overarouse their senses. One may protect his or her olfactory sense from a person who uses a strong cologne by asking the person to wear a different fragrance, by moving to a more remote area of the room, or by removing oneself from the room. The individual with ASD may be extremely sensitive to environmental factors; he or she may defend against tactile, oral, visual, auditory, olfactory, or a combination of sensory intrusions. The ”out” for the individual with ASD may be extreme behavior, such as screaming, flight, or self- abuse. Wilbarger and Wilbarger state, ”Most children who have sensory defensiveness have had their behavior interpreted as something other than a negative reaction to sensation. Behaviors often are hidden in family routines that develop unconsciously to protect the child. For example, some parents routinely remove labels from their child’s clothing. Other families avoid restaurants or other crowded places. Some follow rigid routines to keep the child from becoming overaroused. We call this ’parents held hostage.’”

Some people try to modify their environment with a ”quick fix,” and others may use a more methodical approach. Instructors often try to modify the student’s workspace with a quick fix approach, such as placing a room divider between the individual with ASD and others. This approach may or may not work. It can be a beginning or reference point if a team of professionals or a person well versed in ASD hypothesizes the antecedent to the student’s inability to encode the information, appropriate behavior, appropriate social contact, and so forth.

Simpson and Regan (1988) indicate that educators may not realize the importance of the student’s behavior in relation to his or her total environment and, instead, may focus exclusively on the individual and his or her isolated responses. As a result, evaluations of the overt presenting problems may not take into account that the student affects, and in turn is affected by, the environment. Various environmental factors (curricula, pupil-teacher-peer interaction, classroom psychological climate, variables outside the classroom, etc.) must be carefully analyzed to determine their role in initiating, maintaining, or eliminating certain behaviors. Without such an ecological perspective, educators are likely to overlook natural and obvious intervention approaches that may have a far-reaching impact on autistic students’ behaviors.

Gary Mesibov observed, ”Small details in the environment, which most people would regard as insignificant or irrelevant, may capture the attention of individuals with autism. One child’s attention may be drawn to the visual pattern of lines in the fabric of the teacher’s dress or the feel of the metal-edged ruler during a math activity. Another student may focus on the reflection of light on his pencil, be distracted by the buzz of an electric light, or be annoyed by how someone pronounces a word. With their attention pulled in a variety of ways, it is not surprising to discover that most people with autism find it difficult to identify which of these details are relevant or meaningful in a given situation. To complicate matters further, what may be relevant in one situation may be unimportant in another.”

Psychologist Gail Gillingham noted, ”The bizarre behaviors of a person with autism are a symptom of the problem and not the problem itself. The behaviors are either a call for help or a method of protection. Delays in development occur when stimulation is blocked and learning does not occur. By concentrating on the sensory problems and creating a safe environment for the children, a caregiver should be able to eliminate the need for these behaviors.” Gillingham explains that safe environments are ”those that do not overstimulate any sense. Keep decorations, such as pictures and ornaments, to a minimum. Colors should be soft and neutral (green seems to be a favorite). Noise levels can be lowered by the effective use of carpeting and drapery. Lighting should be indirect and soft. The perfect atmosphere should bring to mind the words ’tranquillity and serenity’ as one enters the room.”

Educational and behavioral teams must define the learning situation that is to be modified or the targeted behavior, hypothesize the antecedent, collect data, and identify and modify the environment. During the modification process, the team must continue collecting data on any changes in learning or behavior until the team is satisfied that the individual with ASD is performing and behaving at his or her maximum level at that particular time.

We must always keep in mind that developing appropriate educational programs for individuals with ASD is ongoing. In most situations, the team needs to meet consistently to review the IPP, IFSP, and IEP to identify incremental benchmarks. Many individuals with ASD will exhibit a variety of problematic behaviors or barriers to education, socialization, and vocation that can lead to regression or noncontinuance of learning. To assure the student’s education is positive and allows for consistent progress in learning, many meetings may be necessary. The *California Code of Regulations,* Title *5* promotes this concept through § 56341(b) and (c), which indicate that the individualized education program (IEP) team shall meet whenever the pupil demonstrates a lack of anticipated progress or the parent or teacher requests a meeting to develop, review, or revise the IEP. The IEP teams, which meet only annually to deter- mine the progress of the individual with ASD, probably are not providing sufficient support and oversight for the student’s progress.

The team and teacher should take the following physical environmental consid- erations into account when implementing the IEP:

1. Physical layout of the classroom with visually clear areas and boundaries
2. Selected work areas which best lend themselves to that being taught (e.g., reading may need to be taught in an area that uses natural light if high Frequency sounds distract the individual)
3. Boundaries needed by the student (e.g., reading may need to be taught consistently on a designated carpet)
4. Specific schedules that allow the student to anticipate and predict activities
5. Individual work systems that convey
   (a) What work is to be done
   (b) How much work is to be done
   (c) How the student will know when he or she is finished
   (d) What happens after the work is completed
1. Visual organization of instruction to allow the individual to use the visual learning modality, which is often the stronger between auditory and visual
2. Routines which allow the student to carry out the task in a systematic and consistent manner

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