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State Capitol North, 325 Don Gaspar, Suite 200  
Santa Fe, New Mexico 87501  
Phone: (505) 986-4591 Fax: (505) 986-4338  
<http://lesc.nmlegis.gov>

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November 8, 2010

**MEMORANDUM**

**TO:** Legislative Education Study Committee

**FR:** Adan Delval, LESC Intern

**RE: WRITTEN REPORT: SENATE JOINT MEMORIAL 25a, *STUDY AUTISM & SCHOOL SERVICES***

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During the 2010 regular legislative session, the Legislature passed Senate Joint Memorial 25, *Study Autism & School Services*, requesting that the Public Education Department (PED):

- conduct a study to determine how to provide best practice services to all children with autism in public schools through the use of highly qualified New Mexico autism specialists in the development and implementation of the individualized education plans (IEPs) of all students with an autism spectrum disorder (ASD) statewide;
- develop a written plan showing steps on how PED will work actively, collaboratively and cooperatively with other state agencies to develop and implement appropriate systems of care for all students with ASD; and
- report its findings, including the written plan, to the Legislative Education Study Committee (LESC) by September 2010 (see Attachment 1).

In October 2010, PED provided a report on SJM 25 to the LESC that contains a series of recommendations for best practice on pages 48-51 (see Attachment 2). According to the report:

- ASD is a neuro-developmental disorder that affects one in 150 births and 1.0 to 1.15 million Americans; and
- New Mexico ranks first among the 56 states and territories for students who receive special education services and 53<sup>rd</sup> for students identified with a diagnosis of autism.

Recommendations: The report recommends the following

- each district should develop an ASD team who is provided with foundation training in evaluation and intervention strategies in autism;
- the team should have at least one staff member who is knowledgeable in the area of autism;
- team members should maintain high levels of competence by completing continuing education; and
- the role of the team is:
  - to offer support for the student through the development of research and evidenced-based evaluation, intervention, data collection, problem clarification, and needs assessment;
  - to assist in evaluating outcomes, developing a training plan; and
  - to assist in sustaining the student IEP, for example, by providing all school staff with basic training on autism on a list of topics included on pages 49 and 50 of the report;
- training such as that provided by the University of New Mexico Center for Development and Disabilities (CDD), the Southern New Mexico Autism Program (SNAP), and PED Technical Assistance consultation and team development should be aligned as much as possible, so participants are learning and developing a core skill set and receiving a foundation for certification;
- the focus of student intervention should be on communication, social, and cognitive levels while addressing academic life and skill needs;
- although research suggests 25 hours per week of intensive instruction, the amount of educational services provided should be determined by the student's IEP team which may be more or less than 25 hours per week, or none at all. The IEP team should consider cognitive functioning, age, ability, learning traits, communication, social skills, ability to generalize skills, and the student's functional behavior;
- research and training on the multicultural aspects of student who have autism should be a strong consideration for best practice, in order to:
  - ensure that all children's educational needs are met with respect to their cultural background; and
  - assist in offering respectful support to the families of children who have autism.

- to overcome the lack of organization among the many agencies providing services, one of the following is recommended:
  - one entity be designated to serve as a central clearinghouse for statewide services for individuals who have ASD, to include SNAP, CDD, and other statewide providers and programs; or
  - a manual be developed, published and regularly updated that includes statewide programs, services, who provides the service, location and contact information, and guidelines for people on use of the manual;
- highly specific training for teachers and administrators, and implementation of appropriate researched-based interventions and preparation for transition needs to occur as soon as possible;
- best practices should adopt or mirror a specific program that is research and evidence-based and already being implemented, such as the model being implemented in Lovington Municipal Schools; and
- an evaluation component should be developed for school evaluators to use for both medical evaluations that accompany a student and district evaluations.

Written PED Plan:

The recommendations in the report are primarily addressed to service providers and school districts. On page 33, the report states that “[t]he most efficient way to build capacity for implementing effective interventions for students with ASD at the district and school level is to take steps that will produce systemic change,” and follows with a five-step plan for building sustainable capacity in schools.

Regarding a “written plan showing steps on how PED will work actively, collaboratively and cooperatively with other state agencies to develop and implement appropriate systems of care for all students with ASD,” starting on page 40, the report describes how the department is currently working with other agencies. However, the report does not contain a written plan with goals, objectives, and a timeline for specific future actions by PED.



The Legislature  
of the  
State of New Mexico

49th Legislature, Second Session

LAWS 2010

CHAPTER \_\_\_\_\_

SENATE JOINT MEMORIAL 25, as amended

Introduced by

SENATOR CLINTON D. HARDEN, JR.



CLINTON D. HARDEN, JR.  
SENATOR  
OFFICE  
1000  
S.W. 20th St.  
Albuquerque, NM 87102  
505-845-3100  
www.newmexico.gov

1 A JOINT MEMORIAL

2 REQUESTING THE PUBLIC EDUCATION DEPARTMENT TO STUDY AUTISM  
3 SPECTRUM DISORDERS AND TO DETERMINE HOW TO PROVIDE BEST  
4 PRACTICE SERVICES TO ALL CHILDREN WITH AUTISM IN PUBLIC  
5 SCHOOLS.

6  
7 WHEREAS, autism spectrum disorders are neurobiological  
8 disorders that interfere with the normal development of  
9 communication, behavior, learning and social interaction  
10 skills; and

11 WHEREAS, the United States centers for disease control  
12 and prevention reports that autism spectrum disorders are the  
13 second most common type of developmental disability and are  
14 seen in all ethnic, racial and socioeconomic groups throughout  
15 the world; and

16 WHEREAS, the autism society of America reports that  
17 autism spectrum disorders are the fastest growing  
18 developmental disability, with an annual cost of ninety  
19 billion dollars (\$90,000,000,000); and

20 WHEREAS, experts attest that the cost of lifelong care  
21 for an individual with an autism spectrum disorder may be  
22 reduced by two-thirds with early diagnosis, intervention and  
23 education; and

24 WHEREAS, early autism spectrum disorder diagnosis and  
25 intervention is instrumental in determining success; and

1           WHEREAS, the national research council report on  
2 *Educating Children with Autism* recommends, as a best  
3 practice, teaching individuals with autism a minimum of  
4 twenty-five hours per week through active engagement begun as  
5 early as possible; and

6           WHEREAS, children with autism need specialized teaching  
7 methods; and

8           WHEREAS, the usual teaching methods that work with other  
9 students, including students with other disabilities, are not  
10 necessarily successful with students with autism; and

11           WHEREAS, specialized training is needed for school  
12 personnel working with children with autism; and

13           WHEREAS, children with autism are all different and  
14 require an individualized approach with a menu of programs  
15 available;

16           NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATURE OF THE  
17 STATE OF NEW MEXICO that the public education department  
18 conduct a study to determine how to provide best practice  
19 services to all children with autism in the public schools  
20 through the use of highly qualified New Mexico autism  
21 specialists in the development and implementation of the  
22 individualized education plans of all students with an autism  
23 spectrum disorder statewide; and

24           BE IT FURTHER RESOLVED that the public education  
25 department develop a written plan for showing steps on how

1 the public education department will work actively,  
2 collaboratively and cooperatively with other state agencies,  
3 groups and stakeholders, including, but not limited to, the  
4 department of health, the human services department, the  
5 children, youth and families department, the autism task  
6 force, the New Mexico developmental disabilities planning  
7 council, the behavioral health planning council of New  
8 Mexico, the New Mexico autism society, the New Mexico state  
9 university southern New Mexico autism project and the autism  
10 programs at the university of New Mexico center for  
11 development and disability in order to develop and implement  
12 appropriate systems of care for all students with autism  
13 spectrum disorder; and

14 BE IT FURTHER RESOLVED that the public education  
15 department report its findings, including the written plan,  
16 to the legislative education study committee by September 30,  
17 2010; and

18 BE IT FURTHER RESOLVED that copies of this memorial be  
19 transmitted to the secretaries of health, human services and  
20 children, youth and families and to representatives from the  
21 autism task force, the New Mexico developmental disabilities  
22 planning council, the behavioral health planning council of  
23 New Mexico, the New Mexico autism society, the autism  
24 programs at the university of New Mexico center for  
25 development and disability, and the department of special

1 education and communication disorders at New Mexico state

2 university. \_\_\_\_\_

SJM 25

Page 4

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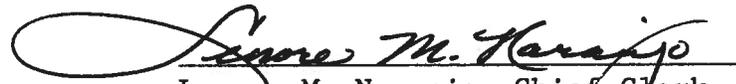
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Diane D. Denish, President  
Senate

  
Lenore M. Naranjo, Chief Clerk  
Senate

  
Ben Lujan, Speaker  
House of Representatives

  
Stephen R. Arias, Chief Clerk  
House of Representatives

10/23/08 11:52  
DAED

**Senate Joint Memorial 25**

**Bill Number: SJM 25a**

**Tracking Number: .180456.1**

**Short Title: Study Autism & School Services**

**Sponsor(s): Senator Clinton D. Harden, Jr.**

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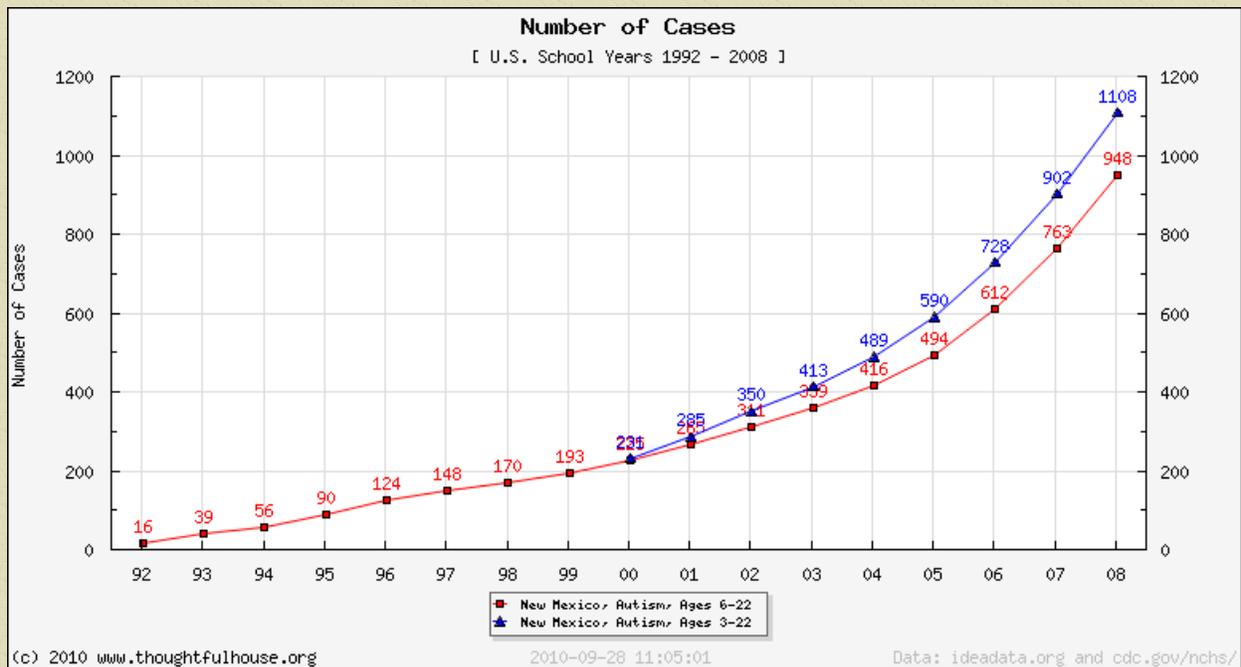
# Senate Joint Memorial 25

**Bill Number: SJM 25a**  
**Tracking Number: .180456.1**  
**Short Title: Study Autism & School Services**  
**Sponsor(s): Senator Clinton D. Harden, Jr.**

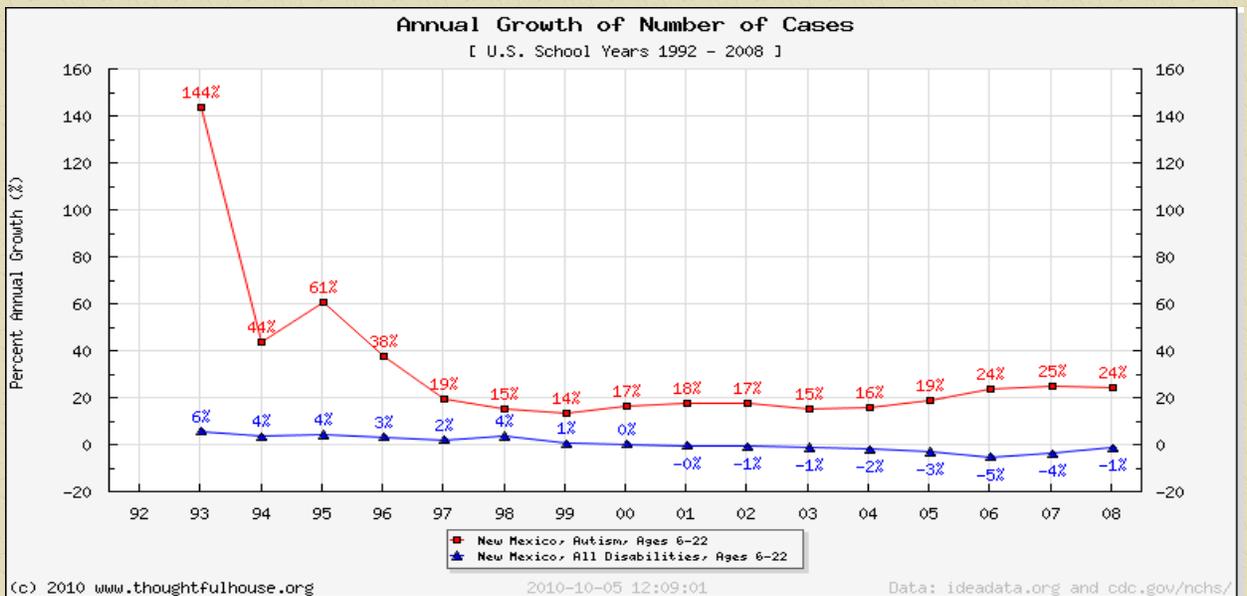
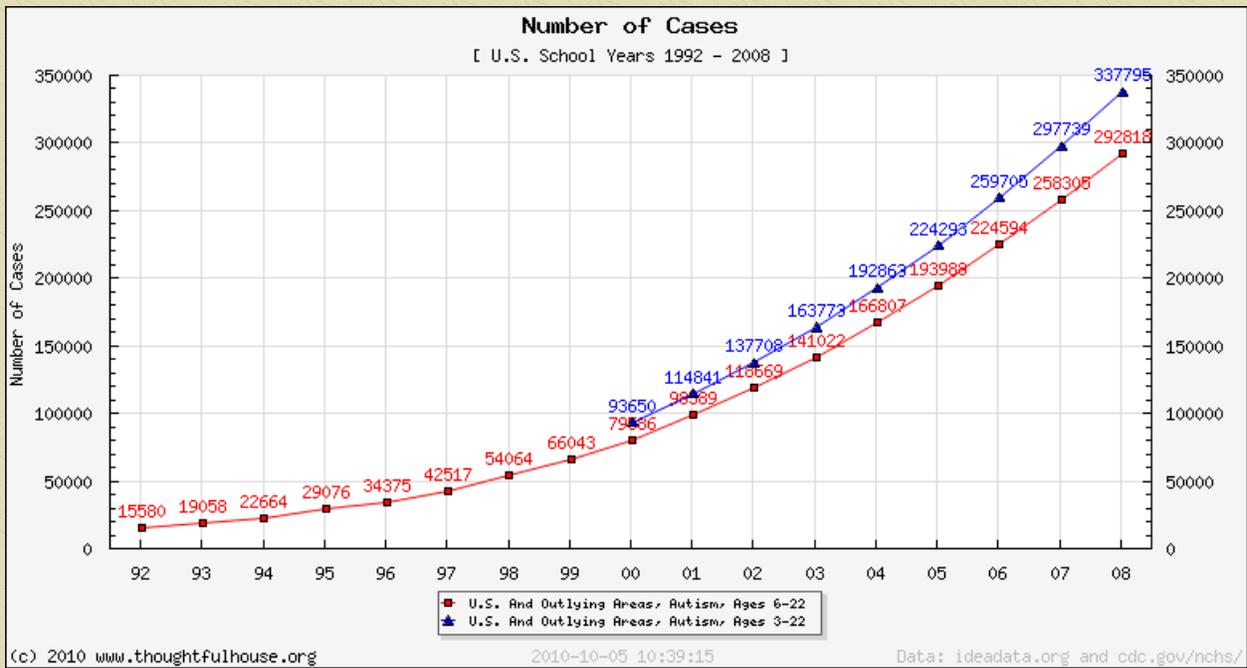
## Section I: Introduction/Overview

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that, according to the Centers for Disease Control and Prevention, affects 1 in 150 births and 1-1.5 million Americans. It can be found in all cultures of the world, and does not discriminate based on race, socioeconomic status, and education of parents or other demographic variables (Wong, Hui, & Lee, 2004; Howlin & Asgharian, 1999). Statistics indicate that per capita, New Mexico ranks first among the fifty six states and territories for students who receive Special Education services. New Mexico ranks fifty third out of fifty six, for students identified with a diagnosis of autism (statemaster.com, 2010). However, review of the number of cases per capita identified from 1992 to 2008, the number of students who were identified as having autism rose from sixteen (16) in 1992 to nine hundred and forty eight (948) ages six to twenty two, and one thousand one hundred eight (1108) ages three to twenty two in 2008. (See graph below)

(<http://www.thoughtfulhouse.org/tech-labs/disabilities/autism.php?s=NM>)



New Mexico's increase in the number of cases has followed the national trend. As the graph below indicates, cases identified nationally have risen from 15,580 in 1992 to 292,818 for ages six to twenty-two, and 337,795 for ages three to twenty two. (see national graph below) <http://www.thoughtfulhouse.org/tech-labs/disabilities/autism.php?s=NM>



The rate of the number of individuals identified as having disabilities, ages 6 to 22, from 1993 to 2008 ranges from 6% to -5%. The growth rate for individuals with autism in the same age group in 1993 was 144%. Variation in percentages to 2008, range from 144% to the lowest of 14%. While there is a decrease in the rate of identification, it is important to note that individuals identified with autism are at a consistently higher percentage than the overall population identified with disabilities.

According to Individuals with Disabilities Education Act (IDEA) data, in New Mexico the percentage of students identified as having autism has increased. The percentage of students ages three to five with disabilities who have met the criteria for Special Education services under the category of Autistic Spectrum Disorder ranges from 1.49% of the total number of identified students with disabilities in the 2005-2006 school year to 2.47% in the 2008-2009 school year ([www.ideadata.org](http://www.ideadata.org)). Consideration of students who have met criteria ages six to twenty-one mirrors the same trend. The percentage of students identified as having autism in this age group made up 1.13% in 2005-2006 school year, with an increase to 2.4% in the 2008-2009 school year, of the total number of students identified as meeting eligibility criteria for Special Education services under IDEA ([www.ideadata.org](http://www.ideadata.org)). See tables below.

Table One – Trend Data – Number of Preschool Students reported with Autism

School Year	Student Ages	# of Students with Autism	# of All Students with Disabilities	% of Disabilities with Autism
2005-06	3-5	96	6,441	1.49%
2006-07	3-5	116	6,300	1.84%
2007-08	3-5	139	6,337	2.19%
2008-09	3-5	160	6,487	2.47%

Table Two – Trend Data – Number of Students Aged 6-21 reported with Autism

School Year	Student Ages	# of Students with Autism	% of Disabilities with Autism
2005-06	6-21	494	1.13%
2006-07	6-21	612	1.47%
2007-08	6-21	763	1.9%
2008-09	6-21	948	2.4%

As many leading edge interventionists know, ASD is characterized by severe difficulties in communication, socialization, and behavior (Klinger, Dawson, & Renner, 2003). What this means for individual children varies based on each one’s cognitive ability, communication skills, and adaptive functioning. When a child is diagnosed with ASD, he or she has met at least six out of 12 criteria, with at least two criteria in the social domain, one from communication, and one from restrictive, repetitive behaviors, interests, or activities based on the DSM-IV-TR (APA, 2000). Moreover, symptoms cannot be better accounted for by other disorders associated with attention, behavior,

thought processes, medical concerns, or mood. Assessing children with ASD is a complex task and should be completed by professionals with specialized training and extensive experience with children with ASD. School psychologists and others in the educational system can diagnose ASD, for the purpose of meeting IDEA eligibility criteria, but they should do so only if they have had specialized training, extensive experience, and have ongoing consultation with professionals in the community who are currently diagnosing ASD. This is the common practice currently implemented in districts throughout the state. The standardized assessments used in diagnosis have little instructional utility in actually planning early intervention services and in writing Individualized Education Programs.

Being aware of ASD diagnoses and their myriad presentations will be an important step in helping children with ASD in the school setting. Educators, treatment providers, and diagnosticians working closely together will help close the gaps between identification, and the best possible outcome for the child. Even when outside professionals are involved, school personnel remain the front line in helping students with ASD reach their potential. This is most likely to occur when the needs of students with complicated school behavior and psychiatric histories are examined within their proper context. Once a proper diagnosis is secured, educational programming selection can begin. It typically begins with identification that have been shown to be effective, based on well-controlled research.

Although all children with ASD and their families benefit from early intervention and some children make remarkable progress as a result of early intervention, ASD is a lifelong disability for which there is no known cure. There is a wealth of knowledge of research about effective intervention strategies for children with ASD (e.g., Dawson & Osterling, 1997; National Research Council [NRC], 2001; Odom, Brown, Frey, Karasu, Smith-Canter, & Strain, 2003). One common characteristic of all successful intervention programs for children with ASD is explicit and systematic instruction in the core deficit areas with special emphasis on communication and social interaction. The objectives for this study include understanding children with ASD and becoming aware of best practices for children with ASD, understanding characteristics of interventions that are related to best outcomes and the challenges that confront public education when educating children with ASD, and understanding how a tiered model applies to children with ASD.

The goal of this study is to provide some information about how the characteristics of ASD may influence a child's performance in school settings and to describe the elements of effective programming for children with ASD. In working with young children with ASD it is important to remember that children with ASD are children first, and that like all children they will benefit from high-quality early learning programs. The key to working with children with ASD and their families is for staff to recognize when additional support is necessary and to know how to provide, or to

make the appropriate referral to professionals who can provide, the type and amount of support needed to help the child succeed. Training in effective instruction, assessment, consultation, data-based decision making, culturally sensitive service delivery, and collaboration will all be necessary for school staff to offer appropriate support for students with ASD and their families. There are several research-based trainings available that staff can access without cost to the district.

## **Section II: Basic Considerations of ASD students**

The background of intervention for children with ASD changed considerably in the late 1980's. In 1987, Ivar Lovaas reported the results of a research study that compared rigorous home-based intervention of 40 or more hours a week to a less-intense intervention of approximately 10 hours a week. He reported that 9 of the 19 participants in the intensive intervention group made such important gains that they entered the first grade without special education services and were impossible to tell apart from their typically developed peers. None of the children in the less-intense groups made such significant gains.

The intervention and findings reported by Lovaas (1987) were made popular in a book by Catherine Maurice (1994). She describes the experience of her own children and how they "recovered" from autism as a result of intensive, behavioral early intervention program. This book, along with the Internet, inspired interest and information for parents, educators, and policy makers interested in interventions for young children with ASD. This book, a number of websites, and other items in the popular press produced a flood of parents requesting 40 hours a week of intervention for their children with ASD from the public schools and early intervention providers. This raised a number of issues: Is this intervention for children with ASD a free, appropriate, public education? Should school districts be providing this? Is this intervention effective?

The questions regarding the effectiveness of this type of intervention are fundamentally based on the failure of other researchers to duplicate the Lovaas (1987) study, and the small sample size. This duplication of research findings is a critical component in determining whether an intervention strategy can be considered to be evidence-based. There is not much definitive information about what makes early intervention behavioral intervention effective. Although there are many models of preschool programming that have shown promising results (e.g., Boulware, Schwartz, Sandall, & McBride, 2006; Harris & Handleman, 2000; Schwartz, Sandall, McBride, & Boulware, 2004), there is not any solid evidence comparing one strategy to another for example, Floortime to Treatment and Education of Autistic and Communication related handicapped Children [TEACCH] to a systematic use of applied behavior analysis

[ABA] or comparing different intensities of services such as 25 hours a week to 40 hours a week.

The wave of families and advocates demanding “recovery” for their children has just started. The hope of achieving extraordinary outcomes for all children with ASD has resulted in programs being developed, policies being made, and litigation being decided on insufficient data.

Although research findings are essential, they are not the only component of evidence-based practice. Evidence-based practice requires the integration of research findings with other critical factors. These factors include:

- ✦ Professional judgment and data-based decision making
- ✦ Values and preferences of families, including the student on the autism spectrum whenever feasible
- ✦ Capacity to accurately implement interventions

Evidence-based practice is complex and requires both ongoing communication and respectful interactions among all stakeholders. Even when a list of effective treatments is identified, collaboration is the key to achieving the best outcomes. What school staff need to be prepared to do to best serve children with ASD in public schools is to not necessarily become experts in the TEACCH, Floortime, or any other name-brand intervention, they need to draw upon the foundational and functional competencies from their training to evaluate the effectiveness of specific intervention programs for individual children and their families. Ensuring that every child with ASD and his or her family receives an educational program that is effective, acceptable, and culturally responsive is less about being an expert in a specific intervention and more about having the skills necessary to work with different providers to implement, evaluate, and guarantee the sustainability of an educational program.

In 2001, the Committee on Educational Interventions for Children with Autism of the National Research Council published its report (NRC, 2001). After a review of the literature, the committee developed conclusions and made recommendations across seven different areas: diagnosis, assessment, and prevalence; role of families; goals for educational programs; characteristics of effective intervention; public policies; personnel preparation; and needed research. According to the NRC report, effective programs for young children with ASD include the following characteristics (NRC, 2001, pp. 220-221):

- ✦ A minimum of 25 hours per week, 12 months per year of systematically planned educational activity
- ✦ Sufficient individual attention every day so that the IEP objectives can be addressed with adequate intensity

- ✧ Ongoing assessment
- ✧ Successful interactions with typically developing children
- ✧ Instruction in the areas of functional spontaneous communication, social interaction, play skills, cognitive skills taught in a manner to facilitate generalization, proactive and effective approaches to challenging behavior, and functional academic skills

These services should be put into place as soon as the team suspects that the child has ASD. It is also important to note that the NRC panel did not identify one preferred method over another. Rather, they identified the components of interventions that must be in place for interventions to have the likelihood of producing best outcomes for children.

Providers and parents can use these recommendations as a starting place for planning and evaluating early intervention programs. As in planning any program for children with disabilities, it is essential to consider individual needs and strengths of a child and the priorities of the family in this planning process. Minimum and maximum “time” and days of planned educational activity should be determined by the student’s IEP team based on the student’s individual needs. It would be inappropriate to take these recommendations and attempt to create a program that meets the needs of every child with ASD. A New Mexico due process hearing officer recently held that the admonition in the IDEA to base special education on peer reviewed research “to the extent practicable” does not supersede IDEA’s requirement that the services be individually designed to provide meaningful educational benefit. As a result, the hearing officer rejected the claim that the National Research Council’s recommendation for 25 hours of services per week must be followed by the school district since it was not established that it was appropriate to meet the student’s needs (DPH 0910-25, July 30, 2010 decision). Therefore, a program that uses these recommendations as guidelines as a way to design a program that is effective in meeting the needs of children and families must always be cognizant that the program must always be designed to meet the individualized needs of the student.

### **Section III: Indicators of Quality Programs**

In 2009, the National Autism Center completed a comprehensive, multi-year effort from a public health perspective called the National Standards Project which sought to answer the question of how to effectively treat individuals with ASD. Its goal was to identify the level of research support available for interventions for children and adolescents with ASD. The results of this endeavor are available in the *Findings and Conclusions of the National Standards Project* report which is included in the appendices of this study. Here are a few important points from the report:

- ✦ A thorough and systematic review of the treatment literature is necessary to determine whether a treatment is effective.
- ✦ There are 11 “Established Treatments” that have been thoroughly researched and have sufficient evidence to confidently state that they are effective.
- ✦ There are 22 “Emerging Treatments” that have some evidence of effectiveness, but not enough to be confident that they are truly effective.
- ✦ There are “Unestablished Treatments” for which there is no sound evidence of effectiveness.

By becoming familiar with these treatments, educators have a place to begin exploring available resources that may be used in developing educational strategies to address the needs of students with ASD in the schools. Once a team has decided which of these Established Treatments will be the best option for their student, it is recommended that a collaborative and carefully planned strategy is developed in order to build the school’s capacity to implement these interventions with a high degree of accuracy.

### Established Treatments

The 11 Established Treatments are:

- ✦ Antecedent Interventions
- ✦ Behavioral Interventions
- ✦ Comprehensive Behavioral Treatment for Young Children
- ✦ Joint Attention Intervention
- ✦ Modeling
- ✦ Naturalistic Teaching Strategies
- ✦ Peer Training Interventions
- ✦ Pivotal Response Treatment
- ✦ Schedules
- ✦ Self-management
- ✦ Story-based Interventions

### *Antecedent Interventions*

Antecedent interventions include a group of treatments designed to modify the environment *before* a target behavior occurs. These treatments have been shown to effectively reduce problem behavior and improve a broad range of developmentally appropriate skills. By concentrating on how to modify the environment ahead of time, we can support a student’s learning and decrease the likelihood of problem behaviors. Facts about Antecedent Interventions:

- ✦ They have been shown to be effective with students aged 3-18 years.

- ✦ They are associated with favorable outcomes for individuals diagnosed with ASD.
- ✦ They are effective with a wide range of target skills and behaviors that include:
  - ◆ Communication Skills
  - ◆ Interpersonal/Social Skills
  - ◆ Learning Readiness
  - ◆ Personal Responsibility
  - ◆ Play Skills
  - ◆ Self-regulation
  - ◆ Problem Behaviors
  - ◆ Sensory and Emotional Regulation

Most often, antecedent interventions involve observing the student in the setting where problem behaviors occur, then determining which of many possible environmental changes are appropriate. As it is decided which environmental modifications to make, it is helpful to consult with a behavioral specialist about how to identify the events that lead to the behavior of concern (e.g., off-task behavior, self-injury, problems keeping hands to feet to self, etc.).

Treatments included in the antecedent interventions are often cost-effective and require minimal time. Teams can work collaboratively to develop simple-to-use strategies that are feasible in most settings. Antecedent modification of staff, materials, tasks, and motivating variables should be considered alone or in conjunction with other treatments. There are many treatments that fall into this category including: choice; cueing and prompting; stimuli manipulation, and time delay.

### ***Behavioral Interventions:***

Behavioral interventions begin with an evaluation of what happens in the environment before and after a behavior you are targeting. Using this data, you can begin to modify the environment accordingly. Focusing on each team members area of expertise, professionals may use these interventions to target behaviors that appear on the student's IEP. Treatments in the behavioral interventions category are based on both antecedents and consequences. Changing the consequences, either positive or negative, will improve performance.

### **Facts about Behavioral Interventions:**

- ✦ Have been shown to be effective with individuals aged 0-21 years.
- ✦ Are associated with favorable outcomes for individuals diagnosed with ASD and Pervasive Development Disorder-Not Otherwise Specified (PDD-NOS).
- ✦ Are effective with a wide range of target skills and behaviors, including:

- ◆ Academic skills
- ◆ Communication skills
- ◆ Interpersonal/Social skills
- ◆ Learning readiness
- ◆ Personal responsibility (e.g., daily living)
- ◆ Play skills
- ◆ Self-regulation
- ◆ Problem behaviors
- ◆ Restricted, repetitive, nonfunctional patterns of behavior, interest, or activity
- ◆ Sensory and emotional regulation

There are many treatments that fall into the category of behavioral interventions, including: behavioral toilet training; contingency contracting; discrete trial teaching; generalization training; shaping; task analysis; and token economy. These treatments involve a complex combination of behavioral procedures.

***Comprehensive Behavioral Treatment for Young Children:***

Individuals learn at an astounding rate, especially during the early years. This is why early intervention is so important. When younger children with ASD receive effective early intervention, they are more likely to reach their potential across a range of skills such as; communication, social, pre-academic, and academic. Comprehensive Behavioral Treatment for Young Children (CBTYC) programs are designed to meet this need.

Features of CBTYC:

- ✦ Intense service delivery based on applied behavior analysis (ABA), and measurement to assess the effectiveness of the program
- ✦ Provision of services in various settings, (e.g., home, community, inclusive classrooms, and self-contained classrooms)
- ✦ Rich student-to-teacher ratio
- ✦ Targeting the defining symptoms of ASD
- ✦ Using applied behavior analytic strategies (e.g., discrete trial teaching, incidental teaching, errorless learning, behavioral momentum, and shaping)
- ✦ Written guidance through treatment manuals and other materials

CBTYC has been shown:

- ✦ To be effective with children aged 0-9 years (the age group to which it is usually applied)

- ✧ To be associated with favorable outcomes for individuals diagnosed with ASD and PDD-NOS
- ✧ To be effective with a broad range of target skills and behaviors, including:
  - ✧ Communication Skills
    - ◆ Higher Cognitive Functions
    - ◆ Interpersonal Skills
    - ◆ Motor Skills
    - ◆ Personal Responsibility
    - ◆ Placement
    - ◆ Play Skills
    - ◆ Problem Behaviors
    - ◆ General Symptoms Associated with ASD

The intensive nature of the ABA-based instruction is achieved through a rich student-to-teacher ratio. That is, there are very few students for every teacher (often there is a 1:1 ratio). Such a ratio is important to ensure the teacher is able to attend to the student completely, individualize the instruction, and provide immediate reinforcement. Intensity is also addressed by providing many hours of services weekly and extending service delivery over a long period of time. Often, these educational programs provide services to children for two or three years.

There are a number of treatment programs that provide CBTYC. In the most well-known program, Lovaas (1987) first evaluated the effectiveness of CBTYC in a study of 19 children with ASD. They received services for 40 hours per week over a period of 2-3 years. These children showed significant gains in IQ scores and the treatment scores were maintained over time. By comparison, children who received 10 hours of special education per week did not show similar gains.

Other researchers questioned whether Lovaas' (1987) CBTYC was successful only because of the amount of time spent in instruction. So, they compared three different treatments; 25-40 hours of CBTYC; 15 hours of traditional preschool program; and 3 hours of eclectic intervention. In the end, treatment effectiveness was found to be related to the *type* of treatment. CBTYC *was* effective, it was not merely the length of time spent in treatment that led to gains for children receiving CBTYC services (Howard, Sparkman, Cohen, Green, & Stainslaw, 2005). Many additional studies have confirmed CBTYC is effective with many children with ASD.

Due to the intricacy of CBTYC, it is difficult to develop an example that reflects all aspects of treatment. Instruction varies depending on their communication, cognitive, social and adaptive skills as well as problem behaviors that interfere with skill acquisition and success across important environments in the child's life. A student who first enters a CBTYC program may spend a large part of the day in discrete trial

teaching, whereas a student further along in treatment may spend a good deal of time generalizing skills to new situations, materials, or people. CBTYC programs can be center-based or home-based (with some community activities). Center-based programs may involve a great deal of peer involvement or may focus almost exclusively on the student with ASD. Irrespective of these differences, the applied behavior analytic techniques produce important gains across a broad range of critical life skills.

### ***Joint Attention Intervention***

Joint attention is a widely used term in the field of ASD. It refers to the behavior of two individuals focusing simultaneously on an object or activity and each other. The sharing of an activity is a fundamental skill in communication and social behavior; it is not a skill that children with ASD automatically develop. Failure to develop joint attention skills may be one of the earliest signs that parents notice when they get the feeling that their child may be having problems.

Examples of Joint Attention Interactions:

- ✦ A child's eye gaze follows the adult's eye gaze.
- ✦ A child prompts someone to look at an item. Joint attention also occurs when someone prompts a child to look at an item and the child responds.
- ✦ A child shows an object to another person, or responds when someone else shows the child an object.
- ✦ A child points to an object, or responds when an adult points to an object.

Very often, joint attention is taught in a discrete trial teaching format. You begin by deciding which joint attention skill to target. It is important to clarify if the goal is to teach the child to initiate a joint attention interaction, or to respond to an offer from others. Teachers can use strategies such as choice, modeling and reinforcement when teaching children to demonstrate joint attention.

Joint Attention Treatments:

- ✦ Have been shown to be effective for children aged 0-5 years
- ✦ Have shown favorable outcomes for children diagnosed with ASD and PDD-NOS
- ✦ Have been shown to increase communication and interpersonal skills

### *Modeling*

These interventions rely on an adult or peer providing a demonstration of the target behavior that should result in an imitation of the target behavior by the individual with ASD. Modeling can include simple and complex behaviors. This intervention is often combined with other strategies such as prompting and reinforcement. Some examples may include live modeling and video modeling.

### *Naturalistic Teaching Strategies*

These interventions involve using primarily child-directed interactions to teach functional skills in the natural environment. These interventions often involve providing a stimulating environment, modeling how to play, encouraging conversation, providing choices and direct-natural reinforcers, and rewarding reasonable attempts.

### *Peer Training*

These interventions involve teaching children without disabilities strategies for facilitating play and social interactions with children on the autism spectrum. Peers may often include classmates or siblings. Common names for intervention strategies include peer networks, circle of friends, buddy skills, peer initiation training, and peer-mediated social interactions.

### *Pivotal Response*

This intervention is also referred to as PRT, Pivotal Response Teaching, and Pivotal Response Training. PRT focuses on targeting “pivotal” behavioral areas; such as motivation to engage in social communication, self-initiation, self-management, and responsiveness to multiple cues, with the development of these areas having the goal of very widespread and fluently integrated collateral improvements. Key aspects of PRT intervention delivery also focuses on parent involvement in the intervention delivery, and on intervention in the natural environment such as homes and school with the goal of producing naturalized behavioral improvements.

### *Schedules*

These interventions involve the presentation of a task list that communicates a series of activities or steps required to complete a specific activity. Schedules are often supplemented by other interventions such as reinforcement. Schedules can take several forms including written words, pictures or photographs, or work stations.

### *Self-management*

These interventions involve promoting independence by teaching individuals with ASD to regulate their behavior by recording the occurrence or non-occurrence of the target behavior, and securing reinforcement for doing so. Initial skills development may involve other strategies and may include the task of setting one's own goals. In addition, reinforcement is a component of this intervention with the individual with ASD independently seeking and/or delivering reinforcers. Examples include the use of checklists, using checks, smiley or frowning faces, visual prompts, and tokens.

### *Story-based Intervention*

Interventions that involve a written description of the situations under which specific behaviors are expected to occur are story-based interventions. Stories may be supplemented with additional components, such as prompting, reinforcement, and discussion. The most well-known story-based interventions seek to answer the "who," "what," "when," "where," and "why" in order to improve perspective-taking.

It is important to develop a social story at an appropriate developmental level for every child for example; a child with ASD who is reading words may not need pictures. They are written in present tense and should include 2 to 5 descriptive and/or perspective sentences for every one directive statement. The strength of this approach for teaching children with ASD is that it is geared to address abstract or difficult social situations and gives the information in a visual or verbal manner that the child can understand. Some limitations of this approach are that it can be time-consuming and that it is often used for behavior management instead of its intended purpose.

Providing intervention to students with ASD is multifaceted. There are topics to be considered around where instruction should take place, who should present the instruction, what should be taught, and how it should be taught. To organize the issues and decisions that are involved in planning a first-rate program, it is important to address the following six characteristics:

## **1. Supports and Services**

The individualized goals and objectives developed for a student dictates the placement of the student through the IEP process and taking into consideration the Least Restrictive Environment (LRE). One type of program, for example, self-contained or inclusion for students with ASD will not meet the needs for every student. It is up to the IEP team, to establish the best placement for each individual student, what services and supports are necessary, what objectives need to be concentrated on, and what instructional strategies will be most effectual. The curriculum should be developed

upon the individual assessment for each student and revised frequently based on data from progress monitoring.

## **2. Well-designed Environments**

Well-designed environments are those environments that provide enough structure to effectively encourage or promote the expected and appropriate student behavior. The environment plays a major role in the development and maintenance of both adaptive and maladaptive behavior. Environment in this sense consists of not only physical items; it also consists of adult and peer interaction patterns.

Providing students with an environment and interactions that support better student outcomes is a critical component of a quality program. Physical arrangement of materials, proximity of adults to students, and clearly defined transition periods are ways in which the environment of early childhood and early school classrooms can influence the development of communicative, social, and emotional skills. Other variables include keeping the length and expectations of an environment and activity within developmentally appropriate levels, providing feedback to students regarding performance, and creating activities that keep students engaged in learning that is relevant.

### **Physical Arrangements**

Research has provided a good deal of information on the arrangement of space and its effect on skill development, for example, visibly defined areas within the classroom decrease opposition and increase persistence. In addition to defining space in the classroom, problem behavior can be decreased by limiting the number of students in any one area. A classroom should be arranged so that students can move easily and have access to items and materials, even with adaptive devices.

### **Materials**

The amount, condition, and types of materials can impact behavior in the classroom. There should be enough materials for all students to utilize. In addition, materials of high interest can facilitate language and social interactions. Materials should be easily accessible and displayed to encourage independence.

### **Schedules**

Schedules are common components of a classroom for students from early childhood to high school. A vital part of the schedule for students with ASD is transition time. Students with ASD often need extra support with transitions. Schedules have been documented in a number of situations to facilitate engagement, decrease disruptive behavior, and increase engagement and social interactions for students with ASD. Students should be taught to use schedules

through promoted graduated guidance procedures. This will promote engagement and independence in a home setting and decrease the need for dependence upon adults.

### **3. Appropriate Curricular Content**

Given that ASD is a spectrum disorder, identifying an appropriate curriculum for students with ASD must be individualized for each student. It is important to identify which domains need specialized and systematic instruction and to decide to what level the student should be accessing the general education curriculum.

There are critical domains to consider when planning curriculum and instruction for students with ASD which include; communication, social, cognitive, play and leisure, and adaptive behavior. All areas should be assessed and considered. Some students will benefit educationally from accessing the same general education as their same-age peers with accommodations and some minor modifications, while others benefit from more major adaptations in the curriculum by needing to learn functional skills.

IEP teams should consider identifying what typically developing students are learning in the general education curriculum and then identify the functional needs of the ASD student. By examining both, the team will be more likely to provide opportunities for learning content similar to same-age peers while considering the functional needs of the student and family.

### **4. Systematic Instruction and Data-Based Decision Making**

As listed before, there are many evidence-based instructional strategies to teach students with ASD. To date, most of the systematic procedures validated for instruction of students with autism have been procedures that are founded in Applied Behavior Analysis or ABA methods and principles. A range of strategies based on ABA principles has been empirically validated (Lovaas, 1987; EcEachin, Smith, & Lovaas, 1993; Smith, Groen, & Wynn, 2000). Systematic instruction is the process of identifying appropriate instructional procedures for teaching, matching them with what is being taught and where it is being taught, collecting ongoing evaluation data to monitor progress, and making decisions about instruction based on evaluation data.

Knowing and being able to implement a given strategy is not enough. Service providers need to identify under what conditions it is appropriate to use one strategy over another. Several factors should be considered:

- ✦ What will be the instructional grouping?
- ✦ What is the best context to teach the skill?

- ✦ What schedule of reinforcement will be necessary for the student to learn the skill?

\*It is important to note that the use of a type of systematic instruction is an IEP decision and may not be applicable.

### ***Data Collection***

Educational teams can only match the skills to be taught with the instructional strategies and context when data are collected and used to make instructional decisions. Data collection and evaluating the data to make changes in the instructional procedures are a critical component of any program for students with ASD. Without data collection, the team will be unable to decide the appropriate strategy and conditions to provide instruction and whether or not those instructional procedures are effective. It is also important to note that schools that use data to make decisions about instruction is a major factor in successful due process hearings when the disagreement is about appropriate methodologies used for instruction.

## **5. Functional Approaches to Problem Behavior**

The nature of ASD may often include deficits in communication and social skills. Many students with ASD may also exhibit challenging behavior. The use of a functional behavior assessment to identify the purpose of the behavior is vital in the development of an intervention that will serve the purpose of teaching the student a new skill to replace the existing problem behavior. A functional approach to challenging behavior includes the detailed inspection of variables through the use of direct and indirect measures to develop a hypothesis about the conditions under which the problem behavior is likely to occur and be maintained. This may include; interviews, scales, review of existing documents, scatterplots, and Antecedent, Behavior, Consequence (ABC) analysis. The emphasis of this function-based approach to problem behavior is on prevention and teaching alternative skills that serve the same function while also examining the way in which people respond to the behavior. In addition, a positive behavior intervention plan should be a good fit with the context and service providers who will be implementing the plan. The plan should consist of those strategies known to be effective with students with ASD and are acceptable and doable to those who will be implementing the plan.

## **6. Family Involvement and Support**

Family participation in a student's school program has a positive impact on learning. Students with ASD may present a challenge, often exhibiting struggles in generalizing capable skills from one environment to another or from the company of one person to another. Research has shown that for children with ASD, parent participation leads to a

number of positive outcomes including greater generalization and maintenance gains and more continuity in intervention programs, (Summers et al., 2005). It is critical that schools partner with families to provide the best learning opportunities for students with ASD.

## **Section IV: Level of Support**

Research supports a multiple level model to offer guidance to the level of “intensity” in the development of a plan or program for the student. The overall goal of specific levels is to assist the student to make meaningful progress academically, and to encourage independent functioning.

Level one is the provision of supports and measurement that aligns with the PED vision for all students, appropriate environments for learning, using research-based curriculum, progress monitoring, and outcome measurement. Universal supports are included at the level which provide the necessary environmental arrangements that will facilitate individualized learning within the classroom; the use of schedules, visuals, and environmental accommodations to the general education curriculum, data-based decision making; and communication between the school and the home. Best practices for students with ASD acknowledge that at this level the student will require a high level of monitoring. If the children with ASD are not making adequate progress with this universal level of instruction and supports in place, then more intensive supports need to be implemented. In some cases, children with ASD will not need too many different supports if the environment and curriculum are high-quality. However, given the unique characteristics of ASD, it is likely that even children accessing the best quality universal supports may need more intensive instruction and supports.

Level two supports are more concentrated and target a select number of children who need comparable instruction. An example of this might be, a group of students may need assistance with learning skills that will help them access the social environment, such as joining a group, being flexible, and taking turns, or students with ASD may need specialized instruction in reading comprehension. It is often the case that young children with ASD do well cognitively in their early school settings, but their social deficits may go unaddressed due to the internal nature of the skill. It may be difficult to identify a problem when a child plays by himself or herself on the playground rather than engage in disruptive behavior. Yet, the lack of social skills is presently as problematic to future independence and school success as noticeable aggression. Level two should offer support that is more specific in nature that focuses with greater intensity those areas that are identified as causing a higher level of interference with academic progress. Services at this level need to be individualized based on child characteristics and skills needed to be taught. Most secondary supports are provided in a group, however, the goals and content of the group instruction must

be individualized and outcomes must be followed for individualized children. For example, a student may have the ability to make adequate academic gains in an inclusion setting but may need greater support in transitions from one school environment to the next.

Level three is a high level of individual instruction and support requires a more restrictive setting either full or part time. Strategies using research-based multi modal techniques such as discrete trial training, multiple primary and secondary reinforcement, Picture Exchange Communication System (PECS), and Pivotal Response Training (PRT), have been successful at this level. Tertiary services are assessment driven and individualized. These services are likely to include instruction that uses clear clues for responding, uses the principles of ABA, provides for multiple opportunities to practice across the day, and is implemented consistently with fidelity so that progress is demonstrated; data collection measures are intensive and sensitive enough to show change. Coordination of services and family communication are likely to occur on a frequent basis. Level three will be considered a program level described in Section VII.

Similar to the varying levels of support needed by children who exhibit problem behavior, children with ASD also benefit from a model that varies by level of intensity. Intensive services for students with ASD must be based on individual need and seen as an addition to high-quality services and curriculum provided to all students. The level model can be used successfully to exemplify and provide guidance for the development of programs for children with ASD. The overall goal across all three levels of the model and all levels of support is to increase independent functioning and consequential progress toward important educational outcomes for the children with ASD. Again, the level of support a student requires is decided by the IEP team.

## **Section V: Evaluation**

Students who qualify for Special Education services under the eligibility of ASD must have been evaluated using the guidelines provided in the PED Educator Guidelines: Identifying, Serving, and Educating Students with Autism Spectrum Disorders and the New Mexico Technical Evaluation and Assessment Manual (NM TEAM).

## **Section VI: Service Provisions**

Hours of service provision will be determined by the IEP team. Due to the variance of the needs of individuals with Autism, service provision time will be determined based on the individual needs of the student.

## **Section VII: Best Practices for Developing and Implementing the IEP for ASD Students**

The student's IEP must adhere to the current IDEA federal guidelines for the development of an appropriate IEP. IDEA requires that every student who qualifies for services have an IEP developed that addresses his or her academic, developmental, and functional needs. The focus of instruction will change over time. A student who receives speech services at age three may face different communication challenges by the time he or she reaches the high school years. It is important for the IEP Team to consider these transitions and the changes that this will make in the focus of the IEP.

Although no single approach is likely to be right for every student, there are characteristics of effective instructional programming that can be followed to guide the planning and decision-making of teams. Districts may consider incorporating the guidelines from the New Mexico Technical Evaluation and Assessment Manual (NM TEAM) to address the process and development of an IEP referenced at <http://www.ped.state.nm.us/seb/index.htm>.

To provide effective early intervention and education for students with ASD, it is important to integrate, into the IEP, the following considerations for all age life spans:

### *Academic*

- ✦ Include services to address fine and gross motor development goals that are needed to access the general education curriculum.
- ✦ Promote family participation in the IEP process.
- ✦ Provide curriculum and assessments that focus on cognitive skills and symbolic play.

### *Motivational*

- ✦ Design age appropriate behavior systems to reinforce positive behaviors.
- ✦ Provide opportunities to engage in a variety of activities that diminish social separation.
- ✦ Allow for more opportunities to self-select activities and interact with students to build communication.

### *Social*

- ✦ Design structure to provide continuity for transitions to new educational and community services and supports for the student.
- ✦ Provide adaptable and flexible environments with accommodations to develop participation between family, school, and community activities.

- ✦ In transition planning, provide opportunities to practice skills and generalize newly learned skills in a variety of genuine settings.
- ✦ Teach developmentally appropriate skills using appropriate tasks and materials.
- ✦ Provide reinforcement assessment strategies to develop motivational systems that are responsive to the students hyper and hypo sensitivities.

### *Educational goals and objectives*

An IEP should include goals and objectives specific to each child's unique needs. Goals may be broad, such as, "John will increase his verbal communication and comprehension," or specific, such as, "This student will learn to interact more with her peers at recess and lunch." Educational objectives are tailored to a child's individual needs and based on the long-term goal. They describe the process by which the child may reach the goal and how a child's progress will be monitored, and provide incremental skills needed to be met to meet the overall goals.

### *Transition Considerations into Adulthood*

The uniqueness of each individual with autism makes the experience of raising a child with autism different for each family. But there are some consistent themes or issues that most families will want to be aware of to be able to provide the best support to the individual and to family members. It is important to recognize the importance of intensive early intervention for young children with ASD, Asperger's syndrome, and other pervasive developmental disorders.

While these children share a common diagnostic label, each has individual needs. Because of the individual differences among these children, an individualized approach is needed that addresses the core deficits of autism spectrum disorders (e.g., communication, social, sensory, academic difficulties). In designing effective programs, professionals and family members are encouraged to consider components that include a curriculum that addresses deficit areas, focuses on long-term outcomes, and considers the developmental level of each child.

### *Deficit Areas:*

- ✦ Inability to attend to relevant aspects of the environment, shift attention, and imitate the language and actions of others
- ✦ Difficulty in social interactions, including appropriate play with toys and others, and symbolic and imaginative play
- ✦ Difficulty with language comprehension and use, and functional communication
- ✦ Programs that capitalize on children's natural tendency to respond to visual structure, routines, schedules, and predictability

- ✦ A focus on generalization and maintenance of skills, using technology such as incidental teaching approaches
- ✦ Effective and systematic instructional approaches that utilize technology associated with Applied Behavior Analysis, including chaining, shaping, discrete trial format, and others
- ✦ Coordinated transitions between service delivery agencies, including 0-2 programs, early intervention/preschool programs, and kindergarten environments
- ✦ Use of technology associated with functional behavioral assessment and positive behavioral supports with a child who presents behavioral challenges
- ✦ Family involvement, including coordination between home and involved professionals; and family training and support

Using applied research to determine those educational programs and approaches that are most effective for all children with autism spectrum disorders are recommended and to encourage common usage of these practices for each child with an autism spectrum disorder, regardless of geographical location.

The transition for individuals on the autism spectrum, from federally mandated services through the school system to adult services can be a challenge. While entitlement to public education ends at age 22, the Individuals with Disabilities Education Act requires that transition planning begin at age 16 and become a formal part of the student's IEP.

This transition planning should include the student, parents, and members of the IEP team who work together to help the individual make decisions about his or her next steps. An Individualized Transition Plan (ITP) should be developed that outlines transition services that may include education or vocational training, employment, living arrangements and community participation, to name a few.

The first step in transition planning should be to take a look at the individual's interests, abilities, and needs. For example, what type of educational needs must be met? What type of college, vocational training, or adult education will the student need? Where can the young adult find employment and training services? What types of living arrangements are best for this individual?

Individuals on the autism spectrum need to start as early as possible to establish paths that can lead to successful school years and adulthood. It is never too late or too early to begin to plan. Person-Centered Planning (PCP) is a process that can begin to create opportunities in the school and in the community for individuals on the autism spectrum. PCP can build a support network for both the family and the individual and lead to the establishment of important relationships.

### *Person-Centered Planning*

Person-centered planning takes work and commitment, and those who begin the process must remain constant and invested in the process to achieve success. The planning is not on the shoulders of any one individual; it is a group process focusing on the dreams, desires, hopes and aspirations of the person on the autism spectrum. This can be a challenging process for some because, generally, parents, teachers or other caregivers decide outcomes and future goals for the person with ASD.

### *Circle of Friends*

Creating a circle of support/friends takes thoughtful planning and organization because it is a time when friends gather to help plan a future for someone they care about. A circle of friends is a group of people who meet on a regular basis to support the focus person in achieving his or her dreams and goals. Circle members should be people who are dedicated to the focus person and can include the professionals in the person's life. A circle is not associated with any agency or school, but instead is focused on the association with a specific individual. Each circle member is an equal, with power to share ideas, listen to others, voice concerns freely and work together to improve the quality of life for the focus person. Members are not paid to participate in the circle. Participants are there because they care.

### *Postsecondary Education*

Many individuals on the autism spectrum are able to continue their education by attending college or trade schools. This also provides an opportunity to further social interaction, particularly in areas where the individual has key interests. It is important to work with young adults in selecting classes that take advantage of his or her strengths. If he or she has decided to pursue post-secondary education and training prior to employment, consider these suggestions:

- ✦ Identify post-secondary institutions (colleges, vocational programs in the community, trade schools, etc.) that offer training in career of interest. Write or call for catalogues, financial aid information, and application. Visit the institution.
- ✦ Identify what accommodations would be helpful to address the individual's special needs. Find out if the educational institution makes, or can make, these accommodations.
- ✦ Identify and take any special tests (e.g., PSAT, SAT, NMSQT) necessary for entry into post-secondary institutions of interest and participate in the required career interest survey.

- ✦ In the individual's last year of secondary school, contact the Department of Vocational Rehabilitation (DVR) in your state and/or the Social Security Administration to determine eligibility for services or benefits.

### ***Employment***

Employment should take advantage of the individual's strengths and abilities. Temple Grandin, Ph.D., suggests, "Jobs should have a well-defined goal or endpoint," and that your "boss must recognize your social limitations." In *A Parent's Guide to Asperger Syndrome and High-Functioning Autism*, the authors describe three employment possibilities: competitive, supported, and secure or sheltered.

Competitive employment is the most independent, with no support offered in the work environment. Individuals with Asperger's Syndrome may be successful in careers that require focus on details but have limited social interaction with colleagues such as, computer sciences, research or library sciences. In supported employment, a system of supports allows individuals to have paid employment in the community, sometimes as part of a mobile crew, other times individually in a job developed for the person. In secure or sheltered employment, an individual is guaranteed a job in a facility-based setting. Individuals in secure settings generally also receive work skills and behavior training, while structured employment may not provide training that would allow for more independence.

To look for employment, begin by contacting agencies that may be of help, such as state employment offices, state departments of vocational rehabilitation, social services offices, mental health departments, and disability-specific organizations. Many of these agencies, and other valuable services and supports can be found in the Autism Society's nationwide on-line database, [\*Autism Source\*](#). Research can be done to locate special projects locally and determine each individual's eligibility to participate in these programs.

Whether an adult with ASD continues to live at home or moves out into the community is determined in large part by his or her ability to manage everyday tasks with little or no supervision. For example, can he or she handle housework, cooking, shopping, and bill paying? Is he or she able to use public transportation? Many families prefer to start with some supportive living arrangement and move towards increased independence.

### ***Living Arrangements***

Supervised group homes usually serve several individuals with disabilities. They are typically located in residential neighborhoods in an average family home. The homes

are staffed by trained professionals who assist residents based on the person's level of need. Usually, the residents have a job that takes them away from home during the day.

A supervised apartment may be suitable for individuals who prefer to live with fewer people, but still require some supervision and assistance. There is usually no daily supervision, but someone comes by several times a week. The residents are responsible for getting to work, preparing meals, personal care and housekeeping needs. A supervised apartment setting is a good transition to independent living.

Independent living means just that; individuals live in their own apartments or houses and require little, if any, support services from outside agencies. Services may be limited to helping with complex problem-solving issues rather than day-to-day living skills. For instance, some individuals may need assistance with managing money or handling government bureaucracies. It is also important for those living independently to have a "buddy" who lives nearby that can be contacted for support. Support systems within the community might include bus drivers, waitresses, or co-workers.

Many people think of adulthood in terms of getting a job and living in a particular area, but having friends and a sense of belonging in a community are also important. Individuals with ASD may need assistance in encouraging friendships and structuring time for special interests. Many of the support systems developed in the early years may continue to be useful.

### *Future Planning*

Today most U.S. households have an individual that is a caregiver; either part-time or full-time. Planning for the future of people with disabilities is something that most families and caregivers must embark upon eventually.

Whether the person with a disability is 4 or 40 years old, it is imperative that families create a plan. Despite the growing number of persons with developmental disabilities in this country, less than 20 percent of families have done any planning.

Written directives can provide instruction for daily care, as well as unexpected and sudden contingencies, whether the person with disabilities functions entirely on their own or need assistance, written directives can provide instruction for daily care, as well as unexpected and sudden contingencies. For example:

- ✳ How would these individuals like to be bathed and clothed?
- ✳ What music do they enjoy, and when do they want to listen?
- ✳ Do they have special nutritional needs and necessities?
- ✳ Who monitors their prescriptions?
- ✳ What activities do they take pleasure in?

- ✧ How can they live with self-respect, quality, a sense of worth, and security?

Family members or caregivers should discuss information regarding the needs and desires of people with disabilities and compose a directive document addressing lifestyle, financial, legal, and government benefit issues.

Most people realize they need to plan and want to do something, but they fail for a variety of reasons. Some believe the task is overwhelming; they don't know where to find qualified professionals who understand their needs and how to resolve their concerns. And, too, the cost of professional services can be prohibitive. Families are also concerned with privacy issues.

As families begin their plan, they should first identify people who can assist in the planning process. This should include, when possible, the family, the person with a disability, an attorney, a financial advisor, caseworkers, medical practitioners, teachers, and therapists, anyone involved in providing services, and a lifetime assistance planner to act as a "team" advisor to make sure that all parts of the plan are coordinated and complete.

Government programs play a key role in the lives of many persons with special needs by providing cash and health care benefits under SSI (Supplemental Security Income), SSDI (Social Security Disability Insurance), Medicaid, and Medicare. A basic understanding of federal and state programs is essential in order to be sure that the person gets all that they are qualified to receive and that assets received from family members through gifts, inheritance, and litigation do not result in the disqualification and termination of government benefits or the government claiming reimbursement for benefits provided from assets received by the person.

It should be clear that each of these issues is interrelated and should be coordinated in the planning process. Those persons who provide advice in one particular area should be made cognizant of what others are doing. This emphasizes the importance of an organized plan.

The result of a comprehensive plan should provide lifetime supervision and care; maintain government benefits; provide supplementary funds to help ensure a comfortable lifestyle; offer management of funds; provide dignified final arrangements; and avoid family conflict.

## **Developmental Stages**

Each developmental stage brings its own challenges for all children, and this holds true for students with ASD. This pattern of development can be confusing for

individuals unfamiliar with ASD. The following table lists some of the various challenges that students with ASD may face across the years they are enrolled in school.

Domain	Age	Symptoms
<b>Social Development</b>	Infant/Toddler	<ul style="list-style-type: none"> <li>* May avoid touch</li> <li>* May isolate from groups</li> <li>* An infant may not imitate facial expressions</li> <li>* Toddlers may not laugh in response to parents laughter</li> <li>* Failure to respond to the emotional needs of others</li> </ul>
	Early School Years	<ul style="list-style-type: none"> <li>* May not engage in social games</li> <li>* May prefer younger children</li> <li>* May appear “bossy” when playing with other children</li> </ul>
	Adolescence/ Early Adulthood	<ul style="list-style-type: none"> <li>* Gaps in social skills become even more apparent</li> <li>* Dating challenges</li> <li>* Social challenges sometimes related to issues such as poor hygiene</li> </ul>
<b>Communication Development</b>	Infant/Toddler	<ul style="list-style-type: none"> <li>* May lack speech</li> <li>* Immediate or delayed echoing of other’s words</li> <li>* Use of scripted phrases</li> <li>* May not respond to name</li> <li>* Unlikely to use gestures</li> </ul>
	Early School Years	<ul style="list-style-type: none"> <li>* May sound like “little professors” who are lecturing on a topic</li> <li>* Conversations are one-sided</li> <li>* May not see how their behavior hurts others</li> </ul>
	Adolescence/ Early Adulthood	<ul style="list-style-type: none"> <li>* Poor understanding of abstract concepts</li> <li>* Challenges in understanding jokes or slang</li> <li>* May mimic language from television or movie, placing them at risk for problems at schools.</li> </ul>
<b>Restricted, Repetitive, Nonfunctional patterns of Behavior, interest, Or activity</b>	Infant/Toddler	<ul style="list-style-type: none"> <li>* Repetitive motor movements like hand-flapping, finger flicking, rocking, etc.</li> <li>* May line up toys for visual examination</li> <li>* May categorize toys instead of playing functionally with them</li> <li>* Some rigidity in routines</li> </ul>
	Early School Years	<ul style="list-style-type: none"> <li>* Rule-bound</li> <li>* May create own rules to make sense of the world- then have a hard time when others violate these rules</li> </ul>
	Adolescence/ Early Adulthood	<ul style="list-style-type: none"> <li>* May engage in elaborate rituals to avoid motor tics</li> <li>* May obsess for hours about a brief encounter with a peer</li> </ul>
<b>Other</b>	Infant/Toddler	<ul style="list-style-type: none"> <li>* Tantrums</li> <li>* Sensitivity to light or sound</li> <li>* Feeding challenges often associated with texture</li> <li>* Safety concerns; may run outside in bare feet into the snow.</li> </ul>
	Early School Years	<ul style="list-style-type: none"> <li>* Academic concerns</li> <li>* Difficulties with concentration and irritability due to sleep or communication problems</li> <li>* May be disruptive during transitions</li> <li>* May be clumsy in sports activities</li> </ul>
	Adolescence/ Early Adulthood	<ul style="list-style-type: none"> <li>* Symptoms of depression or anxiety</li> <li>* Acting out</li> <li>* May not understand rules regarding sexual behavior and may be set up by peers to violate these rules</li> <li>* Increased risk for seizures associated with onset of puberty</li> </ul>

***Least Restrictive Environment***

When considering Least Restrictive Environment for individuals with autism who by the nature of the disorder exhibit a wide range of needs which may or may not require a more restrictive environment, best practice would require that especially in the pre-school and elementary setting, when deemed necessary, a more restrictive program

classroom should be made available. It is at the early stages of development that the child can learn strategies to assist in learning in the present and will provide strategies that will support the student as they advance from grade to grade. The program design should include opportunities to integrate with typically developing children. Such classrooms will offer the opportunity to provide more individualized teaching and learning, small group or one on one ancillary service provision, and allow the student to function more independently among his/her peers. Though the goal in the educational setting should be placement or transition into inclusion or a lesser restrictive environment as the student advances, there will be those individuals who will not be successful in any environment other than a program. In this event, regardless of age or grade, a program would be appropriate. If a student is removed to a more restrictive setting, it is important to have a plan to move the student back to the LRE.

### *Identification of Supplemental Support Services*

Consideration of family needs regarding additional medical or community support services should be an integral part of the formal IEP discussion. A range of options can be expanded through interagency collaboration. The following information on the Developmental Disabilities (DD) waiver and support services are available at:

- ✦ [www.health.state.nm.us/ddsd/index.htm](http://www.health.state.nm.us/ddsd/index.htm).
- ✦ <http://www.health.state.nm.us/ddsd/servicesoverview/pg02overviewddw.htm>
- ✦ UNM Center on Development and Disability Autism Programs
- ✦ <http://cdd.unm.edu/SWAN/>
- ✦ UNM Center on Development and Disability Information Center
- ✦ <http://cdd.unm.edu/infocenternm/>
- ✦ State General Fund Services, including behavioral and recreational respite
- ✦ <http://www.health.state.nm.us/ddsd/sgfserviceswebsitedev/stategeneralfundedsvcspg01.htm> Phone: 1-877-696-1472
- ✦ Family Infant and Toddler Program
- ✦ <http://www.health.state.nm.us/ddsd/fit/>
- ✦ Individual Assistance and Advocacy Unit: Phone:505-841-5520

## Section VIII: Teams

School district personnel must have specialized training in working with students with ASD. With the increase in prevalence in students diagnosed with ASD, personnel preparation programs at colleges and universities may not prepare enough highly qualified personnel to work in the school to fulfill the need. These issues leave school

districts searching for highly qualified personnel or alternative ways to provide that expertise to the educational team. Investing in the staff to develop local expertise in ASD may include certification requirements such as completion of evidence-based training, for example accessing Autism Internet Modules (AIM). This may ensure a consistent foundation and understanding by age and domain.

The following AIM modules provide professional development and include, but are not limited to, these key features:

- ✦ Antecedent-Based Interventions (ABI)
- ✦ Assessment for Identification
- ✦ Computer-Aided Instruction
- ✦ Functional Communication Training
- ✦ Home Base
- ✦ Naturalistic Intervention
- ✦ Parent-Implemented Intervention
- ✦ Peer-Mediated Instruction and Intervention (PMII)
- ✦ Picture Exchange Communication System (PECS)
- ✦ Pivotal Response Training (PRT)
- ✦ Preparing Individuals for Employment
- ✦ Reinforcement
- ✦ Response Interruption/Redirection
- ✦ Restricted Patterns of Behavior, Interests, and Activities
- ✦ Self-Management
- ✦ Social Supports for Transition-Aged Individuals
- ✦ Structured Teaching
- ✦ Structured Work Systems and Activity Organization
- ✦ Supporting Successful Completion of Homework
- ✦ The Incredible 5-Point Scale
- ✦ Time Delay
- ✦ Transitioning Between Activities
- ✦ Visual Supports

To ensure best practice, school personnel should receive continuing education or training.

## **Section IX: Fidelity of Implementation**

Fidelity of implementation can be referred to as procedural reliability. The issue addressed here is whether or not the intervention is implemented correctly and delivered in the way it was intended. Schools are the primary providers of services to students with ASD, therefore it is critical that these services are provided with high fidelity and quality. With careful examination of treatment integrity, teachers and related service providers will be able to make accurate decisions based upon the data that is collected. Attention to the fidelity of interventions will improve the reliability, quality, and consistency of services that students receive in the schools and in the community.

Though research sometimes indicates extensive support is necessary, especially in early studies, intensity varies according to where the student is on the spectrum. Therefore, it is important to restate that it is up to the IEP team to establish the best placement for each individual student, what services and supports are necessary, what objectives need to be concentrated on, and what instructional strategies will be most effectual.

The intensive and complex services and supports needed by a student with ASD and his or her family will never be met by a public school alone. Issues of wraparound services, behavior support at home and in the community, as well as respite care are beyond the scope of the public school setting. Students with ASD require intensive interventions across many environments. The best practice is to coordinate services by one service provider that helps the team manage the multiple program components that need to be in place.

## **Section X: Building and Sustaining Capacity to Deliver Treatments that Work**

There are two approaches to build the capacity to implement effective interventions for students with ASD. Specifically, a grassroots approach or a systemic approach can be developed for creating change. The grassroots approach typically begins and ends with one professional's dedication to meeting the needs of an individual student. In many cases this will be a teacher, a speech-language therapist, a psychologist, or other professional in the school.

Developing the capacity to offer programs to one student at a time made more sense when ASD was viewed as "rare." Currently, autism and its related disorders are becoming more familiar in classrooms nationally. There is no question that the number of diagnosed cases of ASD has increased steadily for nearly two decades (Hertz-Picciotto & Delwiche, 2009). Schools must prepare all staff to serve all children with

ASD, including with varying communication, social, cognitive, and adaptive skills. The grassroots approach may not be an efficient strategy for meeting the needs of this increasingly large and diverse student population.

The complicated nature of treatment decisions requires the participation and input of all involved. When one person is solely responsible for the treatment plan and continuation, decisions are more likely to be based on incomplete and potentially erroneous information. A teacher may have heard that a program was effective when, in fact, it has no evidence of effectiveness. A principal may invest training dollars in a workshop for the entire staff based on the opinion of one parent. This parent may report that the treatment worked for his son, but there may not be evidence the treatment should be applied to all students on the spectrum. It is always best to make treatment selection and continuation decisions in a systematic fashion with input from all key stakeholders.

The most efficient way to build capacity for implementing effective interventions for students with ASD at the district and school level is to take steps that will produce systemic change. The systemic approach addresses the needs of the entire population of students with ASD, and provides support to school service providers as a team.

Development of a strategic plan for building capacity takes time, as does any endeavor requiring the participation of a group. But it is time well spent. Once the capacity to implement effective interventions has been developed, school professionals, working in collaboration with families, will be in a far stronger position to quickly provide interventions that have evidence of effectiveness (Adelman & Taylor, 1997).

#### *Five Key Steps to Consider in Building Sustainable Capacity in Schools:*

- ✦ Step 1: Establish the Planning Team
- ✦ Step 2: Problem Clarification and Needs Assessment
- ✦ Step 3: Evaluating Outcomes
- ✦ Step 4: Developing a Training Plan
- ✦ Step 5: Sustainability

#### *Producing Systemic Change*

Given the diversity in the ASD student population, school professionals will not always feel adequately prepared to provide necessary supports to these students. It is important to assess what the current district has in place to develop systemic ability to support these students. This may begin by asking:

- ✦ Have many school/district personnel attended the same workshops? If so, who made the decision about securing training in this area?
- ✦ Are school/district professionals in agreement about when and how interventions should be implemented?
- ✦ Is there a system in place to evaluate accuracy of implementation to assess the outcomes for students?
- ✦ Is there a sense among school/district professionals that new ASD treatments come and go like fads?
- ✦ Has there been an organized effort to ensure all school staff has access to necessary resources?
- ✦ Who has planned to ensure this intervention can be sustained in the school/district?

The planning process will raise these questions, and many others. The first step is to establish a well-functioning and representative team that is committed to increasing the use of evidence-based practices.

This team may hold many responsibilities including, but not restricted to, the following:

- ✦ Evaluating their current capacity
- ✦ Determining how many different groups of students will be affected and how this relates to capacity building
- ✦ Identifying barriers that may weaken the plan (e.g., availability of resources, resistance from school personnel, lack of training, etc.)
- ✦ Problem-solving collaborative strategies for reducing the impact of these barriers
- ✦ Establishing the training process
- ✦ Developing necessary resources
- ✦ Advancing a plan to provide ongoing support to school staff

### *Step 1: Establish the Planning Team*

In order to effectively produce system-wide changes, many people must contribute to feel ownership of the change process. A planning team should be developed to begin preparation for change. The diverse perspectives of planning team members are a real advantage. Each member of the planning team will bring specialized training and experiences to the group. In addition to their training in specific content domains, the most effective team will also include members with process-specific skills.

These skills may include, but are not limited to:

**Data collection.** At least one team member should understand efficient and effective strategies for measuring change. Team members with experience in data

collection will help determine whether treatments are being implemented accurately and are leading to improved outcomes for students.

**Leadership.** It can be beneficial to include team members with different leadership skills. One member might be skilled in fostering collaborative relationships, while another might help direct the team forward in the decision making process.

**Generalization.** At least one team member should be charged with ensuring the plan to build capacity is extended across relevant environments (e.g., hallways, playground, cafeteria, etc.). Ideally this staff member will have experience providing services across multiple environments.

While there will be a natural division of responsibilities on the team, it is important from the outset for everyone to have a shared sense of commitment to the process and responsibility for a successful result. The planning team should represent all of the professionals who will deliver the educational strategy. In addition, the team should include representatives of any group that is responsible for ensuring the strategy is implemented accurately and sustained over time.

### *Step 2: Problem Clarification and Needs Assessment*

Once the planning team is in place, its work begins with problem clarification. The team must clarify the exact nature of the problem it faces as a system.

**Current capacity evaluation:** Determine the extent to which the school currently has sufficient capacity to implement effective interventions.

**Problem definition:** Describe the nature and scope of the problem

**Systemic identification:** Identify which systems will be affected by their efforts to produce systemic change.

### *Step 3: Evaluating Outcomes*

The purpose of going through the effort of producing change is to help students reach their potential. The planning team members should develop a process for evaluating whether student outcomes actually improve as a result of implementing the new treatments. Measuring change requires operationally defining intended outcomes. The target goals should be defined in a specific, observable, and measurable form.

When student outcomes are not favorable, one of the first questions to ask is, "Are these interventions being implemented with a high degree of accuracy?" One of the reasons for implementing a system-wide change is to enable educators to provide Established Treatments with a high degree of procedural accuracy. Procedural accuracy is also known as treatment integrity, treatment fidelity, or procedural fidelity. No matter what term is used, the goal is to determine the extent to which the intervention is being implemented correctly.

If school staff deviates from the way an intervention is supposed to be implemented, they are no longer using the agreed-upon approach. The school makes the decision to build capacity for implementing research-supported treatments for a reason, there is evidence that they will work.

#### ***Step 4: Developing a Training Plan***

When a school system first determines that it must address issues to implement interventions, training is often the first step considered. The training plan should include two phases: (a) obtaining initial training and (b) providing coaching.

Unless members of the school staff have expertise in a particular treatment, the planning team should arrange for additional training through outside consultants. The state of New Mexico provides this through the Technical Assistance Team. These professionals are able to identify the level of training necessary for the school to produce the desired systemic changes. More complex interventions require more extensive training.

Coaching refers to the availability of an expert to provide on-site feedback based on real-world application of a new treatment. The coach assesses the front-line interventionist's use of the treatment in practice, and then provides feedback and support.

#### ***Step 5: Sustainability***

The planning team's responsibilities do not end once they have developed a strategy for building capacity. The sustainability must include:

- ✦ Identifying ongoing training needs.
- ✦ Identifying resources required to address ongoing training needs and maintain a high degree of procedural accuracy in the implementation of the intervention.
- ✦ Identifying new barriers to educational strategy implementation.
- ✦ Ensuring that changes have resulted in positive outcomes for the students.
- ✦ Determining how to manage requests to deviate from the established procedures. The team must have the technical skills to ensure that procedural modifications that were not anticipated are later addressed in a manner that is consistent with the identified treatment or identify when outside consultation is necessary.

Ongoing leadership paired with sustained ownership of the systemic changes is necessary to meet the long-term goal of providing better educational services to all students.

## Section XI: Stakeholders

Stakeholders are those entities that are impacted or work directly or indirectly with individuals who have autism. An important component of this study is to include input from this group within the scope of the State of New Mexico. Requests for information in the form of a letter, email, phone calls, and two surveys were delivered via email to all stakeholders that were identified. In addition, to try to assure that no one was left out of this information gathering process, a request was made to share the documents with anyone who had not received the information. Participants were also encouraged to write narratives or letters if that provided them a better means of communicating their thoughts.

Outcome from the request for information from stakeholders were divided into three categories; family, agency providers, and public school districts; specifically, but not limited to those school districts who have participated in the New Mexico Autism Project. Family is defined as any caretaker of a child with autism who had experience working with New Mexico school districts on behalf of the child with autism. Agency Providers is defined as any entity or association who provides services in the community, advocacy and support, and links offering education, support, and helpful information. Public Schools are defined as any school designated to provide education to children grades pre-K through graduation.

### A. Families

Results from surveys and narratives from New Mexico parents and grandparents vary from positive to some dissatisfaction in the relationship with New Mexico school districts. They indicate their requests for service provision is met with inconsistent implementation, strategies that vary from grade to grade. Most significant difficulty is experienced at transition points such as from preschool to elementary, elementary to middle school, middle school to high school, and most significantly transition from high school to community. Parents report that early childhood entities appear to be the most successful at identifying children who meet the criteria for eligibility for Special Education under the category of Autistic Spectrum Disorder and providing interventions. Still there is lack of consistency from grade to grade, school to school, and major inconsistencies from district to district.

Concerns are also reported regarding the lack of ancillary staff including but not limited to Occupational Therapists, Speech Therapists and Psychologists. Few district staff assigned to provide interventions and support for students, had training in the variety of research-based strategies. Additionally, parents believe their district budget could be the primary cause for lack of service provision. A majority indicated that each

child should receive services in accordance to their needs and should not be mandated to a one size fits all designated hours per week.

Some parents of children with autism have opted to leave their neighborhood school district in hopes of finding better solutions for their child in another school district.

It is important to report that most family participants are those who either have older children or those whose children have completed their education in New Mexico. This could imply there are some positive effects or improvement of service provision for younger students. The overall consensus of the families who responded to the study is there is a lack of support and they do not feel that school staff is listening to them.

The Santa Fe School District was reported to offer good service provision. The University of New Mexico, Center for Development and Disabilities, and the Southern New Mexico Autism Program were cited as very beneficial resources.

**Parent Recommendations:**

1. Provision of training for teachers and ancillary staff on autism and appropriate interventions.
2. Provision of classrooms, programs, or a school for students who require a more restrictive environment.
3. Resolution to the concern of a shortage of service providers.
4. Reduce the bureaucracy which impedes the process in schools and implement a procedure that is streamlined and less time consuming.
5. Centralize information for parents.
6. Assess the need for the high number of state departments involved in offering parents information.
7. Increase communication between different state entities to clarify the role of each entity and reduce overlap.
8. Provide each district with a certified autism specialist who has specialized training.
9. Provide overall improvement in high school and transition out of high school which appears to be the weakest stage of education for this population.

**B. Agency Providers**

Agency providers responded to the request for participation in this study with the following information:

Most agreed that service provision should be based on the individual needs. Students should receive the “supports they need and should not receive supports they do not need”. Few recommendations supported service provision of at least 25 hours

per week of academics with support from teachers and ancillary staff who were trained in autism.

All responders agreed that training was needed for school staff members who work with students who have autism. Responders suggested that no child should be placed in any classroom whose teacher and support persons did not have appropriate training or the support of an ASD team. Specialized training should be uniform and provide a variety of interventions options to assist in meeting the diverse needs of this population. Because autism impacts all socioeconomic and multicultural groups, training should include a multicultural component to ensure an understanding of how autism is viewed by each group. Training should be extended to all school employees such as cafeteria workers, secretaries, maintenance workers, etc. Additionally, a responder reported there is a significant need for specialized training that includes social skills and life skills.

There is a shortage of ancillary service providers including, but not limited to, Speech Language Pathologists, Occupational Therapists, and Psychologists. Those providers who are offering services often have caseloads that are too large limiting the amount of service provision due to “time constraints”. Also noted, was concern for the salary for Speech Language Pathologists.

The Southern New Mexico Autism Project (SNAP) is an entity at New Mexico State University in the College of Education Department of Special Education and Communication Disorders. The project is funded by a state grant. They report that responses from the families they work with indicate there is a lack of support for their children who have been diagnosed with autism. Parents often do not know what to do when their child has received a diagnosis of autism. They are unaware of available services, unclear about the process of placement, community agencies, and in-home services. Of specific difficulty is enrolling in the DD waiver program.

During the course of implementation of SNAP across several school districts, a theme of inconsistency in “level and quality of services” has been observed. Some districts are exceptional at addressing the needs of their students with autism, while others are struggling.

### *Agency Recommendations*

1. Student should receive services based on need.
2. School employees are in need of uniform and specialized training on autism including effective intervention strategies that addresses the spectrum and the multicultural aspect of autism in different cultures.
3. The student should receive supports in schools that are consistent from district to district.

4. Information for parents and school staff statewide should be easily accessed from a centralized information site.
5. School districts need to have a staff member who is identified as a certified autism specialist.

### **C. School Districts**

School Districts responded to the request for participation in this study with the following information:

School Districts reported that there is a need for clarity for determining eligibility under the category of ASD. The definition of medically eligible and educationally eligible is not clear to many districts. This creates concern in several areas, especially in the area of liability. Some school districts are doing a better job of evaluating a student for autism than the medical practitioner whose evaluation may be less comprehensive. The questions presented are, who makes that decision and is there liability when there is not alignment between medical and educational evaluation outcome?

All school district participants support the need to establish an autism team who has at least one certified specialist who could provide ongoing training within to the district team. This would also serve as a cost effective measure to the district. Those districts who have participated in the PED Autism Project support its function and believe they have benefitted significantly by participating in the program.

#### ***School District Recommendations***

1. Provide a means of obtaining specialized training to school staff.
2. Rename the guidelines provided to school districts for working with students who have autism to technical assistance.
3. Clarify eligibility procedure, specifically when considering medical diagnosis versus an educational diagnosis.
4. Continue to offer support through the PED Autism Technical Assistance Project.

## **Section XII: PED Working with Other Entities**

The New Mexico Public Education Department and other state departments are currently working in partnership with other state agencies including, the Department of Health (DOH), and the Autism Program at the University of New Mexico, Center for Development and Disabilities (UNM-CDD).

The Autism Program at the CDD receives funding from the New Mexico Public Education Department, Special Education Bureau. The Autism Program provides Autism Diagnostic Observation Scale (ADOS) training and follow-up to school teams

around the state. The Autism Program also participates in the National Professional Development Center on ASD, and Office of Special Education Programs (OSEP) funded project, to provide monthly support to three model classroom sites in New Mexico. The goals of this project are to identify and promote the use of evidenced-based practices in classrooms. The program's web page identifies individual programs which offer service provision in neurodevelopmental evaluations, family, school and community support. The individual programs are listed as FACE, Project SET, Neurodevelopmental Clinic, ASD Professional Development, Parent Network, Parent Home Training, Intensive Case Management, Adaptive Skill Building, Camp Rising Sun, School Based Services, and Contractual Services.

(2010 <http://cdd.unm.edu/swan/programs/index.asp>)

*Family and Community Education in ASD (FACE)* is a statewide technical assistance and training network for families, providers and other professionals. FACE is funded through the Long Term Services Division of the Department of Health, whose role is to support children 0-3 yrs. old and those 18 and older. FACE is also a clearinghouse for up to date information regarding research, support, and programming ideas. Trained Regional Parent Coordinators provide information and family support throughout the state.

(2010 <http://cdd.unm.edu/swan/FACE/index.asp>)

*Project SET* is jointly funded through the NM Department of Health, Family Infant Toddler Program and the NM Public Education Department, Special Education Bureau. The purpose of the project is to promote the early identification and appropriate early intervention and preschool services to children with autism and their families and to build statewide capacity and competence in evaluation and program planning. Training and technical assistance is offered to families and professionals working in early intervention programs or preschool programs.

(2010 <http://cdd.unm.edu/swan/FACE/index.asp>)

*The Neurodevelopmental Clinic* conducts comprehensive evaluations and is staffed with professionals including a developmental pediatrician, a neuropsychologist, clinical psychologist, speech-language pathologist, clinical social worker, and family specialist.

(2010 <http://cdd.unm.edu/swan/programs/neuroclinic.asp>)

*The ASD Professional Development Project* provides intensive training and mentoring to community teams working with people with autism spectrum

disorder. Yearly, 12 – 15 teams are trained using a variety of evidenced-based method.

(2010 <http://cdd.unm.edu/swan/programs/profdevelopment.asp>)

*Parent Network* offers family consultation and support to include providing information, referrals and individualized family consultation. The Autism Programs employs family members throughout the state to serve as Autism Family Specialists. These individuals are available to other families to assist with resources, information and problem solving around issues specific to families with ASD.

(2010 <http://cdd.unm.edu/swan/programs/parentnet.asp>)

*The Intensive Case Management* component is “case management service for children statewide who are receiving adaptive skill building services. Case management services include monthly contact with families, assistance with resources, and problem solving.”

(2010 <http://cdd.unm.edu/swan/programs/casemgmt.asp>)

*Specific Parent Training* is offered through a home training program that is child specific and evidenced-based. This program emphasizes teaching parents of young children with ASD how to best engage their child, increase their child’s ability to develop initial communication and to learn techniques of positive behavior supports. This training also brings together community-based teams working with the family and teaches them as well so that the intervention will continue after the Autism Programs’ staff has left. The training is provided statewide for children birth – 5.

(2010 <http://cdd.unm.edu/swan/programs/pht.asp>)

*Adaptive Skill Building Services* are provided through contract with community agencies in the following communities: Albuquerque, Santa Fe, Farmington, Roswell, Las Cruces and Clovis. The Autism Program provides clinical support and assists with entry and exit criteria for the program and reviews, with providers, treatment plans and progress notes.

(2010 <http://cdd.unm.edu/swan/programs/skillbldg.asp>)

*Camp Rising Sun* provides two, one-week summer residential camping experiences for children with ASD and their peers, ages 8-13 yrs. The camp provides respite to families of persons with ASD, leisure and social programs for

persons with ASD, and trains community providers and students to work in the field of autism.

(2010 <http://cdd.unm.edu/swan/programs/camprisingsun.asp>)

*School Based Services* program is designed to provide monthly support to three model classroom sites in New Mexico. The goals of this project are to identify and promote the use of evidenced-based practices in classrooms. This program is funded by the NM Public Education Department, Special Education Bureau. The program provides ADOS training and follow-up to school teams around the state. The Autism Program also participates in the National Professional Development Center on ASD, an OSEP (Office of Special Education Programs).

(2010 <http://cdd.unm.edu/swan/programs/schoolbased.asp>)

*Contractual Services* consists of the development of contracts with individual school districts or specific scopes of work that may include training, consultation, assessment and on-going technical assistance. Work scopes are developed through identifying specific needs within a school district and implementing a plan to address that need.

(2010 <http://cdd.unm.edu/swan/programs/contractualservices.asp>)

Funding from the PED to support the Autism Project is significant. PED provided the following funds:

***Project Specialized Early Teaching (SET) Since prior to 2005 - \$148,300***

***Autism Diagnostic Observation Scale (ADOS) Since prior to 2005 - Provision of Training for school staff and ongoing technical assistance-\$150,000***

***Early Childhood Evaluation Program (ECEP) Since 1992 - \$150,000***

To emphasize training on appropriate intervention strategies, PED collaborates with UNM CDD to provide and facilitate annual summer institutes. These trainings primary focus is to provide current techniques that are successful when working with students who have autism.

To further expand knowledge on ASD and evidence-based interventions, PED is a partner with the UNM CDD Autism Program that is working with the National Professional Development Center on ASD (NPDC). The NPDC consists of several universities, including Child Development Institute, University of North Carolina, the

Waisman Center at University of Wisconsin-Madison, and the M.I.N.D. Institute, University of California at Davis. Under the oversight of the CDD, New Mexico is one of twelve states that are participating in the program. It is a three-year program offered to model school sites that instructs participants on “content and process”, working with NPDC staff in year one, NPDC training and supporting at state site with state personnel in year two, and NPDC continued training in the third year. The required criteria for a model site are:

1. Administrative support at building and district level
2. Resources to form a team of 4-6 teachers, administrators, related service personnel, parents and/or assistants
3. Complete autism foundation online course
4. Attend intensive 5 day summer training institute
5. Be willing to implement evidence-based practices and to be assessed on fidelity of implementation
6. Be willing to have visitors, be videotaped
7. Serve as a learning site for other schools that want to implement Evidence-Based Practices

This collaboration with NPDC offers several levels of support such as information from a project website, assessment instruments, web-based modules, online courses, and national information on ASD. The mission of this partnership has also assisted in the expansion of UNM CDD service provision by participation and oversight of member models that include two middle schools in the Albuquerque Public School District, one pre-K in the Rio Rancho School District, Santa Fe Public School District, and Lovington Public School District. ([www.PED.state.nm.us](http://www.PED.state.nm.us))

## Section XIII: Southern New Mexico Autism Program

The web site of the SNAP program offers the following explanation of their services as “The Southern New Mexico Autism Project is a state-funded grant project that provides services to children with a confirmed or suspected diagnosis of Autism Spectrum Disorder (ASD), their families, and their community caregivers throughout southern New Mexico. These services include consultation, training, diagnostics, and treatment. Due to the largely rural nature of southern New Mexico, the area was divided into geographic regions/quadrants. Quadrant I consists of Eddy, Lea, and Otero Counties, Quadrant II consists of Chavez and Lincoln Counties, Quadrant III consists of Catron, Sierra, and Socorro Counties, and Quadrant IV consists of Dona Ana, Grant, Luna and Hidalgo Counties. The SNAP program also serves school districts in the identified quadrants.” (2010, <http://education.nmsu.edu/projects/snap/>)

The SNAP program conducts “interdisciplinary diagnostic” evaluations. If the individual meets ASD criteria, the evaluations provide a medical and psychiatric diagnosis that also meets the Individuals with Disabilities Education Act (IDEA) eligibility criteria.

The program has created “portable lending libraries”, (which can be personalized to include educational literature for families, school personnel, and persons with ASD; lap top computers; printers; laminating materials; and educational software), which allows individuals to access materials specific to their needs, and to design interventions in the child’s home and educational environment.

(2010,<http://education.nmsu.edu/projects/snap/>)

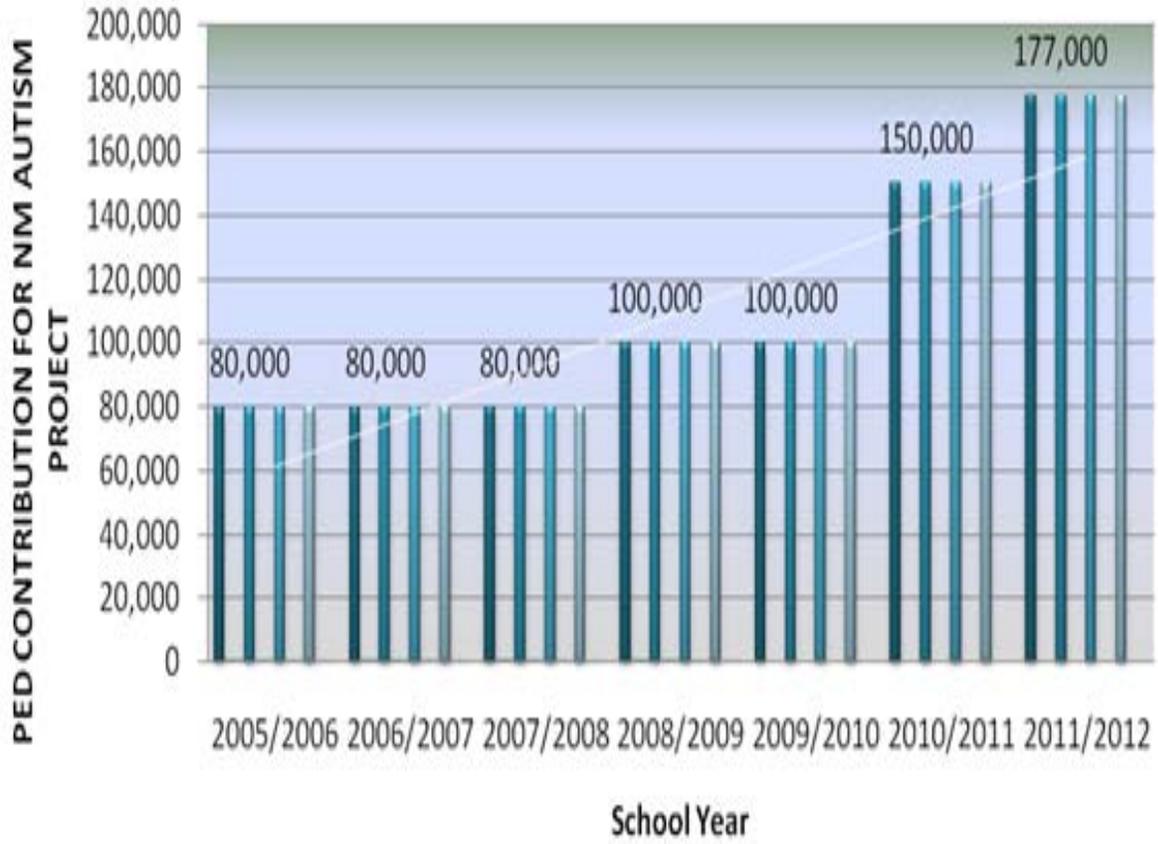
The SNAP program is working with The Autism Project at CDD in an effort to develop a means of state-wide data collection on individuals with autism which will include indentifying population in multicultural or minority groups.

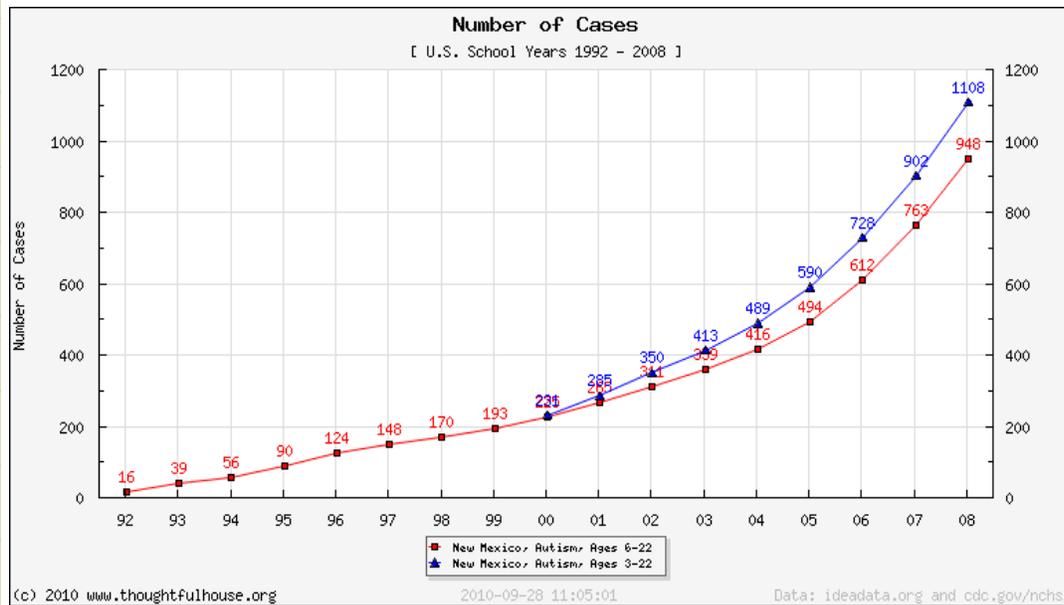
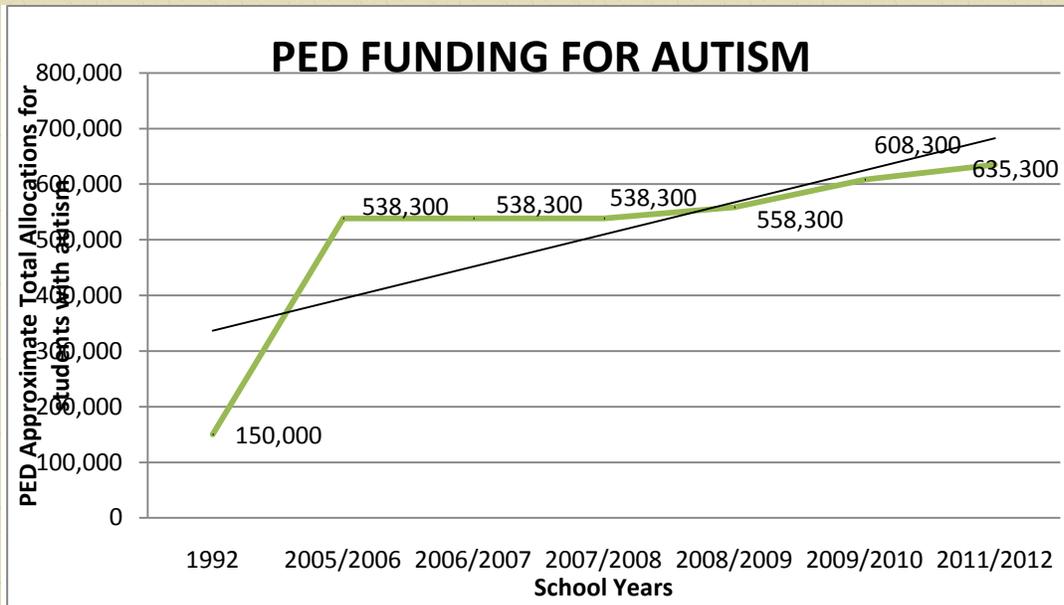
#### **Section XIV: New Mexico Autism Project**

The New Mexico Public Education Department, Special Education Bureau developed and funds the New Mexico Autism Project. The purpose of the New Mexico Autism Project it to provide technical assistance in “supporting state goals, NMPED goals, and State Performance Plan Indicators, Target Measures and activities” (Statement of Work Exhibit A). This project provides assistance in the development of school district ASD teams, training, and ongoing support to school districts in the form of classroom observation, consultation with teachers, administrators, team members and parents.

The New Mexico Autism Project works with autism expert, Dr. Andrew Egel from the University of Maryland. Two additional psychologists work under Dr. Egel’s supervision to assist in providing training and support to more districts through building technical assistance teams. To address the previous documentation that indicates an increase in the identification of students who have autism and to offer increased support and training to more New Mexico school districts, the SEB has increased its funding to the project regularly, with a projected goal of \$177,000 for the 2011-2012 school year. The following graph is reflective of the SEB Autism Project only.

### NM AUTISM PROJECT PED BUDGET ALLOCATION





The above graphs offer a correlation between the upward trends in the PED increase in funding for students who have autism. The PED has increased their spending towards autism despite the lack of additional federal funding. Approximately 15% of the available IDEA B state level activity funds are spent on autism. The SEB funds for autism programs have increased by 18% since 2007.

The New Mexico Autism Project is in its fifth year. School Districts and the year of participation are noted below:

- ✦ 2006- Las Cruces Public School District, Deming Public School District, Gallup McKinley Public School District
- ✦ 2008- Santa Fe Public Schools, Espanola Public School District, Bloomfield School District, Farmington Municipal School District
- ✦ 2009- Central Consolidated School District, Roswell Independent School District, Clovis Municipal School District, Gadsden Independent School District
- ✦ 2010-Taos Municipal School District, Mora School District, San Jon Municipal School District, Ruidoso Municipal School District, Carrizozo Municipal School District, Los Lunas School District, Raton Public School District

\*\* 2010-Santa Fe Public Schools transferred to UNM CDD, Clovis Municipal School District chose to withdraw from the project, all other districts have continued since their start date.

The project is of no cost to the district and district participation is accompanied by a \$5000.00 subgrant to be used for travel, per diem, stipends, training, and supplies. This is significant in that one New Mexico school district is spending approximately \$30,000 for the same type of support. Currently, the New Mexico Autism Project is serving 17 school districts for a total of \$85,000 in sub-grant distribution, giving a grand total of \$255,000 (which includes three consultant experts) for the 2010-2011 school year. Districts are required to send team members to trainings and present at Special Education Bureau sponsored trainings. Of those districts that have participated in the New Mexico Autism Project, only one has been named in any due process hearing related to assisting students with a diagnosis of autism.

Initially PED staff assigned to oversee the New Mexico Autism Project was a State Improvement Grant position. In 2007, PED upgraded the oversight of the Project to a permanent position as a Low Incidence Disabilities Coordinator. This offers both continuity, permanence, and a commitment by PED to the New Mexico Autism Project.

## **Section XV: Summary and Recommendations for Best Practice**

Several states have developed and are practicing a state wide procedure that offers best practice that is consistent, yet offers individualized support from district to district. The development of technical assistance and procedure would benefit

parents, educators, ancillary service providers, and most importantly, New Mexico students who have a diagnosis of autism.

The necessary components in the development of best practice should include suggestions made by The National Research Council (2001), information submitted by stakeholders, and the results of this study. They are as follows:

1. Each district should develop an ASD team who is provided with foundation training in evaluation and intervention strategies in autism.
2. The team should have at least one staff member who is knowledgeable in the area of autism.
3. Team members should maintain a high level of competence by completing continuing education.
4. The role of the team is to offer support for the student through the development of research and evidenced-based evaluation, intervention, data collection, problem clarification, and needs assessment, assist in evaluating outcomes, developing a training plan, and assist in sustaining the student Individualized Education Program. As one stakeholder suggested, all school staff would benefit from basic training on autism. Having a team provide this training would be a cost effective action when considering recruiting an out of district contractor. Training should include information on the following:

Antecedent-Based Interventions (ABI)  
Assessment for Identification  
Computer-Aided Instruction  
Functional Communication Training  
Home Base Instruction  
Naturalistic Intervention  
Parent-Implemented Intervention  
Peer-Mediated Instruction and Intervention (PMII)  
Picture Exchange Communication System (PECS)  
Pivotal Response Training (PRT)  
Preparing Individuals for Employment  
Reinforcement  
Response Interruption/Redirection  
Restricted Patterns of Behavior, Interests, and Activities  
Self-Management

Social Supports for Transition-Aged Individuals  
Structured Teaching  
Structured Work Systems and Activity Organization  
Supporting Successful Completion of Homework  
The Incredible 5-Point Scale  
Time Delay  
Transitioning Between Activities  
Visual Supports  
applied behavior analysis  
naturalistic learning  
incidental teaching  
assistive technology  
socialization  
communication  
inclusion  
adaptation of the environment  
language interventions  
assessment  
effective use of data collection systems

New Mexico school districts have benefitted from outreach training provided by the University of New Mexico, Center for Development and Disabilities, the Southern New Mexico Autism Program, and PED Technical Assistance consultation and team development. It would be beneficial to align trainings as much as possible so participants are learning and developing a core skill set and provide a foundation for certification.

5. Both the National Research Council and Iovannone et al., (2003), point to critical elements of effective educational practices. "Educational interventions cannot assume a typical sequence of learning" (NRC, 2001, p. 83). The focus of intervention should be on communication, social, and cognitive levels while addressing academic and life skill needs.
6. Though home research suggests 25 hours per week of intensive instruction, the amount of educational service provision should be determined by the student's IEP team which may be more or less than 25 hours per week, or none at all. The student's IEP team should consider cognitive functioning, age, ability, learning traits, communication, social skills, ability to generalize skills, and the student's functional behavior.

7. Research and training on the multicultural aspects of students who have autism should be a strong consideration for best practice to ensure all children's educational needs are met with respect to their cultural background. This will also assist in offering respectful support to the families of children who have autism.
8. Parents and service providers report it is extremely difficult to decipher where services exist, where to begin, and who to contact. While there are many agencies involved in service provision, there appears to be a lack of communication between the entities, giving the appearance of too much bureaucracy and lack of organization. One of the following is recommended: 1) One entity be developed to serve as a central department for the purpose of providing a clearinghouse of statewide participants, regarding individuals who have autism, to include, but not limited to SNAP, CDD, and other statewide providers and programs. 2) Develop and publish a manual that includes statewide programs, services, who provides the service, location and contact information, and guidelines for people on use of the manual. Periodic updates would ensure accuracy in reporting.
9. Child Find, pre K, and early childhood entities are doing the best job of identifying and serving the educational needs of student who have autism. There is significant decrease in the quality of instruction and interventions as the student moves from grade to grade. Highly specific training for teachers and administrators, and implementation of appropriate researched-based interventions and preparation for transition needs to occur as soon as possible. This could occur through the PED Autism Technical Assistance Program who is already working with several school districts in the state. In addition, information and linkage to continuing education, vocational training, employment, supported living, should be easily accessible to schools to assist in transition planning early in the student's academic planning.
10. It is recommended that Best Practice adopt or mirror a specific program that is research and evidence-based and already being implemented, such as the model being implemented in partnership with PED, CDD, a National Collaborative in the Lovington Municipal School District. Several were suggested by a parent stakeholder including the MIND Institute of California, and Pennsylvania Bureau of Autism.
11. Develop an evaluation component checklist for school evaluators to use for both medical evaluations that accompany a student, and district evaluations. All evaluations must meet the standard of each component on the list to meet Special Education eligibility criteria under the category of ASD.

## **Appendix A: General Autism Related Web Resources**

### **Autism Research Institute**

**[www.autism.com/ari/](http://www.autism.com/ari/)**

**Links to research on the causes of autism and methods of preventing, diagnosing, and treating autism and other severe behavioral issues of childhood.**

### **Autism Society of America**

**[www.autism-society.org](http://www.autism-society.org)**

**This Web site is the voice and resource of the autism community. Included are many Web site links to ASA chapters.**

### **Center for the Study of Autism**

**[www.autism.org/contents.html](http://www.autism.org/contents.html)**

**The center provides information about autism to parents and professionals and conducts research in collaboration with the Autism Research Institute in San Diego, California.**

### **Online Asperger's Syndrome Information and Support**

**[www.udel.edu/bkirby/asperger/](http://www.udel.edu/bkirby/asperger/)**

**Designed by parents for family support on issues of Asperger's Syndrome.**

## **Appendix B: Training and Specific Techniques for Services Web Resources**

### **Behavior Analysis**

**[www.behavioranalysis.com](http://www.behavioranalysis.com)**

**Assists individuals to locate and publicize training opportunities in the field of Behavior Analysis, Education, and Human Services.**

### **Division TEACCH-Treatment and Education of Autistic and Communication-related handicapped Children**

**[www.teacch.com](http://www.teacch.com)**

### **Geneva Centre for Autism**

**[www.autism.net](http://www.autism.net)**

**Center for developing and teaching effective techniques and services for people affected by Autism/P.D.D.**

## **Appendix C: General Resources with Support Services and Information Web Resources**

### **Council for Exceptional Students**

[www.ced.sped.org](http://www.ced.sped.org)

International organization dedicated to improving educational outcomes for individuals with exceptionalities, students with disabilities, and/or the gifted. Includes resources on topics of Autistic Spectrum Disorder and Pervasive Developmental Disorder.

### **National Institute of Child Health and Human Development**

[www.nichd.nih.gov/autism/autism.cfm](http://www.nichd.nih.gov/autism/autism.cfm)

Includes research into various aspects of autism including causes, prevalence, and treatments.

### **NICHCY-National Information Center for Students and Youth with Disabilities**

[www.nichcy.org](http://www.nichcy.org)

National site containing resources, publications, conferences, State resources, and IDEA information.

### **U.S. Department of Education, Office of Special Education and Rehabilitative Services**

[www.ed.gov/offices/OSERS](http://www.ed.gov/offices/OSERS)

Information on public education issues, IDEA, legislation, and links to other special education resources.

## **Appendix D: Identification of Supplemental Support Services**

### **Support Services:**

**Information on the Developmental Disabilities (DD) waiver can be accessed at <http://www.health.state.nm.us/ddsd/servicesoverview/pg02overviewddw.htm>**

**UNM Center on Developmental and Disability Information Center: <http://cdd.unm.edu/infocenternm/>**

**State General Fund Services, including behavioral and recreational respite: <http://www.health.state.nm.us/ddsd/sgfserviceswebsitedev/stategeneralfundedsvcsprog01.htm>**

**Family Infant and Toddler Program: <http://www.health.state.nm.us/ddsd/fit/>**

**Individual Assistance and Advocacy Unit  
Phone: 505-841-5529**

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