

Arizona Autism Insurance Coverage

**Social and Fiscal Impacts of
SB1263, Steven's Law**

In Fulfillment of the Requirements of
A.R.S. §20-181 & 182

Provided to Members of the
Senate Health Committee and Senate Appropriations Committee
February 6, 2008

Prepared and Offered by:

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Chair, Senate Health Committee

The Honorable Robert (Bob) Burns
Chair, Senate Appropriations Committee

Arizona State Senate
1700 W. Washington St.
Phoenix, AZ 85007

February 6, 2008

Dear Chairmen:

As you know, Arizona SB#1263 requires private insurance companies to offer coverage for the treatment of autism spectrum disorders.

As the proponents of this bill, the undersigned are pleased to submit the following report pursuant to the requirements set forth in A.R.S. §20-181 and §20-182. The report addresses the specific language SB1263, as required by A.R.S. §20-181(C).

We thank you and your colleagues in advance for your attention to this important matter that is impacting so many families in Arizona today, and we urge you to align private insurance coverage for autism spectrum disorders in Arizona with national trends, including the recommendations of the American Academy of Pediatrics and laws and pending legislation in more than 20 states in the US.

Please do not hesitate to contact us for further information or to answer any questions.

Best regards,

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BACKGROUND

Autism Spectrum Disorders

Autism spectrum disorders (ASD) refers to a complex, neurobiological developmental disability that typically appears before the age of three, affecting the functioning of the brain in areas of communication and social interaction, as well as restrictive or repetitive behaviors. Although no cure is known for ASD, according to the American Academy of Pediatrics (AAP), "early diagnosis resulting in early, appropriate, and consistent intervention" is "associated with improved long-term outcomes."ⁱ

ASD includes three diagnoses as defined in the Diagnostic and Statistical Manual (DSM IV) of the American Psychiatric Association:

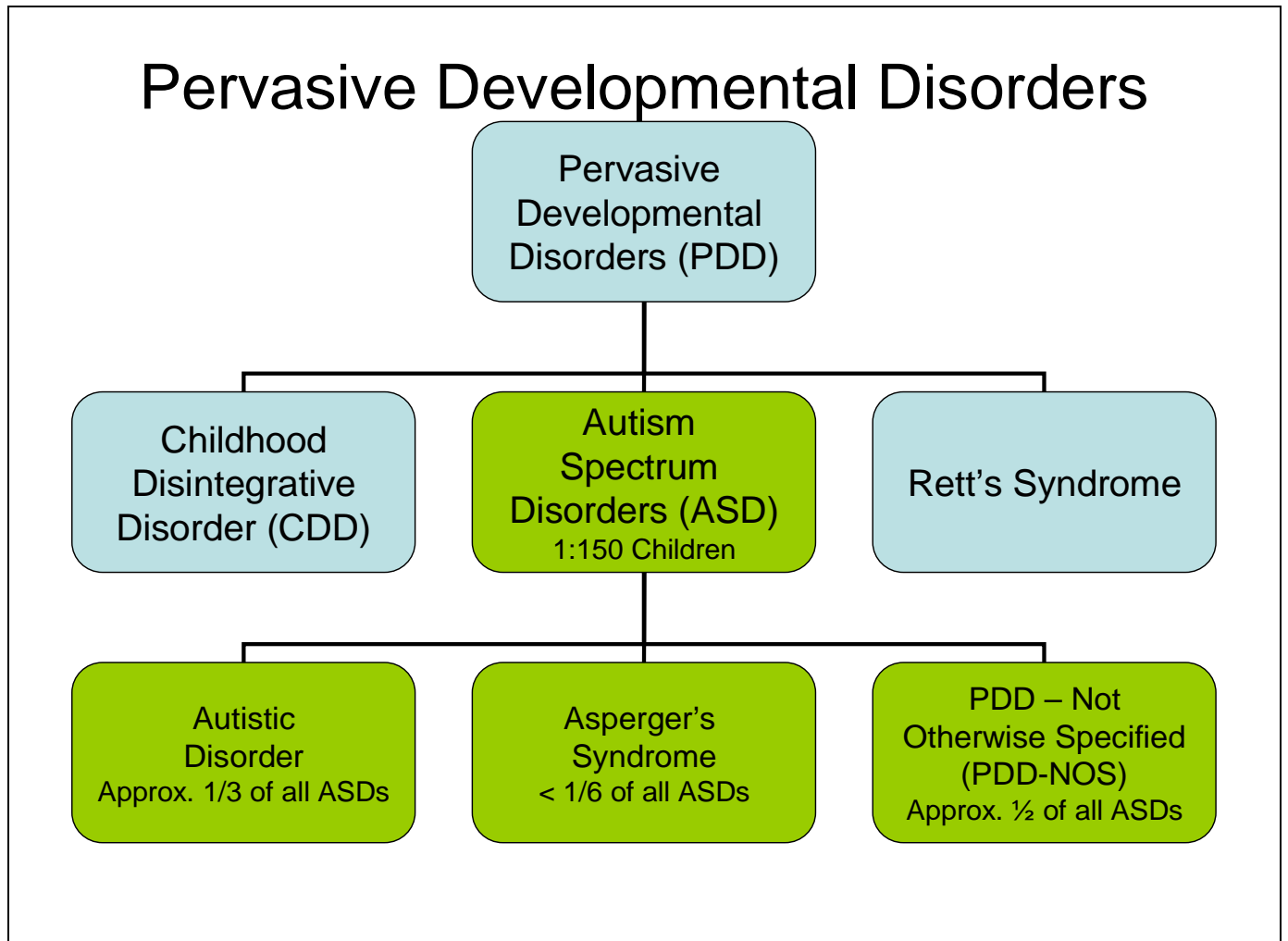
1. Autism: Difficulty in the developmental areas of communication, socialization and repetitive/restricted interests and behaviors.
2. Asperger's Syndrome: Similar characteristics to autism but do not have a significant delay in language.
3. Pervasive Developmental Disorder- Not Otherwise Specified (PDD-NOS): This term is used when an individual displays developmental deficits but does not meet diagnostic criteria for the other two ASD diagnoses.

ASD is now the number one childhood developmental disability with 1 of every 150 children in the US being diagnosed (CDC 2007). 26,670 children born in the US this year will eventually be diagnosed with ASD (CDC, 2007), making the diagnoses more common than all types of pediatric cancer, AIDS, and diabetes combined. According to the American Academy of Pediatrics, 44% of primary care physicians reported that at least ten of their patients have ASD.ⁱⁱ

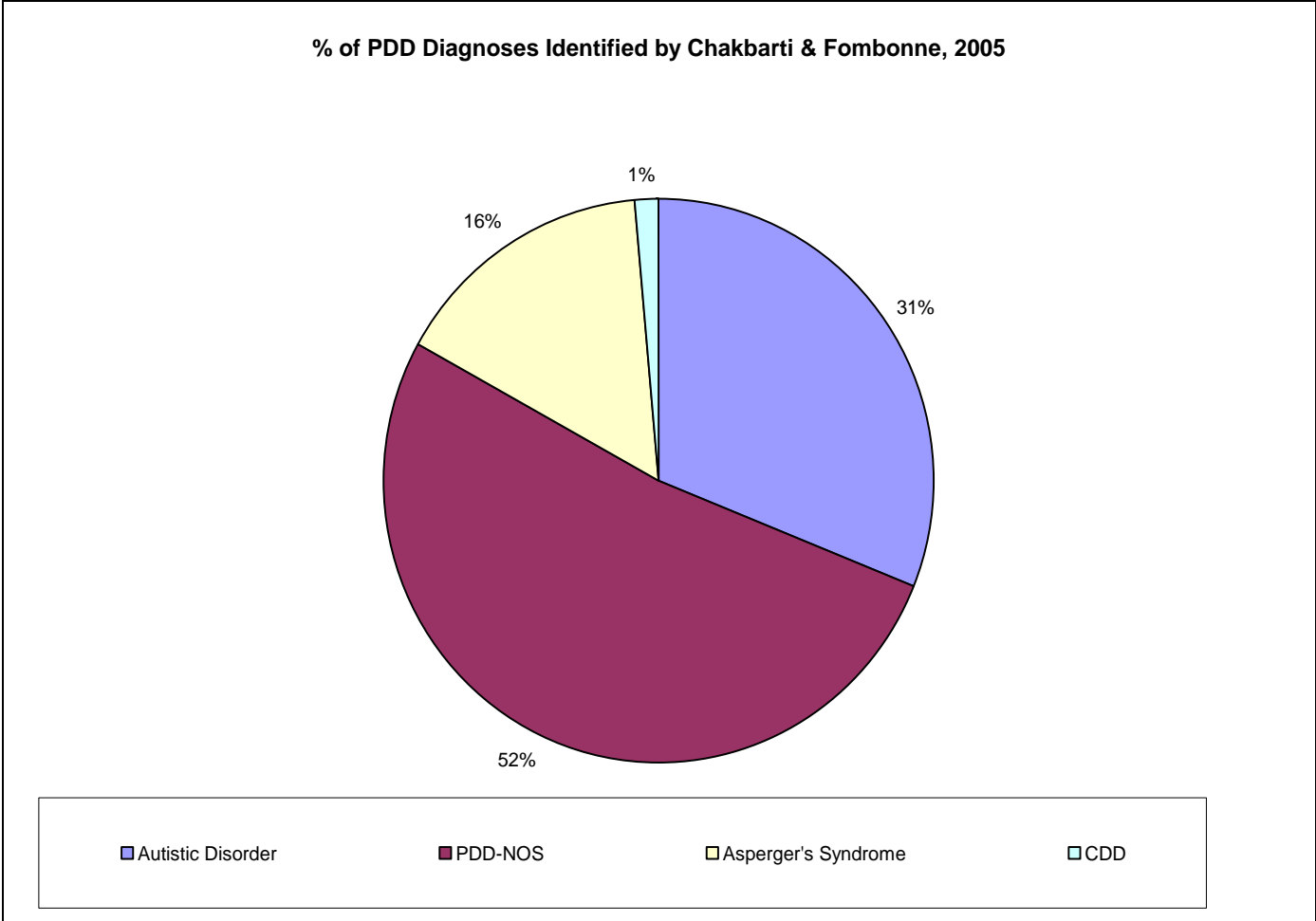
Males are four times more likely to be diagnosed than females; in contrast, females are more likely to be severely impacted by autism when a diagnosis exists. Females are also more likely than males to have a co-diagnosis of mental retardation (58.2% and 41.8%, respectively [CDC, 2007]). Younger siblings of children diagnosed with an ASD are 20 times more likely to be diagnosed, resulting in families with up to five children known to be on the autism spectrum in the US. A recent studyⁱⁱⁱ highlights the fact that relative to children without autism, children with autism are much more likely to have poor health, to require medically necessary care for behavioral problems, and to be using medications.

The following charts illustrate ASD's position among pervasive developmental disorders as defined by the DSM-IV, and the frequency with which each ASD diagnosis is made relative to the others.

DSM-IV Criteria. ASDs would be covered under the proposed legislation in AZ.



Pervasive Developmental Disorders: Diagnostic Distribution



In this study, no individuals with Rett's Disorder were identified, suggesting a prevalence rate of < 1:10,000.

Societal Impact of ASD

ASD results in annual societal costs of \$35 billion per year, or over \$60,000 per person per year, for services, education and other publicly funded supports. (Ganz, 2006) Over the lifespan, the average societal cost of caring for one person with autism is \$3.2 million. (Harvard School of Public Health, 2006) Comprehensive intervention programs for preschool aged children with autism, including behavioral and speech therapies, may cost up to \$50,000 per year. (New York Times 2006) Comprehensive intervention programs for young children, including behavioral therapies, may cost up to \$100,000 per year.^{iv}

Autism first became a special education classification under the Individuals with Disabilities Education Act (IDEA) in 1991. Between 1991 and 1999, the number of persons receiving special education services for autism increased 500% (CDC, 2007). In 2005, approximately 224,000 children were served under the autism classification in US schools. In Arizona, the average cost of public education per student for children age 3+ in FY2005 was \$12,779 (autism resource) and \$18,822 (self-contained classroom). (ADE 2006) In contrast, the cost of a typical child's education was \$5,000. (Senate Education Committee, 2006)

Over 67% of individuals with disabilities nationally are not employed (Cornell, 2005). Many, who are employed, tend to be underemployed in dead end or entry level positions. For the population with autism, the number of individuals unemployed has been estimated to be as high as 90% (New Jersey Autism Society). Without effective intervention, that means that of the 560,000 children currently living with autism, 504,000 may be unemployed in adulthood.

Treatment for ASD

Early Intervention

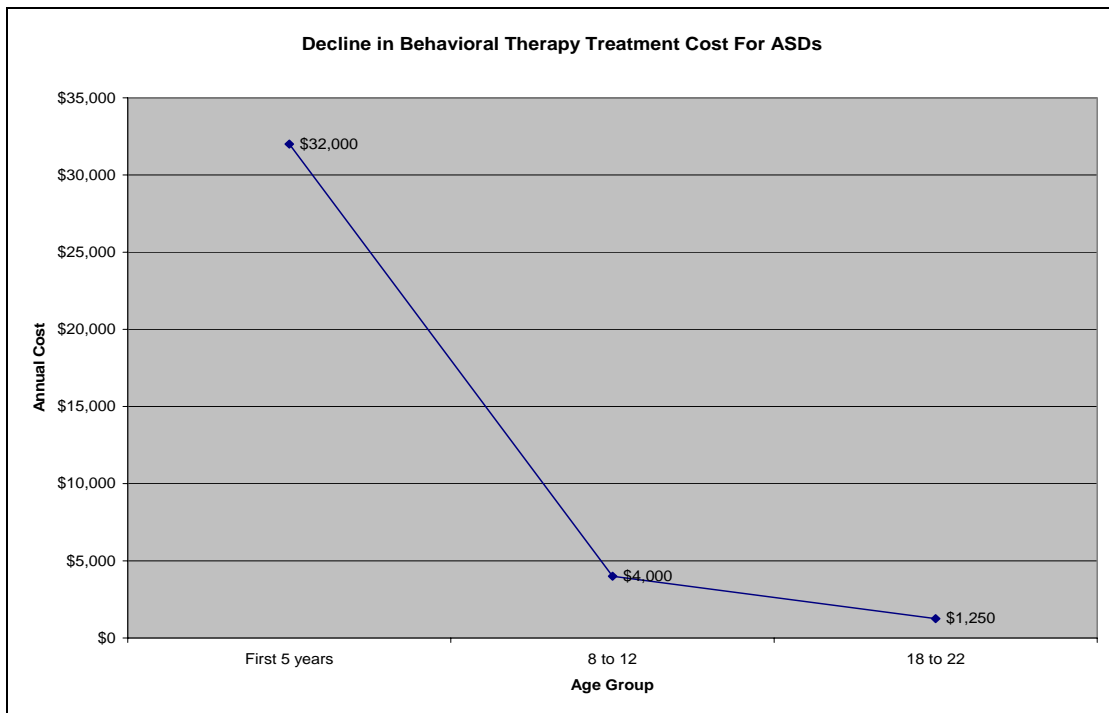
The CDC reports that "early identification and participation in intervention can improve the long term outcome for children with an ASD" (2007). The Harvard School of Public Health corroborates, writing that "improving behavioral and educational therapies for autistic children may not only lessen these costs but also improve quality of life" (Ganz, 2005).

Despite the research supporting early intervention, the 2007 CDC study suggests a significant nationwide lag between the first sign of developmental delay and the receipt of an autism diagnosis and subsequent interventions, which may compromise children's potential progress, and increase their likelihood to require publicly funded supports over the lifetime. If such barriers can be eliminated, however, a child's prognosis improves dramatically. In many cases, by a certain age, children with an ASD diagnosis no longer require treatment, thereby reducing or eliminating associated costs to society.

Effective Therapeutic Interventions for ASD

While treatment plans for individuals with ASD are tailored to each person's unique needs according to the severity of their deficits and any co-occurring diagnoses, persons with autism typically require a combination of medical, psychological/psychiatric, physical (PT), occupational (OT), behavioral, and speech therapies. Individuals with ASDs should be engaged in functional and appropriate activities as much as possible. In 2001, the National Research Council Report recommended a minimum of 25 hours per week and the American Academy of Pediatrics recommends 20 hours or more of active engagement in evidence-based interventions. Behavioral therapy typically comprises the largest proportion of therapeutic hours, with children receiving between 10-35 hours per week in most cases. Other therapies, such as speech, PT, and OT, are generally required for 1-2 hours per week per child.

Michael L. Ganz's study of the societal costs of autism supports the fact that ASD treatment costs decline over time.^v According to Ganz, direct medical costs reach their maximum during the first five years of life. As the child ages, direct medical costs begin to decline substantially and continue to decline through the end of life. Ganz goes on to report, "The large direct medical costs early in life are driven primarily by behavioral therapies (see next section) that cost [an average of] \$32,000 during the first 5-year age group and decline from about \$4,000 in the 8-to 12-year age group to around \$1,250 for the 18- to 22-year age group." (Ganz, *supra* note 27)



Behavioral Therapy

Behavioral therapies for ASD are derived from behavioral science, which is the examination of human and animal behavior using the principles of science, including observation, reproduction, testing, objectivity, etc. Behavioral therapy is also commonly known as, or otherwise includes, Lovaas therapy, early intensive behavioral intervention, applied behavior analysis (ABA), pivotal response treatment, or other similar terms.

ABA is the *application* of behavioral science in order to improve socially important behaviors and teach new skills. ABA-based procedures apply behavioral principles of learning to increase or decrease a particular behavior, improve the quality of a behavior, stop an old behavior, or teach a new behavior.

Effective ABA-based programs include intervention that is:

1. Implemented early (ideally, before school age)
2. Intensive with respect to the number of hours children are actively engaged
3. Provided in natural environments (i.e. home, school, community)
4. Actively involving of families.

Evidence Supporting Behavioral Therapy's Effectiveness with ASDs

ABA-based behavioral interventions are based upon decades of scientific investigation with individuals affected by a wide range of behavioral and developmental disorders, including autism. Specifically for children with autism, research demonstrates the efficacy of ABA in teaching complex communication, social, play, and self-help skills, and in reducing disruptive behaviors. The seminal article on this type of intervention was published by Ivar Lovaas at UCLA in 1987. This controlled, long-term study found that 47% of children with autism achieved normal intellectual educational functioning after treatment intensive behavioral treatment, compared to only 2% in the control group.

Since the Lovaas article was published, 20 years of research and over 500 studies continues to support the effectiveness of behavioral therapy for autism.

Lovaas's landmark 1987 study was followed in 1993 by another study of these same 38 subjects. The objective of John J. McEachin's study was to discover the long-term effects of Lovaas's early intensive behavioral treatment and to find out if the results of the experimental group were preserved over time.^{vi} In terms of intellectual functioning, the study found that "the experimental group at follow-up had a significantly higher mean IQ than did the control group... indicating that the experimental group had maintained its gains in intellectual functioning between age 7 and the time of the current evaluation... [and] ... the experimental group showed more adaptive behaviors and fewer maladaptive behaviors than did the control group." (McEachin, *supra* note 10)

In another study, more than 50% of children with autism who participated in comprehensive treatment programs using ABA were successfully integrated into typical classrooms, with many requiring little ongoing treatment. (Harris and Handleman, 1994)

Only four behavioral interventions are scientifically validated for the treatment of ASD, and all of these are derived from the principles of ABA, according to Simpson (2005). Scientifically validated ABA-based interventions for autism include:

1. Applied Behavior Analysis (ABA)
2. Discrete Trial Teaching (DTT)
3. Pivotal Response Treatment (PRT), and
4. Learning Experiences: An Alternative Program for Preschoolers & Parents (LEAP).

SB1263 Provisions

As introduced, SB1263 or “Steven’s Law,” stipulates that:

- Private insurers in Arizona must provide coverage for the diagnosis of ASD made by a:
 - Licensed psychologist
 - Medical doctor (MD), or
 - Doctor of osteopathy (DO).
- Treatment of ASD that is prescribed by the insured’s treating medical physician is covered, including:
 - Behavioral, speech, OT, and PT therapies
 - Psychological and psychiatric care, through age 18
 - Behavioral therapy is subject to an annual cap of \$50,000, but is not subject to a limit on the number of annual visits.
- Self-insured employers are exempt from the bill’s requirements pursuant to federal regulations, as are employers of less than 50 people and AHCCCS Health Plans.
- The bill as introduced would become effective on July 1, 2009, or state fiscal year 2010.

THE SOCIAL IMPACT

The following sections set forth the information required pursuant to A.R.S. §20-182 [1a-1g].

§20-182(A[1a])

The extent to which the treatment or service is generally utilized by a significant portion of the population.

A diagnosis of ASD is made approximately one time among every 150 children born today. This equates to 0.67% of births. In Arizona, AHCCCS reported serving a total of 5,090 individuals with a diagnosis of autism in November 2007.

This figure does NOT include individuals diagnosed with Asperger's Syndrome or PDD-NOS, which are not covered diagnoses under AHCCCS.

§20-182(A[1b])

The extent to which the insurance coverage is already generally available.

The Department of Economic Security (DES) Division of Developmental Disabilities (DDD) provides some services for autism, one of the three autism spectrum disorders. However, neither DDD nor the private sector offer coverage for Asperger's Syndrome or PDD-NOS. (See A.R.S. §36-551[18a])

Arizona law does not require any private insurance coverage for the treatment of ASDs, and therefore, currently, an estimated 98-99% of the cost of medically necessary treatment for the diagnosis of autism is borne in out-of pocket costs to families and in the public sector.

Private insurance claims for speech, OT, and PT are generally denied when associated with a diagnosis of ASD. In some cases, a developmentally delayed child may be covered for certain therapies such as speech, but once actually diagnosed with ASD, is denied private reimbursement for the same therapies since insurers are not required to cover treatments once they are associated with an ASD diagnosis. Most insurance companies designate autism as a diagnostic exclusion, "meaning that any services rendered explicitly for the treatment of autism are not covered by the plan, even if those services would be covered if used to treat a different condition."^{vii}

Certain autism treatment providers, such as SARRC, collect less than 1-2% of their revenue from insurance reimbursements for speech and occupational therapies.

Insurance reimbursement for behavioral therapy does not exist at all in Arizona currently; 0% of SARRC's insurance reimbursements have been collected for behavioral intervention. Private insurance companies' clinical policies related to

the diagnosis, assessment, and treatment of ASD generally list behavioral therapy among treatments not covered due to being “experimental or investigational.”^{viii} This is despite over 20 years of scientifically validated research and hundreds of studies demonstrating the effectiveness of behavioral therapy for the treatment of ASD.

Under its federal 1115 Waiver, the Arizona Health Care Cost Containment System (AHCCCS), Arizona’s Medicaid agency, contracts with DES for the provision of certain services to the developmentally disabled population in Arizona. DES acts as the “payor of last resort” (A.R.S. §36-2946[A]) for all age groups; when private insurance is available, it must be billed before DES.

- **Ages Birth-Three:** In 2006, the State of Arizona, through DES paid an average of \$5,927.40 in 2006 per child for early intervention for children with autism age 0-3 through the Arizona Early Intervention Program (AzEIP). However, this figure does not capture the true cost of services for multiple reasons, including:
 - Many children with ASD are not diagnosed and receiving services prior to age three.
 - There is a shortage of providers in AZ, and some therapies are not available without long waiting lists, especially in rural areas.
 - Based on individual needs, not all children receive the same number of therapy hours, and criteria used to determine a child’s treatment plan are subjective.
- **Ages Three-Adult:** AHCCCS/Arizona Long Term Care System (ALTCS) contracts with DES/DDD for services for children ages 3+, including OT, PT, speech, music, and habilitation therapies. In November 2007, AHCCCS reported annual expenditures of approximately \$44.5M (total funds) related to services for approximately 5,090 individuals with autism (\$8,700/person).

Both of these figures are significantly lower than what is known to be the typical cost of treatment and support needed for ASD in order to ensure school-readiness and independent living (see data in other related sections).

Rates paid to autism service providers through DDD (Medicaid) are generally inadequate, failing to cover the true cost of high-quality intervention, and making it difficult for providers to stay in business, particularly when compared to the private sector. In Table 1 below, the highlighted row indicates the service most highly utilized and arguably, needed, by children with ASD, and yet is paid at the lowest rate. These rates are intended to cover the cost of the therapist, and all related business expenses, including oversight, mileage, training, overhead, and employee benefits.

Table 1: DDD Reimbursement Rates as of 12/2007

DDD Service	Hourly Rate	
	Low	High
Behavioral] Habilitation	20.53	N/A
Assessment & Supervision-Hab Bach/Masters	40.00	60.00
Speech Therapy – Clinic*	62.80	86.28
Speech Therapy – Natural Setting*	77.94	116.91
Occupational Therapy*	62.80	86.28
Physical Therapy*	62.80	86.28

* Tiered by zip code

Beyond the publicly funded coverage for autism under DDD, there are few examples of private insurance coverage in Arizona or the US under federal and self-insured plans.

The federal government, through military health insurance or TriCare, offers coverage for behavioral therapy for autism. Additionally, two major self-insured employers, Home Depot and Microsoft, offer benefits to employees that have a child(ren) with ASD. Home Depot covers the full range of treatment for childhood autism, including behavioral, speech, occupational, and physical therapies. Similarly, Microsoft pays 80% of the cost of ABA-based therapies, including costs related to both the program manager and therapist involved in the treatment.

§20-182(A[1c])

If coverage is not generally available, the extent to which the lack of coverage results in persons avoiding necessary health care treatments.

Given the importance of early intervention, children should be screened and diagnosed at the earliest possible age. However, the CDC found that the age in initial diagnosis ranges from 17 to 106 months, despite the fact that most children display the characteristics of autism by 36 months (2007). Later diagnosis may be symptomatic of socio-economic stratification, such as evidenced in a study in Pennsylvania, in which “being white was associated with receiving a first diagnosis at an earlier age” (2007). Further, the CDC writes, “socio-demographic factors might influence both who gets evaluated for developmental concerns and how those concerns and behaviors are documented” (2007).

Because Arizona law does not require insurance coverage for ASD treatment, many families pay the balance between the true cost and state coverage out of pocket, and families that do not have adequate resources may go without crucial interventions, and/or languish on waiting lists for state funded services, losing precious months of early intervention.

§20-182(A[1d])

If the coverage is not generally available, the extent to which the lack of coverage results in unreasonable financial hardship to a patient.

Generally, a child with a disability is more likely to be poor. According to Fujiura & Yamaki (2000) 28% of children with disabilities are living below the Federal Poverty Limit (FPL), compared to 16% of children without disabilities. Poverty is in turn associated with other negative outcomes.

There are many reasons that a child with a disability such as ASD is more likely to be living in a poor household. For example, a child's financial well-being is directly related to parental employment (Lichter & Eggenbeen, 1994), and parents of a child with ASD may have difficulty maintaining employment because some government services require a parent to be present, making work difficult.

Additionally, out-of-pocket spending is known to be 2-3 times higher for parents of children with disabilities (Newachek & McManus, 1988), due to costs related to therapeutic interventions, health care and medication, adaptive equipment, and educational services, none of which are required benefits in Arizona under private insurance.

More specifically, families of children and adults with a member diagnosed with Asperger's Syndrome or PDD-NOS are entirely responsible for the cost of treatment in Arizona; there are no public or private payors for these two ASD diagnoses.

For families of children with a diagnosis of autism, although some coverage is available through DDD in Arizona, many children do not obtain adequate or timely treatment, and many receive nothing due to problems with the tool and criteria used to determine eligibility.^{ix} Consequently, families are faced with the choice to privately supplement their child's treatment, or in many cases, go without the necessary interventions. Many families have refinanced or lost their homes in order to ensure that their child receives adequate interventions. Many others declare bankruptcy to seek some level of financial protection.^x Families that are in a position to pay privately generally do so at exorbitant costs to their family's financial security. For families with high health care costs, such as families in which a member has ASD, a 2003 study found that 46% were contacted by a collection agency and 35% took "drastic measures" such as re-financing their homes or piling up credit card debt to pay medical bills.^{xi}

The process of actually obtaining a diagnosis of autism, which is required by the State in order to become eligible for DDD services, can be time consuming and expensive. DDD requires that the diagnosis be made by a child psychiatrist or child psychologist (and upon review, a developmental pediatrician). Arizona has approximately ten of these specialists in the State, some of whom do not accept private insurance or Medicaid. Once eligible, many families are not able to

identify providers that can treat their child through DDD's list of contractors, and are forced to wait months or years for services.

Private pay rates for generally utilizes ASD services are as follows:

- Diagnostic (specialist) visit: One-time cost, may exceed \$500
- Private pay behavioral therapy programs: Up to \$100,000/year
- One hour of speech, physical or occupational therapy: \$100-180/hour; usually 1-2 visits/week

§20-182(A[1e])

The level of public demand for the treatment or service.

Behavioral Therapy

- American Academy of Pediatrics: “There is a growing consensus that the important principles and components of effective early childhood intervention for children with ASDs include...intensive intervention...at least 25 hours per week, 12 months per year... Three studies that compared intensive ABA programs (25-40 hours/week) to equally intensive eclectic approaches have suggested that ABA programs were significantly more effective. In the same report, the AAP goes on to write that the “effectiveness of ABA –based intervention in ASDs has been well documented through 5 decades of research....”^{xii}
- U.S. Surgeon General’s Report on Mental Health (2001): “Among the many methods available for treatment and education of people with autism, applied behavior analysis (ABA) has become widely accepted as an effective treatment. Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior.”^{xiii}
- New York State Department of Health: Assessed interventions for children with autism, and recommended that “behavioral interventions for reducing maladaptive behaviors be used for young children with autism when such behaviors interfere with the child's learning or socialization or present a hazard to the child or others.”^{xiv}
- Maine Administrators of Services for Children with Disabilities: Notes in their report that “There is a wealth of validated and peer-reviewed studies supporting the efficacy of ABA methods to improve and sustain socially significant behaviors in every domain, in individuals with autism. Importantly, results reported include ‘meaningful’ outcomes such as increased social skills, communication skills academic performance, and overall cognitive functioning. These reflect clinically-significant quality of

- life improvements. While studies varied as to the magnitude of gains, all have demonstrated long term retention of gains made.”^{xv}
- National Institute of Mental Health (NIMH): “The basic research done by Ivar Lovaas and his colleagues at the University of California, Los Angeles, calling for an intensive, one-on-one child-teacher interaction for 40 hours a week, laid a foundation for other educators and researchers in the search for further effective early interventions to help those with ASD attain their potential. The goal of behavioral management is to reinforce desirable behaviors and reduce undesirable ones.”^{xvi}
 - The National Institute of Child Health and Human Development: Lists Applied Behavior Analysis among the recommended treatment methods for Autism Spectrum Disorders.^{xvii}
 - National Research Council (NRC [2001]): Report on Educating Children with Autism acknowledged, “There is now a large body of empirical support for more contemporary behavioral approaches using naturalistic teaching methods that demonstrate efficacy for teaching not only speech and language, but also communication.”^{xviii}
 - Association for Science in Autism Treatment: Recommends ABA-based therapies, stating, “ABA is an effective intervention for many individuals with autism spectrum disorders.”^{xix}

Occupational Therapy

According to the American Occupational Therapy Association, for children with ASD, “occupational therapy can provide intervention that helps children to develop.... The therapist aids the child in achieving and maintaining normal daily tasks” though evaluation, interventions, and facilitation of tasks typical to the child’s age.^{xx}

Speech Therapy

The AAP states that “people with ASDs have deficits in social communication, and treatment by a speech-language pathologist usually is appropriate.”^{xxi}

Physical Therapy

ASD may result in various delays, including gross and fine motor skills. Children on the spectrum may also have low muscle tone and/or poor coordination, any or all of which can interfere with basic day-to-day functioning and/or physical development. Physical therapists may work with individuals with ASD to ensure development of basic motor skills, muscle strength, and coordination.^{xxii}

§20-182(A[1f])

The level of public demand for insurance coverage of the treatment or service.

State Legislation

In contrast to Arizona, 19 states and the District of Columbia have enacted requirements for some form of private insurance coverage for ASD, including CA, CO, CT, GA, IL, IN, IA, KS, KY, ME, MD, NH, NY, OR, RI, SC (Ryan’s Law), TN, TX, VA. Laws specifically requiring coverage of ABA-based interventions are found in IN, MN (legal action), SC, and TX. Additional bills are pending in FL, OH, OK (Nick’s Law), MA, MI, and PA. Copies of any of these bills and/or related statutory references are available upon request.

Case Law

In addition to state funding and laws both enacted and pending (see above), several significant court decisions support the move towards private insurance coverage for ASD. Specifically, see *Kunin v. Benefit Trust Life Insurance Co.* (CA-1988), which established that, because autism has organic causes, it is not a mental illness and so cannot be used as a basis for denying or limiting insurance benefit. Also see *Jacob Micheletti v. State Health Benefits Commission* (NJ-2007), in which the court ruled that state workers’ health insurance plans required coverage for a family member with autism, including sessions of ABA-based therapy, occupational therapy, and speech therapy.

Arizona Organizations

In Arizona, every major autism organization is engaged in the effort to gain private insurance coverage for the treatment of ASD. These organizations include all of those listed as signers on the cover letter of this report, as well as additional stakeholders. Among the signers of this report, many thousands of Arizona residents are represented.

More generally, the level of demand for improved health coverage in Arizona is apparent in recommendations made by the 90th Arizona Town Hall on Health Care in Arizona, which included the statement that “everyone in Arizona should have access” to health care.^{xxiii}

§20-182(A[1g])

The level of interest of collective bargaining agents in negotiating privately for inclusion of this coverage in group contracts.

There is no known interest in collective bargaining agreements as generally defined (that is, negotiation between organized workers and their employer or employers). The proponents of this bill strongly assert that legislative action is needed in order to effectively secure the intended coverage.

THE FINANCIAL IMPACT

The attached report (see next pages) sets forth the information required pursuant to A.R.S. §20-182 [2a-2e]. This information was prepared by Reza Mohassessi of Key Healthcare Concepts. Mr. Mohassessi is a member of the American Academy of Actuaries, and his analysis is consistent with accepted actuarial techniques, according to the requirements of A.R.S. 20-182(B).

As indicated by Mr. Mohassessi's report, costs related to SB1263 are low, while potential savings over the lifetime of individuals with ASD that receive adequate intervention are significant. A 1998 study examined the cost/benefit relationship of early intensive behavioral intervention treatment at varying levels of treatment success.^{xxiv} With a success rate of 47 percent for early intensive behavioral intervention therapy (as determined by Lovaas, see above), Jacobson's study found that cost savings per child served are estimated to be from \$2,439,710 to \$2,816,535 to age 55.

Table 6. Financial benefits at different levels of effectiveness, age 3–55 years, per 100 children served and per child served—Pennsylvania model

	<i>Inflated total</i>	<i>1996 \$ total</i>	<i>Inflated/ student</i>	<i>1996 \$/ student</i>
At 20% normal range				
20 norm range vs. partial effect	96,085,200	36,654,400	4,804,260	1,832,720
70 partial vs. minimal effect	72,520,910	28,984,130	1,036,013	414,059
10 minimal effect	0	0	0	0
Net	168,606,110	65,638,530	1,686,061	656,385
At 30% normal range				
30 norm range vs. partial effect	144,127,800	54,981,600	4,804,260	1,832,720
60 partial vs minimal effect	62,160,780	24,843,540	1,036,013	414,059
10 minimal effect	0	0	0	0
Net	206,288,580	79,825,140	2,062,886	798,251
At 40% normal range				
40 norm range vs. partial effect	192,170,400	73,308,800	4,804,260	1,832,720
50 partial vs. minimal effect	51,800,650	20,702,950	1,036,013	414,059
10 minimal effect	0	0	0	0
Net	243,971,050	94,011,750	2,439,710	940,118
At 50% normal range				
50 norm range vs. partial effect	240,213,000	91,636,000	4,804,260	1,832,720
40 partial vs. minimal effect	41,440,520	16,562,360	1,036,013	414,059
10 minimal effect	0	0	0	0
Net	281,653,520	108,198,360	2,816,535	1,081,984

Note: This table presents a comparison of financial benefits at different levels or rates of achievement of normal skills or functioning achieved by EIBI, for people ages 3–55 years, ranging from 20% of children achieving normal range skills or functioning (an assumed minimal rate) to 50% of children. At each level of effectiveness, differing rates of normal range functioning, as well as partial benefit are estimated. Costs are shown in terms of the aggregate of 100 children served, and averages per person served, with inflation and in 1996 dollars.

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Committee on Children With Disabilities (2001). Technical Report: The Pediatrician's Role in the Diagnosis and Management of Autistic Spectrum Disorder in Children. *Pediatrics*, 107, e85.
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- ⁱⁱⁱ James G. Gurney, Melissa L. McPheeters, Matthew M. Davis, Parental Report of Health Conditions and Health Care Use Among Children With and Without Autism, 160 *Archives of Pediatric and Adolescent Medicine*, 825-30 (2006).
- ^{iv} Lovaas Institute for Early Intervention. See <http://www3.scoe.net/npsa/index/index.cfm?fuseaction=basicDetails&id=420&searchType=adv>.
- ^v Michael L. Ganz, The Lifetime Distribution of the Incremental Societal Costs of Autism. 161 *Archives of Pediatric and Adolescent Medicine*, 343-49 (2007). Retrieved from www.archpediatrics.com.
- ^{vi} J. J. McEachin, T. Smith, O. Ivar Lovaas, Long-term Outcome for Children with Autism Who Received Early Intensive Behavioral Treatment, 97 *American Journal on Mental Retardation*, 359-72 (1993).
- ^{vii} Douglas L. Leslie, Andres Martin, Health Care Expenditures Associated with Autism Spectrum Disorders, 161 *Archives of Pediatric and Adolescent Medicine*, 350-55 (2007).
- ^{viii} See Cigna, BC/BS of AZ, and/or Aetna, available upon request.
- ^{ix} ALTCS eligibility is determined according to a subjective determination of whether an individual is "at-risk for institutionalization." For autism, this criterion is not appropriate. The "PAS" tool, which ALTCS administers during the screening process, is weighted to provide more emphasis on items such as feeding tubes; in fact, the tool provides ZERO points for a diagnosis of autism.
- ^x Approximately 50% of personal bankruptcy cases are due at least in part to medical costs. See "Too Great a Burden: Arizona's Families at Risk." Publication No. 07-112AZ. Families USA, December 2007.
- ^{xi} See "Too Great a Burden: Arizona's Families at Risk." Publication No. 07-112AZ. Families USA, December 2007.
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^{xxii} See <http://autism.about.com/od/autismtherapy101/a/PTbasics.htm>

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