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*Legislative Brief*

# Autism in Tennessee: Part 3 – Health

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## Introduction

This is the third report in a series on Autism Spectrum Disorders by the Offices of Research and Education Accountability. The first report, *Autism in Tennessee: Part 1 – An Introduction to Issues and Data Collection Methods* was released in October 2009. Part 1 includes an overview of autism as a disability, including associated laws, and a review of autism data collection and prevalence estimates. The second report, *Autism in Tennessee: Part 2 – Education*, was released in December 2010. It includes an overview of the special education process and associated laws, and includes approaches being taken by Tennessee and other states to prepare teachers and school staff to educate children with autism. These reports are available at OREA's website, http://www.comptroller1.state.tn.us/OREA.

This report covers issues related to state and federal health-related programs and laws that intersect with the state and federal special education programs in Tennessee. These include federal laws, funding mechanisms, and treatments.

## Methodology

The contents of this report are based on:

- a review of the major federal and state education laws concerning autism and disability services
- a review of national and state-specific research on autism spectrum disorders
- a review of literature on autism and autism health-related services
- interviews with staff from the Tennessee Department of Education (TDOE), Division of Special Education; Department of Health; Bureau of TennCare; Department of Human Services

## Background

Children are usually diagnosed with autism spectrum disorders by age eight. According to the Centers for Disease Control and Prevention (CDC), the number of children aged eight years identified with autism spectrum disorders increased an average of 57 percent from 2002 to 2006 in 10 communities participating in both studies. Data from a 2006 CDC survey indicate that one in 110 three-year-olds were identified by public school officials as having an autism spectrum disorder (ASD).[1] Based on this 2006 survey, the CDC estimates that nationally up to 730,000 people, birth to 21 years of age, have an ASD.[2]

### Treatment

Health professionals agree that it is important to intervene as soon as possible after a child is diagnosed with an ASD. The following symptoms are commonly used by health professionals to make an autism diagnosis:

- impaired verbal communication skills
- impaired nonverbal communication skills
- impaired social skills, including "restricted, repetitive, and stereotyped patterns of behavior….[ranging in] impact from mild to significantly disabling"[3]

There is currently no cure for autism, but some symptoms can be treated. Treatment options may include behavioral and educational interventions, complementary and alternative medicine, and dietary changes or medications to manage or relieve symptoms. There is no single treatment or group of treatments that is successful for all children. Applied behavioral analysis (ABA) has proven effective for many children.[4]

### Co-occurring Conditions

Children with ASD may also have a co-occurring developmental disability, such as attention deficit disorder or intellectual disability. (See Exhibit 1.) One study of data from a sample of U.S. households from the 1997-2005 CDC National Health Interview Surveys estimated that 95.6 percent of children with autism had a co-occurring developmental disability.[5] However, according to the Deputy Commissioner of the Department of Intellectual and Developmental Disabilities, there is a wide variance in this co-diagnosis. This same study found 19.2 percent of children with autism also had an intellectual disability, though a wide variance, 25-70 percent, can be found in prior past studies.[6]

**Exhibit 1: Percentage of Co-occurring Developmental Disabilities Among ASD Children from Sample of U.S. Household Data from 1997–2005**

| Co-occurring DD | Co-occurring DD (Prevalence Of >=1 Co-occurring DD) |
|---|---|
| ADD/ADHD | 41.8% |
| Learning Disability | 60.7% |
| Intellectual Disability | 19.2% |
| Stuttering | 15.6% |
| Other DD | 79.5% |

Source: Sheree L. Boulet, Coleen A. Boyle, Laura A. Schieve, "Health Care Use and Health and Functional Impact of Developmental Disabilities Among U.S. Children, 1997-2005," Archives of Pediatric and Adolescent Medicine, Vol. 163, No. 1, 2009, pp. 19-26, Table 2.

A more recent study by the CDC, released in 2012, found an average of 38 percent of children with an ASD also had an intellectual disability (intelligence quotient <=70).[7]

### Cost of Treatment

ASD treatments are often costly. A 2006 study by the Harvard School of Public Health estimated that it can cost up to $3.2 million to take care of an individual with autism over his or her lifetime; national costs are an estimated $35 billion each year to care for all individuals with autism.[8] The CDC estimates the annual health care costs for a child with an ASD range from $4,100 to $6,200 more than the annual health care costs of a non-ASD child.[9] A study of medical costs in a large group health plan found that children with ASD had costs three times higher after adjusting for age and gender.[10]

### Federal Laws Related to Autism

Several federal laws related to ASD seek to coordinate research and activities between agencies, provide federal funding to states, and enhance research into ASD. These laws are described below.

### Combating Autism Act of 2006

Congress passed the federal Combating Autism Act of 2006 to coordinate the efforts of several federal agencies concerning ASD research. (See box on page 3.)

**Exhibit 2: Autism Diagnoses: Percent of All Children Served by IDEA**

| Year | Autism Diagnoses as % of All Children Served by IDEA |
|---|---|
| 1998 | 0.9 |
| 1999 | 1.1 |
| 2000 | 1.5 |
| 2001 | 1.8 |
| 2002 | 2.1 |
| 2003 | 2.5 |
| 2004 | 2.8 |
| 2005 | 3.3 |
| 2006 | 3.9 |
| 2007 | 4.5 |
| 2008 | 5.1 |

Source: U.S. Department of Education, Office of Special Education Programs; Data Accountability Center, Individuals with Disabilities Education Act data, as cited in Jonathan Watts Hull, Southern Legislative Conference of the Council of State Governments, Autism and Schools, Jan. 2010, p. 4, http://www.slcatlanta.org (accessed March 27, 2012).

### Autism and IDEA

Congress passed the most recent version of the Individuals with Disabilities Education Act (IDEA) in 2004.[11] The law provides federal funding for states for services to ensure a free appropriate public education for children with disabilities. Part B of the Act covers children ages three through 21 with disabilities, while Part C relates to services for children through two years old. The Office of Education Accountability's report *Autism in Tennessee: Part 2 – Education*, released December 2010, details the requirements and services under IDEA.

Federal law identifies autism as a qualifying disability under IDEA. The percent of all students with autism served by IDEA grew from 0.9 percent in 1998 to 5.1 percent in 2008. (See Exhibit 2.) To meet the state's obligations under IDEA, Tennessee has an interagency agreement between the Departments of Education (TDOE), Children's Services, Finance and Administration, Bureau of TennCare, Intellectual and Developmental Disabilities, Health, Human Services/ Division of Rehabilitation Services, Mental Health, and Corrections:

> The purpose of this Agreement is to identify and define the financial responsibilities of the Parties to this Agreement and to facilitate the provision and coordination of services for all infants, toddlers, children, youth and adolescents who are IDEA eligible. This Agreement formalizes policies, procedures, and fiscal responsibilities of the Parties.[12]

<u>2006 Amendment to IDEA</u>

In August 2006, the U.S. Department of Education published a controversial amendment to IDEA that required LEAs to "obtain parental consent . . . each time that access to public benefits or insurance is sought."[13] According to the Tennessee Department of Education staff, this was one of the reasons that TDOE and the Bureau of TennCare discontinued direct billing for Medicaid-eligible services provided to students under IDEA.[14]

A letter issued in May 2007 by the Office of Special Education Programs in the U.S. Department of Education attempted to clarify issues surrounding parental consent:

> [C]onsent may be obtained one time for the specific services and duration of services identified in a child's IEP. . . . If however, the public agency seeks to use the child's or

**Combating Autism Act of 2006**

Congress passed the federal Combating Autism Act in 2006 (P.L. 109-406). The act created the Interagency Autism Coordinating Committee (IACC), a committee that comprises several federal departments and agencies. The IACC's mission is to:

- Provide advice to the Secretary of Health and Human Services regarding federal activities related to autism spectrum disorder.
- Facilitate the exchange of information on and coordination of ASD activities among the member agencies and organizations.
- Increase public understanding of the member agencies' activities, programs, policies, and research by providing a public forum for discussions related to ASD research and services.

The committee consists of these federal agencies:

- Department of Health and Human Services (HHS)
- Administration for Children and Families (ACF)
- Centers for Medicare and Medicaid Services (CMS)
- Centers for Disease Control and Prevention (CDC)
- Health Resources and Services Administration (HRSA)
- National Institutes of Health (NIH)
- Office on Disability
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- Department of Education (ED)

The committee is required to create an annual strategic plan on federal autism activities, including advances in autism research. The IACC's most recent Strategic Plan states: "There is increasing recognition that the multiple systemic issues in children with ASD may influence vulnerability, onset, and severity of symptoms and behaviors." In other words, it is believed that both medical and behavioral issues may play a role in a child having ASD.

Source: U.S. Department of Health and Human Services, "Interagency Autism Coordinating Committee," "About IACC," "Charter," "The 2011 Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research – January 11, 2011," http://iacc.hhs.gov (accessed March 27, 2012).

> parent's public benefits or public insurance to pay for additional hours of service (due to the IEP being revised or extended) or the public agency is charging different amounts for such services the public agency must obtain parental consent.[15]

Despite these clarifications, school districts nationwide have continued to experience difficulty complying with the law. Because of these issues, in September 2011, the Secretary of Education issued a proposed change in IDEA regulations:

> [U]nder these proposed regulations the public agency would no longer be required to obtain parental consent each time that it seeks access to public benefits or insurance in order to provide a service to a child. Public agencies would provide the written notification to parents of children who receive special education and related services prior to seeking access to the child's or parent's public benefits or insurance. The exact timing and frequency of a public agency's provision of the onetime written notification to the parent would be at the discretion of the public agency, so long as the public agency provides the notification before the public agency seeks access to the child's or parent's public benefits or insurance.[16]

The proposed changes in federal regulations, if enacted, may remove one obstacle to states seeking federal matching funds for IDEA-related services provided in schools.

### <u>ASD Treatments</u>

There is no one treatment for ASD. The severity of symptoms, co-occurring conditions, and how these conditions affect the life of the person with ASD are factors that may affect an individual's treatment plan. Even when an individual child has shown improvement under a certain treatment regimen, it can be difficult to pinpoint the specific reasons for the child's improvement, and difficult to repeat specific treatment successes with other persons with ASD.[17]

#### *Medication*

The federal Interagency Autism Coordinating Committee reported in its January 2011 strategic plan that "no medication has been shown in controlled trials to enhance social behavior or communication." The committee argued that many more controlled trial studies are needed to determine which medications may be most effective. A recent analysis of multiple studies on the use of medication to treat persons with ASD concluded that "strikingly little evidence exists to support evidence for most medications."[18]

Risperidone and Aripiprazole are antipsychotic medications used to treat mental illnesses, including schizophrenia and bipolar disorder. They are also prescribed to treat conditions related to ASD, such as irritability and aggression. The study found that these two drugs improved some specific behaviors, "but associated adverse affects limit their use to patients with severe impairment or risk of injury."[19]

Only one drug, Risperidone, has been approved by the Food and Drug Administration to treat certain behavioral problems, such as aggressiveness, in children with ASD.[20] Risperidone has a number of side effects, including weight gain, drowsiness,[21] "extrapyramidal effects (sudden, often jerky, involuntary motions of the head, neck, arms, body, or eyes), dizziness, hyperactivity, tiredness, abdominal pain, fatigue, fever and nausea."[22]

#### *Applied Behavioral Analysis*

One treatment that has proven effective for some children with ASD is applied behavioral analysis (ABA). Not all experts support the widespread use of ABA without further research. Such treatment can be quite expensive, costing up to $70,000 annually per child. ABA involves repeated conditioning and rewards to bring about desired behaviors. ABA is not covered for the treatment of autism by many insurance companies. TennCare does not cover "highly structured intensive programs to improve the cognitive and social skills of children with autism (e.g., Lovaas therapy)." According to TennCare policy, "ABA when utilized in this manner is primarily an educational intervention, rather than a medical service and is not a covered benefit under the TennCare program." However, TennCare covers ABA for children with autism or other diagnoses to treat "challenging behaviors" as defined in its policy at http://www.tn.gov/tenncare/forms/apcard.pdf.

ABA is accepted by many as a proven, effective treatment for autism, and has been studied extensively. *Mental Health: A Report of the Surgeon General* states, "Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior."[23] According to the IACC:

> Of the numerous behavioral interventions currently in use, little scientific evidence from randomized controlled trials supports their efficacy. Behavioral therapies, such as Applied Behavior Analysis (ABA) based therapies, which use the principles of reinforcement and repetition, have been used since the 1960s and have been studied most extensively. Controlled trials have shown ABA to be effective for improving social skills and language when provided for at least 25-40 hours per week for 2 years. . . . Efficacy is greatest when behavioral interventions are used early, but improved skills have been reported with adolescents and adults. . .[24]

The American Academy of Pediatrics (AAP) has endorsed ABA treatments:

> The effectiveness of ABA-based intervention in ASDs has been well documented through 5 decades of research by using single-subject methodology and in controlled studies of comprehensive early intensive behavioral intervention programs in university and community settings. According to the AAP, children who receive early intensive behavioral treatment have been shown to make substantial, sustained gains in IQ, language, academic performance, and adaptive behavior as well as some measures of social behavior, and their outcomes have been significantly better than those of children in control groups.[25]

Critics of ABA maintain that it is difficult to determine for which children and conditions ABA will be effective. Some researchers argue that the various studies analyzing ABA effectiveness have been limited to specific populations or small groups. Although positive results have been noted, these results may not be generalizable across the broad range of persons with an ASD. These researchers argue that larger controlled studies are necessary to determine more precisely the ASD subgroups, ASD symptoms, and conditions where ABA is a cost-effective treatment.[26, 27]

## Federal Funding for Autism Related Services

A number of federal programs enable states to obtain federal matching dollars through the Medicaid program. These programs require the state or a school district to incur Medicaid-related expenses from providing services for Medicaid-eligible children. Some of the services eligible for federal matching funds are related to IDEA and the child's IEP. The specifics of these programs are described in this section.

### *Medicaid School Billing Act (42 USC 1396b(c))*

The Medicaid School Billing Act was passed by Congress in 1988 to provide a way for school districts to obtain more money for special education programs through billing Medicaid. The act was intended to help fund medically necessary, non-educational services contained in the IEP of a student with a disability.[28]

Schools may bill Medicaid only for services that are part of the state's Medicaid plan and are contained in Title XIX, section 1905(a) of the Social Security Act.[29] Medicaid is usually the payer of last resort; other sources of funding or payment for services must be used if available.[30] While schools are legally liable to provide IDEA-related health services at no cost to eligible students, Medicaid reimbursement is available for these services because section 1903(c) of the Act requires Medicaid to be primary to the U.S. Department of Education for payment of the health-related services provided under IDEA. Medicaid covers services included in an IEP under the following conditions:

- the services are medically necessary and included in a Medicaid covered category (speech therapy, physical therapy, etc.);
- all other federal and state Medicaid regulations are followed, including those for provider

qualifications, comparability of services and the amount, duration and scope provisions;
- the services are included in the state's plan or available under EPSDT; and
- the medical service must be provided to a Medicaid-eligible student.[31]

*Medicaid Reimbursement Program – administered by Stellar Therapy Services*
Several school districts in Tennessee are working with a private company, Stellar Therapy Services, to provide IEP services that are eligible for Medicaid federal matching reimbursement. These include speech, occupational therapy, physical therapy, and special education services. Stellar Therapy Services indicates that it operates the "Medicaid Reimbursement Program" for eligible special education services for:[32]

- Hamilton County Schools,
- McMinn County Schools,
- Tullahoma City Schools,
- Morgan County Schools,
- McNairy County Schools,
- Hardin County Schools,
- Wilson County Schools,
- Sumner County Schools,
- Little Tennessee Valley Education Cooperative (LTVEC),[33] a public nonprofit agency formed to foster collaboration between east Tennessee school systems. The member LEAs are Athens City Schools, Alcoa City Schools, Lenoir City Schools Loudon County Schools, Monroe County Schools, and Sweetwater City Schools.

According to the Hamilton County Department of Education (HCDE), the plan works as follows:

- TennCare reimbursements are paid directly to HCDE;
- HCDE pays [the private contractor] a billing fee based on a percentage of TennCare reimbursements; and
- HCDE pays [the private contractor] an hourly rate for contract therapy services, using budgeted funds and TennCare reimbursements.[34]

According to Stellar Therapy Services:

- All eligible providers are either credentialed or in the process of being credentialed with each MCO [managed care organization] who agrees to accept new providers.
- For school year 2010–2011, Hamilton County Schools received approximately $650,000 in reimbursements for Speech Therapy, Occupational Therapy, Physical Therapy, and Audiology, provided to 987 students.
- [The company expects] to contract to assist more individual school districts in the near future.[35]

*TENNderCare Connection*
TennCare's "TENNderCare Connection" program is guided by an interagency agreement between the Department of Education, Bureau of TennCare and the Governor's Office of Children's Care Coordination (the GOCCC was removed from the state's FY 2011–12 budget).[36] TennCare sends a letter to schools and managed care organization (MCO) directors each year to remind them of their responsibilities to share IEP information, and to coordinate TennCare covered care contained in the child's IEP.

The state asks "that schools share information with the appropriate TennCare MCOs when medical services are included in the IEP of a TennCare enrolled child."[37] By doing so, the state can obtain matching federal dollars if these services are Medicaid-eligible under the Medicaid School Billing Act.[38]

*TennCare Early Periodic Screening, Diagnosis and Treatment*
TennCare's Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program is required for Medicaid-enrolled children under age 21. It provides for comprehensive physical and behavioral health screening and treatment for children enrolled in Medicaid, up to the age of 21, regardless of whether they are IDEA-eligible. (It is also required by Tennessee Code Annotated 56-7-2367.) The interagency agreement between the Bureau of TennCare and DOE specifies:

> DOE shall furnish TennCare/EPSDT providers with criteria and training concerning IDEA requirements. TennCare will train TennCare/EPSDT providers concerning EPSDT requirements. TennCare will ensure that MCOs provide appropriate technical assistance to TennCare providers in billing and the coordination of services for children who are IDEA eligible. This training will be conducted annually and will begin within ninety (90) days after this Agreement has become final.[39]

EPSDT requires states to provide all medically necessary treatment to correct identified problems, even if the specific treatment needed is not otherwise covered under a state's Medicaid plan:[40]

> A covered benefit for TennCare Medicaid enrolled children only that includes (a) screening in accordance with professional standards and interperiodic, diagnostic services to determine the existence of physical or mental illnesses or conditions of TennCare Medicaid enrollees under age twenty-one (21) and (b) health care, treatment, and other measures, described in 42 USC § 1396a(a) to correct or ameliorate any defects and physical and mental illnesses and conditions discovered. Tenn. Rule 1200-13-13-.01 and Tenn. Rule 1200-13-14-.01. Also known in Tennessee as "TENNderCare." (Interagency Agreement)

States must pay for any medical condition found during an EPSDT screening, regardless of whether other payers are available. Services include "dental, vision, and hearing screenings, speech and language assessments, and general periodic health examinations."[41]

For a school to be reimbursed for a service, the service must be medically necessary, eligible for Medicaid funding, and delivered by a Medicaid-eligible provider.[42]

*Medicaid Administrative Claiming (MAC)*

Tennessee does not currently operate a Medicaid Administrative Claiming (MAC) program. Such a program was in place from 2004 through 2006. A Medicaid administrative claiming program allows states to receive Medicaid reimbursement for administrative activities by school employees in support of the state's Medicaid program. Under the program, reimbursement is available for outreach and enrollment and to "locate, identify, refer, and coordinate health and health-related services for Medicaid-eligible students and their families."[43] The Centers for Medicare and Medicaid Services (CMS) reimburses schools at a matching rate of 50 percent of expenditures for "activities the Secretary finds necessary for proper and efficient administration of the State plan."[44]

Thirty-two states were participating in this program as of 2009. (See Exhibit 3.) Participating states are required to perform a comprehensive time study that must be approved by CMS to document the types of activities performed by employees and how they will be reported to CMS.[45]

Tennessee's MAC program was operational from June 2004 through September 2006, and claimed less than $1 million.[46] According to the former TennCare contact for the MAC program, the program was discontinued at the end of 2006, "because it was dependent upon local school systems maintaining back-up documentation for everything that was billed. That proved to be very difficult for them."[47] Also, according to TDOE staff, the program had to return "all monies paid out to [Local Education Agencies] following an audit by CMS in 2006 in which the . . . MAC programs were deemed out of compliance."[48] According to TennCare staff, "CMS determined that Local Education Agencies . . . were not maintaining proper documentation to support the billing of medical services provided or administrative services provided. TennCare and the Department of Education agreed to terminate the program to avoid the possibility of future disallowances."[49]

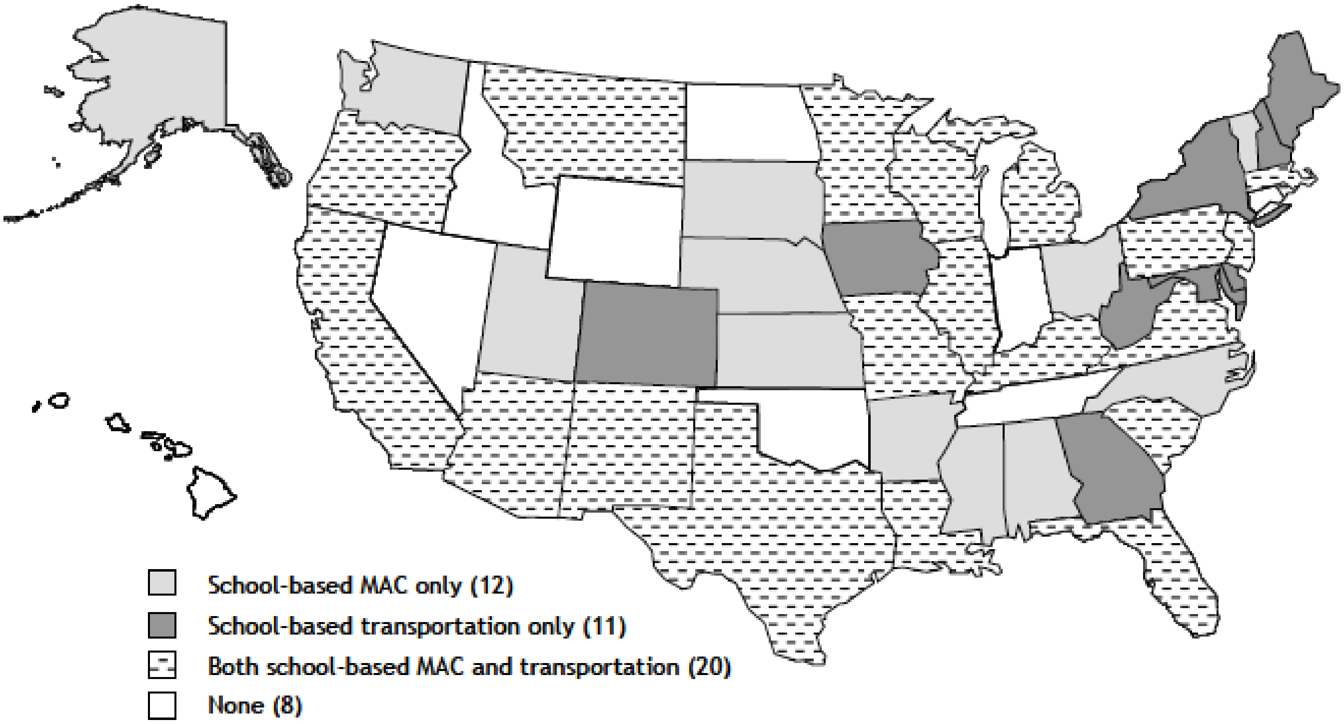
School districts in other states have also found it difficult to comply with the rules of the program. Testimony from the U.S. Government Accountability Office before Congress on June 28, 2005, indicated that some administrative procedures used by school districts and states did not ensure that administrative activities were properly identified and reimbursed."[50] In 2008, CMS issued proposed rule "CMS-2287-F, Medicaid Reimbursement for School Administrative Expenditures and Costs Related to Transportation between Home and School" to eliminate Medicaid administrative reimbursement. However, after several deferrals of the rule by Congress, CMS rescinded the proposed rule on June 30, 2009.[51] The effect was to leave the Medicaid Administrative Claiming program in place.

*Autism-Specific Federal Waivers for ASD*

Home and Community Based Services (HCBS) waivers allow states to provide and fund services to particular populations with special needs. A Medicaid waiver exempts a state from specific Medicaid regulations so that alternative services may be provided. It also allows states to provide Medicaid to persons who would otherwise be eligible only in an institutional setting, often due to the income and resources of a parent. The services to be covered by the waiver are determined by the state and must be approved by the Center for Medicaid Services (CMS).[52] CMS HCBS requirements include:

- demonstrating that providing waiver services to a target population is no more costly than the cost of services these individuals would receive in an institution
- ensuring that measures will be taken to protect the health and welfare of consumers

**Exhibit 3: States Participating in School-based MAC and School-based Transportation, Federal Fiscal Year 2009**



| School-based Activity or Service | Number of States Covering this Activity or Service |
|---|---|
| Medicaid administration performed by school employees (MAC)[72] | 32 |
| School-based transportation | |
| Transportation from home to school and school to home | 29 |
| Transportation only from home/school to non-school provider | 2 |

Source: The Lewin Group, *Mandated Report to Congress: Analysis of Impacts and Issues Relating to Four Medicaid Regulations Prepared for the United States Congress*, under contract to U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, Contract No. HHSM-500-2005-00024I, Sept. 30, 2009, p. 73, http://www.naph.org (accessed March 19, 2012).

- providing adequate and reasonable provider standards to meet the needs of the target population
- ensuring that services are provided in accordance with a plan of care[53]

Tennessee's 1915(c) waivers with CMS for Mental Retardation – Developmental Disabilities do not specifically cover children with only an Autism Spectrum Disorder diagnosis. Tennessee's waivers provide home and community-based services to individuals who, but for the provision of such services, would require services in an Intermediate Care Facility for the Mentally Retarded. Enrollment is also limited to individuals who meet the requirements of TennCare Rule 1200-13-1-.15, including an I.Q. of 70 or below.[54]

Some states do include autism services in their waivers, though this is a recent trend. According to a recent University of Minnesota study, "Colorado, Indiana, Kansas, Maryland, Massachusetts, Missouri, Montana, Nebraska, New York (ASD/DD/MR), South Carolina (Pervasive Developmental Disorder waiver), and Wisconsin (Children's DD waiver) had autism waivers specific only to children. Two states, Indiana and Pennsylvania, had autism waivers that specifically served adults."[55]

According to an analysis of 1915(c) waivers for 2010, states reported expenditures under 318 separate waivers. Ten waivers were for services specifically for ASD, two for services for intellectual disabilities and ASD, and 89 for services for developmental disabilities including intellectual disabilities and ASD.[56] The study was based on various sources, including Form CMS-64 expense reports, other report data from the CMS Waiver Management System, and data from state websites or other state sources.[57] The Centers for Medicare and Medicaid Services maintain an online database of currently approved 1915(c) waivers.[58]

*Mandated Insurance Coverage for ASD*

Many states have enacted laws requiring some degree of private insurance coverage for ASD services, including ABA. The provisions and limitations of these laws vary by state, and are summarized in Appendix 1. Tennessee's autism insurance mandate law requires insurers (other than self-insured employers) to cover children to age 12, and does not require that insurers cover applied behavioral analysis (ABA). Tennessee's law, which became effective January 1, 2007, requires coverage for ASD that is commensurate with other neurological disorders:

> A contract or policy of an insurer that provides benefits for neurological disorders, whether under an individual or group health insurance policy providing coverage on an expense-incurred basis, an individual or group service contract issued by a health maintenance organization, a self-insured group arrangement to the extent not preempted by federal law or a managed health care delivery entity of any type or description shall provide benefits and coverage for treatment of autism spectrum disorders that are at least as comprehensive as those provided for other neurological disorders. These benefits and coverage for treatment shall be provided to any person less than twelve (12) years of age. (Tennessee Code Annotated 56-7-2367(b))

The law does not provide a specific dollar limit on services.

Laws mandating that insurance companies cover autism services are one method used by states to ensure children with ASD are able to obtain services. Autism Speaks contracted with an actuarial firm to determine an estimate for proposed legislation in Virginia mandating autism services including ABA. The study estimated long-term average increases in premiums of 0.24 percent to 0.62 percent, depending on the percentage of children under age six starting ABA services.[59] However, in its 2010 annual report on health insurance mandates, the Council on Affordable Health Insurance (CAHI), a group representing the insurance industry, increased its estimated cost impact of autism insurance mandates to one to three percent of overall premiums, "due to the growing frequency and scope of this benefit."[60] According to CAHI, their estimate is based upon "real health insurance pricing with this mandate" in all 50 states and D.C. Estimates of health insurance costs depend on the number of persons insured, services covered, dollar maximums for overall or for individual services, any individual or service exclusions and the utilization of services by those insured.

According to the National Conference of State Legislatures (NCSL), as of January 2012, there were 34 states, along with the District of Columbia, with some form of autism-related insurance law. At least 29 of these states require insurers to cover autism treatments. (See Appendix 1.)[61]

The trend in recent years has been for states to require coverage of ASD. According to NCSL:[62]

- During the 2007–2008 legislative session, nine states passed legislation related to autism and insurance coverage. Arizona, Florida, Illinois, Louisiana, Pennsylvania, South Carolina, and Texas enacted legislation specifically requiring coverage for autism. Massachusetts enacted legislation in 2008 to specify that autism shall be covered under mental health parity laws on a nondiscriminatory basis. Connecticut enacted legislation in 2008 that requires insurers to provide coverage for physical, speech and occupational therapy services for the treatment of autism spectrum disorders to the extent that such services are a covered benefit for other diseases and conditions under such policy.
- In 2009, Colorado, Connecticut, Montana, Nevada, New Jersey, New Mexico, and Wisconsin enacted legislation requiring insurance coverage for autism. Illinois enacted legislation requiring insurance coverage for habilitative services for children with a congenital or genetic disorder, including autism.
- In 2010, Iowa, Kansas, Kentucky, Maine, Massachusetts, Missouri, New Hampshire, and Vermont enacted legislation requiring insurance coverage for autism. In April 2010, Oklahoma enacted legislation to specify that health insurance policies must provide the same coverage and benefits to children who have been diagnosed with autism as children who have not been diagnosed with the disorder.
- In 2011, Arkansas, Virginia, and West Virginia enacted legislation requiring insurance coverage for autism spectrum disorders.

### Sources of Autism-Related Services

#### *Autism Treatment Network*

Autism Speaks is the "nation's largest autism science and advocacy organization, dedicated to funding research into the causes, prevention, treatments and a cure for autism; increasing awareness of autism spectrum disorders; and advocating for the needs of individuals with autism and their families."[63] Autism Speaks created the Autism Treatment Network (ATN) "in 2005 as the nation's first network of hospitals and physicians aiming to bridge gaps in knowledge and understanding and to improve treatment for individuals with autism."[64] There are 17 network sites in North America, including Vanderbilt University Medical School in Nashville, Tennessee.[65] The goal of the ATN "is to provide comprehensive, high-quality care by teams of healthcare professionals who understand autism spectrum disorders and excel at treating associated medical conditions including the sleep disturbances and gastrointestinal problems that can vex children with ASD and their families."[66]

#### *Developmental Disabilities Network*

The Tennessee Developmental Disabilities Network (TDDN) includes two University Centers for Excellence in Developmental Disabilities and the Tennessee Council on Developmental Disabilities. The University Centers for Excellence are part of the University Centers for Excellence in Developmental Disabilities Education, Research and Service (UCEDDs). According to the TDDN, "This network of 64 centers in every U.S. state and territory supports interdisciplinary training, exemplary services, research, and dissemination of information."[67] There are many developmental disabilities, including autism:

> A developmental disability is a condition that is significant and ongoing, begins before age 22, and substantially limits functioning in daily activities of living. Examples include autism, brain or spinal cord injury, cerebral palsy, Down syndrome, fetal alcohol syndrome, intellectual disabilities (mental retardation), Prader-Willi syndrome, spina bifida, Williams syndrome. The Network also serves persons with all types of disabilities, including those whose disabilities occur after age 22.[68]

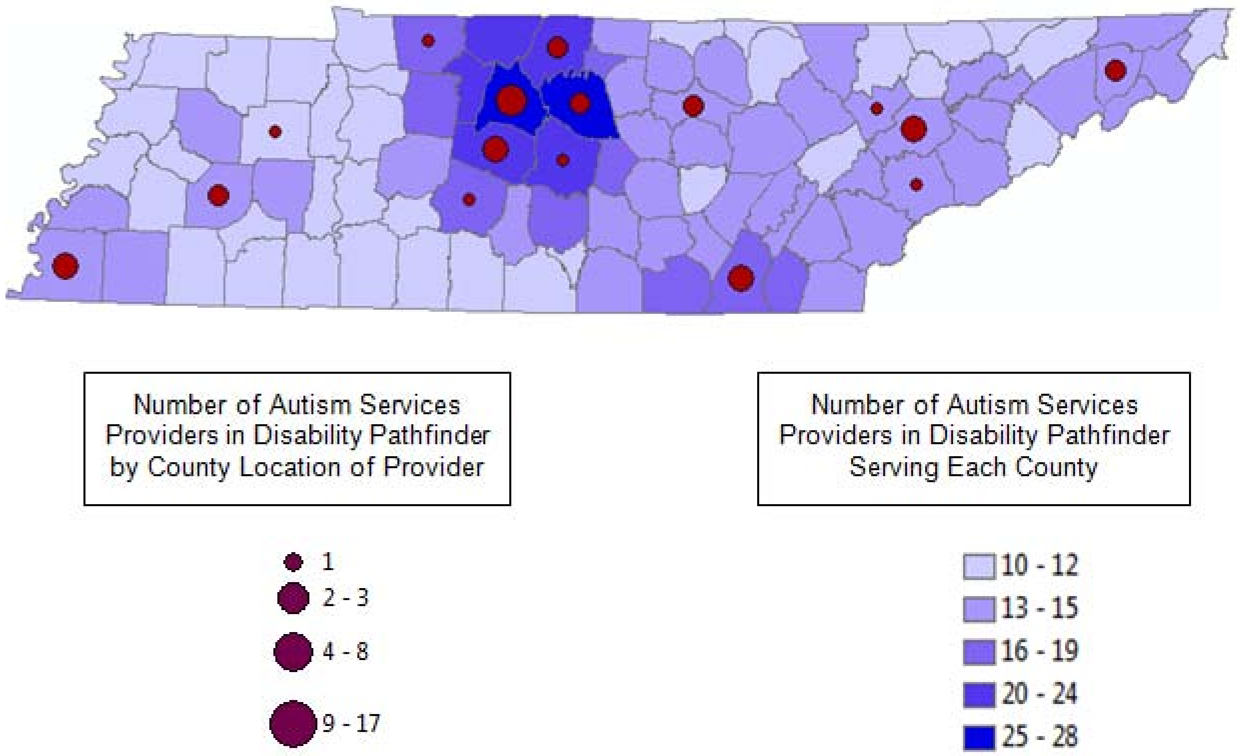
The University of Tennessee Health Sciences Center hosts the Boling Center for Developmental Disabilities. The center's mission is to:

- develop and provide exemplary, coordinated, person-centered supports and services to individuals of all cultures and their families
- provide excellent, relevant interdisciplinary training
- disseminate information, products, and plans to consumers, professionals, agencies, and policy makers
- serve as advocates and agents for meaningful systems change on local, state, and national levels
- develop and conduct relevant disciplinary and interdisciplinary clinical research
- provide technical assistance to individuals, groups, agencies, and policy makers in the priority area of inclusion and self-direction[69]

The Vanderbilt Kennedy Center includes the Treatment and Research Institute for Autism Spectrum Disorders (TRIAD), which "is dedicated to improving assessment and treatment services for children with autism spectrum disorders and their families while advancing knowledge and training."[70] The center also operates a helpline and referral service to help parents find appropriate services. The center hosts the Tennessee Disability Pathfinder, which can assist parents in finding autism-related services throughout the state.[71]

Private entities offering some form of autism treatment outside of the educational system do not appear to be evenly distributed across the state. The "Tennessee Disability Pathfinder" is a joint project of the Tennessee Council on Developmental Disabilities and the Vanderbilt Kennedy University Center for Excellence in Developmental Disabilities.[72] It is a statewide disability services referral service which includes a searchable database of services.[73] An OREA search of this database for facilities offering autism services found 57 providers offering some form of autism services. The database indicates which counties each organization serves. Davidson County is served by the highest

**Exhibit 4: Autism Services Providers in Disability Pathfinder**



Source: Tennessee Council on Developmental Disabilities, Vanderbilt Kennedy Center for Excellence in Developmental Disabilities, Tennessee Disability Pathfinder, OREA analysis of Disability Pathfinder autism service providers from http://kc.vanderbilt.edu.

number of organizations (28), followed by Wilson County (25 facilities), and Williamson County (24 facilities). Twenty-nine treatment centers are located in Middle Tennessee, nine in West Tennessee, and 19 in East Tennessee. See Exhibit 4.

The number of centers does not take into account the type and level of services offered by each individual facility. This database is only one source of information on disability services, but may suggest that some children with ASD have greater difficulty acquiring private ASD services.

Policy Considerations

- It is difficult to estimate the cost of expanding Tennessee's existing HCBS Medicaid waiver to specifically include children with autism and/or applying to CMS for an autism-specific HCBS waiver. The cost of such a program would depend upon many factors including eligibility criteria, integration into existing programs, specific services offered, and age limitations. Maryland released a 2010 report analyzing the costs of its autism waiver, which may be viewed at http://www.hilltopinstitute.org/publications/DHMHLTSSChartBook-AutismWaiver-December2010.pdf.[74]
- Requiring insurance companies to cover medically necessary ABA services could add to average health insurance premium costs an estimated one-quarter percent to three percent, based on different studies. The Council for Affordable Health Insurance bases its estimate on "a member and non-member actuaries working group that looked at the definition of autism across all 50 states plus DC — based upon real health insurance pricing with this mandate." The average cost in these estimates depends on estimates of the number of children identified with ASD, to what extent they are insured, and the services they might access.

## Appendix 1: State Statutes Specifically Requiring Insurance Coverage of Autism

| State | Statute Summary |
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| Arizona | Ariz. Rev. Stat. Ann. § 20-826.04, § 20-1057.11, § 20-1402.03 and § 20-1404.03 (2008 Ariz. Sess. Laws, Chap. 4; HB 2847 of 2008)<br>Require policies issued by certain health insurers, beginning July 1, 2009, to provide coverage for the diagnosis and treatment of autism spectrum disorders, with some limitations. Coverage for autism treatment may not be excluded or denied and dollar limits, deductibles and coinsurance cannot be imposed based solely on the diagnosis of an autism spectrum disorder. Coverage for medically necessary behavioral therapy services may not be excluded or denied and is subject to a $50,000 maximum benefit per year for an eligible person up to the age of 9 and a $25,000 maximum benefit per year for an eligible person who is between the ages of 9 and 16 years. |
| Arkansas | 2011 Ark. Acts, Act 196 (HB 1315 of 2011)<br>Requires health benefit plans to provide coverage for the diagnosis and treatment of autism spectrum disorders. Treatment is defined to include applied behavior analysis, pharmacy care, psychiatric care, psychological care, therapeutic care, necessary equipment to provide evidence-based treatment, and any care that is determined by a licensed physician to be medically necessary and evidence-based. Applied behavioral analysis is limited to $50,000 annually and to children under 18 years of age. Coverage is not subject to any limits on the number of visits an individual may make to an autism services provider. The law specifies that on or after January 1, 2014, to the extent that these provisions require benefits that exceed the essential health benefits specified under the federal Patient Protection and Affordable Care Act, the benefits that exceed the essential health benefits shall not be required of a health benefit plan when the plan is offered by a health care insurer in the state through the state medical exchange. |
| California | Cal. Insurance Code § 10144.5<br>Requires every policy of disability insurance that covers hospital, medical, or surgical expenses in the state to provide coverage for the diagnosis and medically necessary treatment of severe mental illnesses, including pervasive developmental disorder or autism, for a person of any age under the same terms and conditions applied to other medical conditions.<br>Cal. Insurance Code § 10144.51 and § 10144.52 (2011 Cal. Stats., Chap. 650; SB 946)<br>Require every health insurance policy to provide coverage for behavioral health treatment for pervasive developmental disorder. The law also specifies that this provision does not require any benefits to be provided that exceed the essential health benefits required by the federal Patient Protection and Affordable Care Act.<br>Cal. Health and Safety Code § 1374.72<br>Requires every health care service plan to provide coverage for the diagnosis and medically necessary treatment of severe mental illness, including pervasive developmental disorder or autism, of a person of any age under the same terms and conditions applied to other medical conditions.<br>Cal. Health and Safety Code § 1374.73 (2011 Cal. Stats., Chap. 650; SB 946)<br>Requires every health care service plan contract that provides hospital, medical or surgical coverage to provide coverage for behavioral health treatment for pervasive developmental disorder or autism. The law specifies that this provision does not require any benefits that exceed the essential health benefits required by the federal Patient Protection and Affordable Care Act. |
| Colorado | Colo. Rev. Stat. § 10-16-104 (1.3)(g), § 10-16-104 (1.4) and § 25.-5-8-107 (a)(IV) (2009 Colo., Sess. Laws, Chap. 391; SB 244 of 2009, Fiscal Note, Commission on Mandated Health Insurance Benefits Review of SB 244)<br>Require that all health benefit plans provide coverage for the assessment, diagnosis and treatment of autism spectrum disorders for a child. Treatment for autism spectrum disorders is defined to include treatments that are medically necessary, appropriate, effective or efficient and shall include evaluation and assessment services; behavior training and management and applied behavior analysis; habilitative or rehabilitative care, including occupational, physical or speech therapy; pharmacy care and medication; psychiatric care; psychological care; and therapeutic care.<br>Colo. Rev. Stat. §10-16-104.5 (1993 Colo., Sess. Laws, Chap. 211, amended by 2009 Colo., Sess. Laws, Chap. 391; SB 244 of 2009)<br>Specified sickness and accident insurance policies providing indemnity for disability due to sickness and specified individual policies that provide coverage for autism shall provide such coverage in the same manner as for any other accident or sickness, other than mental illness, otherwise covered under such policy. |

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| Connecticut | Conn. Gen. Stat. § 38a-514b (2009 Conn. Acts, P.A. 115; SB 301 of 2009, Summary, Fiscal Note; 2011 Conn. Acts, P.A. 11-4, HB 6278 of 2011)<br>Requires specified group health insurance policies to provide coverage for the diagnosis and treatment of autism spectrum disorder. Treatments must be medically necessary and identified and ordered by a licensed physician, psychologist or clinical social worker in accordance with a treatment plan. Treatments may include behavioral therapy, prescription drugs, psychiatric services, psychological services, physical therapy, speech and language pathology services and occupational therapy. Coverage for behavioral therapy may be limited to $50,000 per year for a child who is less than nine years of age, $35,000 for a child who is at least nine years of age and less than 13 years of age, and $25,000 for a child who is at least 13 years of age and less than 15 years of age. The policy may not impose limits on the number of visits to an autism services provider. This law repealed the previous version of § 38a-514b (2008 Conn. Acts, P.A. 132; HB 5696, Fiscal Note), which specified that group health insurance policies must provide coverage for physical, speech and occupational therapy services for the treatment of autism spectrum disorders to the extent such services are a covered benefit for other diseases and conditions.<br>Conn. Gen Stat. § 38a-488b (2008 Conn. Act, P.A. 132; HB 5696, Fiscal Note; 2011 Conn. Acts, P.A. 11-4, HB 6278 of 2011)<br>Requires individual health insurance policies to provide coverage for physical, speech, and occupational therapy services for the treatment of autism spectrum disorder, as defined by the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders (DSM)," to the extent such services are a covered benefit for other diseases and conditions. |
| Florida | Fla. Stat. § 627.6686 and § 641.31098 (2008 Fla. Laws, Chap. 30; SB 2654 of 2008, Bill Analyses)<br>Requires health insurance plans and health maintenance contracts to provide coverage to eligible individuals for well-baby and well-child screening for diagnosing the presence of autism spectrum disorders, treatment of autism spectrum disorders through speech, occupational and physical therapy and applied behavior analysis. Coverage is limited to treatment that is prescribed by the insured's treating physician in accordance with a treatment plan and is limited to $36,000 annual and may not exceed $200,000 in total lifetime benefits. |
| Illinois | Ill. Rev. Stat. ch. 215, § 5/356z.14 (2008 Ill. Laws, P.A. 95-1005, SB 934 of 2008; and 2009 Ill. Laws, P.A. 95-1049, SB 101 of 2008)<br>Requires all individual and group accident and health insurance or managed care plans to provide coverage for the diagnosis and treatment of autism spectrum disorders for individuals less than 21 years of age. Coverage is to include applied behavioral analysis and other treatments with a maximum benefit of $36,000 per year. The law was amended in 2009 by 2009 Ill. Laws, P.A. 95-1049 (SB 101 of 2008) to require insurance coverage for habilitative services for children less than 19 years of age with a congenital, genetic or early acquired disorder, including autism spectrum disorders. Habilitative services includes occupational therapy, physical therapy, speech therapy and other services prescribed by the insured's treating physician pursuant to a treatment plan to enhance the ability of a child to function with a congenital, genetic or early acquired disorder.<br>► For more information, please see Illinois' fact sheet on insurance coverage for autism. |
| Indiana | Ind. Code § 27-8-14.2-1 et seq. and § 27-13-7-14.7 (HB 1122 of 2001; Fiscal Impact Statement)<br>Requires an accident and sickness insurance policy that is issued on a group basis and a group contract with a health maintenance organization to provide coverage for the treatment of a pervasive developmental disorder. Coverage is limited to treatment that is prescribed by the insured's treating physician in accordance with a treatment plan. An insurer may not deny or refuse to issue coverage, or otherwise terminate or restrict coverage on an individual under an insurance policy solely because the individual is diagnosed with a pervasive developmental disorder. An insurer that issues an accident and sickness insurance policy on an individual basis or a health maintenance organization that enters into an individual contract that provides basic health care services must offer to provide coverage for the treatment of a pervasive developmental disorder of an enrollee.<br>► For additional information about the law, please visit the Indiana Resource Center for Autism's webpage. |
| Iowa | Iowa House File 2531 of 2010 (Fiscal Analysis)<br>Requires state employee health care plans to provide coverage for the diagnosis and treatment of autism spectrum disorders for individuals under 21 years of age. Treatment is defined as pharmacy care, psychiatric care, psychological care, rehabilitative care and therapeutic care. The law also establishes a $36,000 annual maximum benefit on coverage for children with autism spectrum disorder. The coverage plan cannot limit the number of visits to an autism service provider for treatment. Coverage must be provided in coordination with requirements established in Iowa Code § 514c.22.<br>Iowa Code § 514c.22 (2005 Iowa Acts, Chap. 91; HF 420 of 2005)<br>Requires specified insurers to provide coverage benefits for treatment of a biologically based mental illness, including pervasive developmental disorders and autistic disorders. |

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| Kansas | Kan. Stat. Ann. § 75-6524 (2010 Kan. Sess. Laws, Chap. 120 ;HB 2160 of 2010; Supplemental Note)<br>Requires state employee health insurance plans to provide coverage for the diagnosis and treatment of autism spectrum disorder for any covered individual up to 19 years old. Covered services are defined to include applied behavioral analysis and evidence-based services. The annual benefit cap for children up to age 7 is $36,000 and for children at least 7 years old and up to age 19, the annual cap is $27,000. The law also requires the state employees' health care commissioner to submit a report to the legislature that includes information on the impact of the mandated coverage for autism spectrum disorder on the state health care benefits program, data on the utilization of coverage and the cost of providing such coverage, and recommendations for whether such coverage should continue.<br><br>Kan. State. Ann. § 40-2,105a (HB 2214 of 2009; HB 2033 of 2001)<br>The law was amended in 2009 by Kan. Sess. Laws, Chap. 136 to require any group health insurance policy, medical service plan, contract, hospital service corporation contract, hospital and medical service corporation contract, fraternal benefit society or health maintenance organization, which provides medical, surgical or hospital expense coverage to include coverage for the diagnosis and treatment of mental illness. The law re-defines mental illness to include any disorder defined in the DSM-IV. |
| Kentucky | 2010 Ky. Acts, Chap. 150; (HB 159 of 2010)<br>Requires large group health benefit plans to provide coverage for the diagnosis and treatment of autism spectrum disorders for individuals between the ages of one through 21 years of age. For individuals between the ages of one through their seventh birthday, the maximum annual benefit amount is $50,000, and the maximum benefit for individuals between the ages of seven through 21 is $1,000 per month. Coverage may not be subject to any limits on the number of visits an individual may make to an autism services provider. Treatment of autism spectrum disorders is defined to include medical care, pharmacy care (if covered by the plan), psychiatric care, psychological care, therapeutic care, applied behavior analysis, and rehabilitative and habilitative care. This law also amends Ky. Rev. Stat. § 304.17A-143 (1998 Ky. Acts, Chap. 106; SB 63 of 1998), to require individual and small group market health benefit plans to provide coverage for pharmacy care (if covered by the plan), psychiatric care, psychological care, applied behavioral analysis, and habilitative care for the treatment of autism spectrum disorders, in addition to the law's existing coverage for therapeutic and rehabilitative care. The law increases the maximum benefit per month from $500 to $1000. Additional definitions related to this law are included in Kentucky Regulations 806 KAR 17:460. The law also amends Ky. Rev. Stat. § 18A.225 to require state employee health benefit plans to provide coverage for the diagnosis and treatment of autism spectrum disorder consistent with the requirement for coverage under large group health benefit plans. |
| Louisiana | La. Rev. Stat. Ann. § 22:1050 (2008 La. Acts, P.A. 648; HB 958 of 2008: Fiscal Note)<br>Requires health insurance policies, including health maintenance organizations, to provide coverage for the diagnosis and treatment of autism spectrum disorders in individuals less than 17 years of age. Coverage is subject to a maximum benefit of $36,000 per year and a lifetime maximum benefit of $140,000. Treatment of autism spectrum disorders is defined to include habilitative or rehabilitative care (including applied behavior analysis), pharmacy, psychiatric, psychological and therapeutic care.<br>2009 House Bill 406 amended the statute (La. Acts, P.A. 419) to exclude individually, underwritten, guaranteed renewable limited benefit health insurance policies from the provisions in this law. |
| Maine | 2010 Me. Laws, Chap. 635 (LD 1198; SB 446 of 2010; Fiscal Note)<br>Requires all individual health insurance policies and contracts, group health insurance policies, and all individual and group health maintenance organization contracts to provide coverage for the diagnosis and treatment of autism spectrum disorders for individuals five years of age and under. Treatment is defined as habilitative or rehabilitative care, applied behavior analysis, counseling services and therapy services, including speech, occupational and physical therapy. The policy or contract may limit coverage for applied behavior analysis to $36,000 per year, and the insurance policy or contract may not include any limits on the number of visits. The law also requires the Department of Professional and Financial Regulation, Bureau of Insurance to review and evaluate the financial and social impact and medical efficacy of this mandated health insurance benefit, and submit a report to the Legislature by February 1, 2015.<br>Me. Rev. Stat. Ann. tit. 24 § 2325-A; tit. 24-A § 2749-C, § 2843 and § 4234-A<br>Requires specified group contracts to provide, at a minimum, benefits for a person receiving medical treatment for specified mental illnesses, including pervasive developmental disorders. Other specified individual and group insurance contracts or policies must make available benefits for the treatment and diagnosis of specified mental illnesses, including pervasive developmental disorder or autism, under terms and conditions that are no less extensive than the benefits provided for medical treatment for physical illnesses. |

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| Maine (continued) | 2009 Me. Acts, Chap. 33 (SB 226 of 2009)<br>Requires the Department of Health and Human Services to amend the rules of reimbursement for the provision of supervisory services by board-certified behavior analysts in the MaineCare programs for home and community benefits for persons with mental retardation or autistic disorders, developmental and behavioral clinical services, day habilitation services for persons with mental retardation, early intervention services, community support benefits for persons with mental retardation or autistic disorders, day treatment services, intermediate care facilities for persons with mental retardation and school-based rehabilitative services. The law also requires the Department of Health and Human Services to pursue amendment to the federally approved Medicaid state plan on a timely basis and, after approval, amend the MaineCare rules to provide for reimbursement of board-certified behavior analysts for supervision only. |
| Massachusetts | 2010 Mass. Acts, Chap. 207 (HB 4935 of 2010)<br>Requires specified individual, group and state employee health plans and health maintenance contracts to provide benefits on a nondiscriminatory basis for the diagnosis and treatment of autism spectrum disorder. Treatment is defined to include habilitative or rehabilitative, pharmacy, psychiatric, psychological and therapeutic care. The health plan may not contain an annual or lifetime dollar or unit of service limitation on coverage for autism which is less than the limitations imposed on coverage for physical conditions. The plan may not limit the number of visits an individual may make to an autism services provider. The law allows for exemptions from providing coverage under certain circumstances.<br>Mass. Gen. Laws Ann. ch. IV § 32A-22 (2008 Mass. Acts, Chap. 256; HB 4423)<br>Requires an individual policy and a group blanket or general policy of accident and sickness insurance or a health maintenance contract that provides hospital and surgical insurance to provide mental health benefits on a nondiscriminatory basis for the diagnosis and treatment of specified biologically-based mental disorders, including autism. Requires the group insurance commission to provide to any active or retired employee of the commonwealth who is insured under the group insurance commission coverage on a nondiscriminatory basis for the diagnosis of treatment of specified biologically-based mental disorders, including autism. |
| Missouri | Missouri House Bill 1311 and House Bill 1341 of 2010 (HB 1311 Fiscal Note)<br>Requires all group health benefit plans to provide coverage for the diagnosis and treatment of autism spectrum disorders. Coverage is limited to medically necessary treatment that is ordered by the insured's treating physician or psychologist, in accordance with a treatment plan. Treatment for autism spectrum disorder is defined to include psychiatric, psychological, habilitative or rehabilitative care, applied behavior analysis, therapeutic care and pharmacy care. Coverage for applied behavior analysis is subject to a maximum benefit of $40,000 per year for individuals through 18 years of age. However, this limit may be exceeded, with approval by the health benefit plan, if the applied behavior analysis services are medically necessary for an individual. The health benefit plan may not place limits on the number of visits an individual makes to an autism service provider. The law requires the department of insurance and other institutions to submit a report to the legislature regarding the implementation of this coverage, including specified costs of this coverage. |
| Montana | Mont. Code Ann. § 33-22-515 (2009 Mont. Laws, Chap. 359, SB 234 of 2009, Fiscal Note)<br>Requires specified disability policies, certificates of insurance and membership contracts to provide coverage for the diagnosis and treatment of autism spectrum disorders for a covered child 18 years of age or younger. Coverage must include habilitative or rehabilitative care, medications, psychiatric or psychological care, therapeutic care and other specified care. Coverage for treatment of autism spectrum disorders may be limited to a maximum benefit for $50,000 per year for a child 8 years of age and younger and to $20,000 per year for a child 9 years of age through 19 years of age.<br>Mont. Code Ann. § 33-22-706<br>Requires a policy or certificate for health insurance or disability insurance to provide a level of benefits for the necessary care and treatment of severe mental illness, including autism, that is no less favorable than that level provided for other physical illness generally. Benefits for treatment of severe mental illness include but are not limited to inpatient services, outpatient services, rehabilitative services, medication and other specified treatments. The law was amended in 2009 by Mont. Laws, Chapter 359 to specify that coverage for a child with autism who is 18 years of age or younger must comply with § 33-22-515. |
| Nevada | Nev. Rev. Stat. § 689A.0435 (2009 Nev. Stats., Chap. 331, AB 162 of 2009, Health and Human Services Fiscal Note \| Public Employees' Benefits Program Fiscal Note)<br>Requires an individual health benefit plan to provide the option of coverage for screening, diagnosis, and treatment of autism spectrum disorders for persons covered by the policy under the age of 18, or if enrolled in high school, until the person reaches the age of 22. Requires health insurance for small employers and group and blank health insurance benefit plans and health care plans issued by a health maintenance organization to provide coverage for screening, diagnosis and treatment of autism spectrum disorders to persons covered by the policy of group health insurance under the age of 18, or if enrolled in high school until the person reaches the age of 22. Treatment of autism spectrum disorders must be identified in a treatment plan and may include medically necessary habilitative or rehabilitative care, prescription care, psychiatric care, psychological care or behavior therapy. |

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| New Hampshire | N.H. Rev. Stat. Ann. § 417-E:2 2010 N.H. Laws, Chap. 363 (House Bill 569 of 2010)<br>Clarifies and defines treatment of pervasive developmental disorder or autism, as required under N.H. Rev. Stat. Ann. § 417-E:1, to include professional services and treatment programs, including applied behavioral analysis, prescribed pharmaceuticals (subject to the terms and conditions of the policy), direct or consultative services provided by specified licensed professionals, and services provided by licensed speech, occupation or physical therapists. The policy, contract or certificate may limit coverage for applied behavior analysis to $36,000 per year for children 0 to 12 years of age, and $27,000 from ages 13 to 21.<br>N.H. Rev. Stat. Ann. § 417-E:1<br>Requires specified insurers that provide benefits for disease or sickness to provide benefits for treatment and diagnosis of certain biologically-based mental illness, including pervasive developmental disorder or autism, under the same terms and conditions and which are no less extensive than coverage provided for any other type of health care for physical illness. |
| New Jersey | N.J. Rev. Stat. § 17:48-6ii, § 17:48A-7ff, § 17:48E-35.33, § 17B:26-2.1cc, § 17B:27-46.1ii, § 17B:27A-7.16, § 17B:27A-19.20, § 26:2J-4.34, § 52:14-17.29p and § 52:14-17.46.6b (2009 N.J. Laws, Chap. 115, AB 2238 of 2009)<br>Require specified health insurance policies and health benefit plans to provide coverage for expenses incurred in screening and diagnosing autism or another developmental disability. When the covered person's primary diagnosis is autism or another developmental disability, coverage must be provided for expenses incurred for medically necessary occupational therapy, physical therapy, and speech therapy, as prescribed through a treatment plan. When the covered person is under 21 years of age and the person's primary diagnosis is autism, coverage must be provided for expenses incurred for medically necessary behavioral interventions based on the principles of applied behavioral analysis and related programs, as prescribed through a treatment plan.<br>N.J. Rev. Stat. § 17:48-6v, § 17:48A-7u, § 17:48E-35.20, § 17B:26-2.1s, § 17B:27-46.1v, § 17B:27A-7.5, § 17B:27A-19.7 and § 26:2J-4.20<br>Require specified insurers that provide hospital or medical expense benefits to provide coverage for biologically-based mental illness, including pervasive developmental disorder or autism, under the same terms and conditions as provided for any other sickness under contract. |
| New Mexico | N.M. Stat. Ann. § 59A-22-49, § 59A-23-7.9, § 59A-46-50 and § 59A-47-45 (2009 N.M. Laws, Chap. 74, SB 39 of 2009, Fiscal Impact Report)<br>Requires specified insurance policies, health care plans, certificates of health insurance or contracts to provide coverage to an eligible individual who is 19 years of age or younger, or an individual who is 22 years of age or younger and is enrolled in high school for well-baby and well-child screening for diagnosing the presence of autism spectrum disorder and the treatment of autism spectrum disorder through speech therapy, occupational therapy, physical therapy and applied behavioral analysis. Coverage is limited to $36,000 annually and shall not exceed $200,000 in total lifetime benefits. |
| New York | N.Y. Insurance Law § 3216, § 3221 and § 4303<br>Require specified policies and contracts that provide coverage for hospital or surgical coverage to not exclude coverage for the screening, diagnosis and treatment of medical conditions otherwise covered by the policy solely because the treatment is provided to diagnose or treat autism spectrum disorder. The law was amended by 2011 N.Y. Laws, Chap. 595 (AB 6305) to also require every policy which provides physician services, medical, major medical or similar comprehensive-type coverage to provide coverage for the screening, diagnosis and treatment of autism spectrum disorder. The law prohibits any limitations on visits that are solely applied to the treatment of autism spectrum disorder. Treatment of autism spectrum disorder is defined to include behavioral health treatments, psychiatric care, psychological care, medical care, therapeutic care and specified pharmacy care. 2011 N.Y. Laws, Chap. 596 (SB 5845) amended these provisions to specify that coverage for applied behavior analysis is subject to a maximum benefit of $45,000 per year. |
| Pennsylvania | Pa. Cons. Stat. tit. 40, § 764h (Pa. Laws, Act 2008-62; HB 1150 of 2008; Mandated Benefits Review by the Pennsylvania Health Care Cost Containment Council; Autism Spectrum Disorders Mandated Benefits Review Panel Report by Abt Associates Inc.; Pennsylvania Department of Public Welfare “Where to Get Help with PA’s Autism Insurance Law” webpage)<br>Requires a health insurance policy or government program to provide coverage for individuals less than 21 years of age for the diagnostic assessment and treatment of autism spectrum disorders. Maximum benefit of $36,000 per year. |
| Rhode Island | R.I. Gen. Laws § 27-20.11-1 et seq. (2011 R.I. Pub. Laws, Chap. 159, HB 5275 and 2011 R.I. Pub. Laws, Chap. 175, SB 107)<br>Require specified contracts and policies to provide coverage for autism spectrum disorder. Benefits include coverage for applied behavior analysis, physical therapy, speech therapy and occupational therapy services for the treatment of autism spectrum disorder and apply until the covered individual reaches age 15. Coverage for applied behavior analysis is limited to $32,000 per year. |

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| South Carolina | S.C. Code Ann. § 38-71-280 (2007 S.C. Acts, Act 65; SB 20 of 2007: Fiscal Impact Statement)<br>Requires a health insurance plan to provide coverage for the treatment of autism spectrum disorders. Coverage is limited to treatment that is prescribed by the insured's treating medical doctor in accordance with a treatment plan. To be eligible for coverage, an individual must be diagnosed with autism spectrum disorder at age eight or younger and be less than 16 years of age. |
| Texas | Tex. Insurance Code § 1355.015 (2007 Tex. Gen. Laws, Chap. 877; HB 1919 of 2007:, Fiscal Note)<br>Requires a health benefit plan to provide coverage for all generally recognized services prescribed in relation to autism spectrum disorder by the enrollee's primary care physician in the treatment plan recommended by the physician. The law defines "generally recognized services" to include applied behavior analysis; speech, occupational and physical therapy; medications or nutritional supplements; and other treatments. This coverage may be subject to annual deductibles, copayments and coinsurance that are consistent with annual deductibles, copayments and coinsurance required for other coverage under the health benefit plan. 2009 Tex. Gen. Laws, Chap. 1107 (House Bill 451) amended the law to specify that a health benefit plan must provide coverage to an enrollee who is diagnosed with autism spectrum disorder from the date of diagnosis until the enrollee completes nine years of age. The law previously required coverage to an enrollee older than two years of age and younger than six years of age. |
| Vermont | Vt. Stat. Ann. Tit. 8 § 4088i (2010 Vt. Acts, Act 127; SB 262 of 2010; Vermont Legislative Joint Fiscal Office Analysis)<br>Requires health insurance plans to provide coverage for the diagnosis and treatment of autism spectrum disorders, including applied behavior analysis for children beginning at 18 months of age and continuing until the child reaches age six or enters first grade, whichever occurs first. Treatment of autism spectrum disorders is defined to include habilitative or rehabilitative care, pharmacy care, psychiatric care, psychological care and therapeutic care. A plan may not limit the number of visits an individual may have with an autism services provider. The law requires specified agencies to evaluate the feasibility and budget impacts of requiring health insurance plans, including Medicaid and the Vermont health access plan, to provide coverage for autism spectrum disorders for children under the age of 18. |
| West Virginia | 2011 W. Va. Act, Chap. 13 (HB 2693 of 2011; Children's Health Insurance Program fiscal note; Department of Health and Human Resources fiscal note; Insurance Commission fiscal note; Public Health Insurance Agency (PEIA) fiscal note)<br>Requires specified health insurers, including the state's Children's Health Insurance Program (CHIP), to provide coverage for the diagnosis and treatment of autism spectrum disorders in individuals from the age of 18 months through 18 years. To be eligible for coverage, the individual must be diagnosed with autism spectrum disorder at age 8 or younger. Coverage includes treatments that are medically necessary and ordered or prescribed by a licensed physician or licensed psychologist, including but not limited to, applied behavioral analysis. The annual maximum benefit for applied behavioral analysis is $30,000 per year for the first three years after treatment commences, and $2,000 per month after three years. |
| Wisconsin | Wis. Stat. § 632.895(12m) and Wis. Stat. § 609.87 (Assembly Bill 75 of 2009; 2009 Wis. Laws, Act 28)<br>Requires specified disability insurance policies and self-insured health plans to provide coverage for treatment for autism spectrum disorder if the treatment is prescribed by a physician, including specified therapies. The statute defines intensive-level and nonintensive-level services. The law was amended in 2010 by Wis. Laws, Act 282 (SB 667) to create Wis. Stat. § 632.895 (12m) (b) 3m, which adds behavior analysts licensed under § 440.312 to the list of professionals qualified to provide intensive-level and nonintensive-level services.<br>Wis. Stat. § 51.01(5a)<br>Defines autism as a developmental disability. Admin. Code, Insurance Commissioner 6.54(3)(a) et seq. specifies that no insurance company may refuse, cancel or deny insurance coverage solely on the basis of the applicant's or insured's physical condition or developmental disability. |

Source: National Conference for State Legislatures, Insurance Coverage for Autism, http://www.ncsl.org, (accessed Feb. 6, 2012).

## Endnotes

[1] Centers for Disease Control, Autism Spectrum Disorders (ASDs) Data and Statistics, http://www.cdc.gov (accessed March 18, 2011).

[2] Autism and Developmental Disabilities Monitoring (ADDM) Network, *Prevalence of the Autism Spectrum Disorders (ASDs) in Multiple Areas of the United States, 2004 and 2006*, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, p. 23, http://www.cdc.gov (accessed Feb. 6, 2012).

[3] Interagency Autism Coordinating Committee, U. S. Department of Health and Human Services, "The 2010 Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research–January 19, 2010," http://www.iacc.hhs.gov (accessed March 16, 2011).

[4] Department of Health and Human Services, *Mental Health: A Report of the Surgeon General*, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institute of Mental Health, 1999, p.164, http://profiles.nlm.nih.gov/ (accessed Feb. 2, 2012).

[5] Sheree L. Boulet, Coleen A. Boyle, Laura A. Schieve, "Health Care Use and Health and Functional Impact of Developmental Disabilities Among U.S. Children, 1997–2005," *Archives of Pediatric and Adolescent Medicine*, 2009, Vol. 163, No. 1, pp. 19–26, Table 2, http://archpedi.ama-assn.org (accessed March 19, 2012).

[6] M. Dawson, L. Mottron, M.A. Gernsbacher, "Learning in autism," in *Learning and Memory: A Comprehensive Reference*, J. H. Byrne (ed.), Amsterdam; Boston: Elsevier, 2008.

[7] Centers for Disease Control, Autism Spectrum Disorders (ASDs) Data and Statistics, http://www.cdc.gov (accessed April 10, 2012).

[8] Harvard School of Public Health, "Autism Has High Costs to U.S. Society," press release, 2006, http://www.hsph.harvard.edu (accessed March 1, 2011).

[9] Autism Spectrum Disorders (ASDs) Data and Statistics, http://www.cdc.gov (accessed Feb. 6, 2012).

[10] Lisa A. Croen, Daniel V. Najjar, G. Thomas Ray, Linda Lotspeich, and Pilar Bernal, "Children With and Without Autism Spectrum Disorders in a Large Group-Model Health Plan," *Pediatrics*, Vol.118, No. 4, Oct. 2006, p. e1203, http://pediatrics.aappublications.org (accessed Feb. 15, 2012).

[11] National Dissemination Center for Children with IDEA, "The Individuals with Disabilities Education Act," http://nichcy.org (accessed Feb. 6, 2012).

[12] Interagency Agreement Among Tennessee Department of Education, Tennessee Department of Children's Services, Tennessee Department of Finance and Administration, Bureau Of Tenncare, and Department of Intellectual and Developmental Disabilities Tennessee Department Of Health, Tennessee Department Of Human Services, Tennessee Department Of Mental Health and Tennessee Department Of Correction, July 1, 2009, p. 4, http://www.tn.gov/education (accessed Feb. 2, 2012).

[13] U. S. Department of Education, Office Of Special Education and Rehabilitative Services, Code of Federal Regulations, Title 34, Subtitle B, Chapter III, Subpart B, § 300.154 (d)(2)(iv)(A), 2011 ed.

[14] Tracey Ray, Director of Data Services, Division of School Readiness and Early Learning, Tennessee Dept. of Education, e-mail, Aug. 24, 2011.

[15] U. S. Department of Education, Office of Special Education Programs, Office of Special Education and Rehabilitative Services, Policy Letter of Clarification, May 10, 2007, http://www2.ed.gov (accessed Feb. 2, 2012).

[16] U.S. Department of Education, Office of Special Education and Rehabilitative Services, "Assistance To States For The Education Of Children With Disabilities," Notice of proposed rulemaking, *Federal Register* 76:188 (Sept. 11, 2011), p. 60310, http://www.gpo.gov (accessed Feb. 12, 2012).

[17] U.S. Department of Health and Human services, Interagency Autism Coordinating Committee, "The 2010 Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research – January 19, 2010,"

Question 4, http://www.iacc.hhs.gov (accessed March 17, 2011).

[18] Zachary Warren, Melissa L. McPheeters, Nila Sathe, Jennifer H. Foss-Feig, Allison Glasser, and Jeremy Veenstra-Vander Weele, “A Systematic Review of Medical Treatments for Children With Autism Spectrum Disorders,” *Pediatrics*, May 2011, Vol. 127, No. 5, published online April 4, 2011, pp. e1312-21. The analysis looked at studies in the Medline, PsycInfo, and ERIC (Education Resources Information Center) databases. Medline and ERIC are federal government databases of the National Library of Medicine and the U. S. Department of Education, respectively. PsycInfo is an American Psychological Association database.

[19] PubMed Health, “Aripiprazole” and “Resperidone,” http://www.ncbi.nlm.nih.gov (accessed June 30, 2011).

[20] U.S. Department of Health and Human services, Interagency Autism Coordinating Committee, “The 2010 Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum Disorder Research – January 19, 2010,” Question 4, http://www.iacc.hhs.gov (accessed March 17, 2011).

[21] Vincent Iannelli, “Risperdal for Autism: Autism Basics,” http://pediatrics.about.com (accessed Feb. 15, 2012).

[22] MedicineNet.com, Annette Gbemudu Ogbru, “risperidone, Risperdal,” http://www.medicinenet.com (accessed Jan. 31, 2012).

[23] U.S. Department of Health and Human Services, *Mental Health: A Report of the Surgeon General, Substance Abuse and Mental Health Services Administration*, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999, p. 164, http://profiles.nlm.nih.gov (accessed Feb. 2, 2012).

[24] U.S. Department of Health and Human services, Interagency Autism Coordinating Committee, “The 2010 Interagency Autism Coordinating Committee Strategic Plan for Autism Spectrum disorder Research – January 19, 2010,” Question 4, http://www.iacc.hhs.gov (accessed March 17, 2011).

[25] Scott M. Myers and Chris Plauché Johnson, “Management of Children With Autism Spectrum Disorders,” Pediatrics, Vol. 120, No. 5, Nov. 2007, pp. 1162–1182, http://pediatrics.aappublications.org (accessed Jan 31, 2012).

[26] United Healthcare, Intensive Behavioral Therapy for the Treatment of Autism Spectrum Disorders, Policy Number: 2011T0202H, Effective Date: Sept. 1, 2011, United HealthCare Services, Inc., 2011, p. 1, https://www.unitedhealthcareonline.com (accessed Feb. 6, 2012).

[27] Zachary Warren, Melissa L. McPheeters, Nila Sathe, Jennifer H. Foss-Feig, Allison Glasser, and Jeremy Veenstra-Vander Weele, “A Systematic Review of Early Intensive Intervention for Autism Spectrum Disorders,” *Pediatrics,* May 2011, Vol. 127, No. 5, published online April 4, 2011, pp. e1303 and e1310.

[28] Lena G. Caesar, “Medicaid School Billing for SLP Services: A Brief Tutorial,” *Contemporary Issues in Communication Science and Disorders*, Vol. 34, Spring 2007, p. 19, http://www.nsslha.org (accessed Feb. 6, 2012).

[29] National Association for Medicaid in Schools, “CMS Policy on Medicaid in Schools, Coverage, Reimbursement, and Time Studies,” NAME Conference, presentation, Oct. 2009, http://www.medicaidforeducation.org (accessed Feb. 6, 2012).

[30] Centers for Medicare and Medicaid Services, “Deficit Reduction Act Important Facts for State Policymakers,” Dec. 11, 2007, https://www.cms.gov (accessed Jan, 31, 2012).

[31] Centers for Medicare and Medicaid Services, CMS Medicaid School-Based Administrative Claiming Guide, May 2003, p. 5, https://www.cms.gov (accessed March 19, 2012).

[32] Holly Christopher, Stellar Therapy Services, e-mail, April 19, 2012.

[33] Little Tennessee Valley Educational Cooperative, www.LTVEC.org (accessed Dec. 1, 2011).

[34] Stellar Services, “TennCare in Schools,” presentation, Annual Special Education Conference, Opryland Hotel, Feb. 25, 2011.

[35] Holly Christopher, Stellar Therapy Services, e-mail, Oct. 14, 2011.

[36] State of Tennessee, The Budget, Fiscal Year 2011-2012, Vol. 2, Base Budget Reductions. p. 18.

[37] Bureau of TennCare, "TENNderCare Connection," http://www.tn.gov/tenncare (accessed Jan. 31, 2012).

[38] Lena G. Caesar, "Medicaid School Billing for SLP Services: A Brief Tutorial," *Contemporary Issues in Communication Science and Disorders*, Vol. 34, Spring 2007, p. 18, http://www.nsslha.org (accessed Feb. 6, 2012).

[39] Interagency Agreement Among Tennessee Department of Education, Tennessee Department of Children's Services, Tennessee Department of Finance and Administration, Bureau Of Tenncare, and Department of Intellectual and Developmental Disabilities Tennessee Department Of Health, Tennessee Department Of Human Services, Tennessee Department Of Mental Health and Tennessee Department Of Correction, July 1, 2009, p. 17, item 12, http://www.tn.gov/education (accessed Feb. 2, 2012).

[40] 42 U.S.C. § 1396d(r)(5).

[41] Lena G. Caesar, "Medicaid School Billing for SLP Services: A Brief Tutorial," *Contemporary Issues in Communication Science and Disorders*, Vol. 34, Spring 2007, p. 18, http://www.nsslha.org (accessed Feb. 6, 2012).

[42] Ibid., p. 19.

[43] CMS Medicaid School Based Administrative Claiming Guide Summary Analysis, Deloitte Consulting, distributed at NAME Convention, Sept. 25–27, 2003.

[44] 42 CFR 433.15(7).

[45] Centers for Medicare and Medicaid Services, CMS Medicaid School-Based Administrative Claiming Guide, May 2003, p. 7, https://www.cms.gov (accessed March 19, 2012).

[46] Tracy Purcell, Bureau of TennCare, e-mail, Sept. 1, 2011.

[47] Judy Womack, Director, Division of Quality Oversight, Bureau of TennCare, e-mail, March 10, 2011.

[48] Tracey Ray, Director of Data Services, Tennessee Department of Education, e-mail, Aug. 24, 2011.

[49] Tracy Purcell, Bureau of TennCare, e-mail, Sept. 1, 2011.

[50] U.S. Governmental Accountability Office, *MEDICAID: States' Efforts to Maximize Federal Reimbursements Highlight Need for Improved Federal Oversight*, Testimony Before the Committee on Finance, U.S. Senate, Kathryn G. Allen, Director, Health Care, p.12, http://www.gao.gov (accessed March 19, 2012).

[51] Ibid.; The Lewin Group, *Mandated Report to Congress: Analysis of Impacts and Issues Relating to Four Medicaid Regulations Prepared for the United States Congress*, under contract to U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, Contract No. HHSM-500-2005-00024I, Sept. 30, 2009, p. 1, http://www.naph.org (accessed March 19, 2012).

[52] Medicaid.gov, Home and Community-Based Services, 1915(c) HCBS Waiver Program Basics, http://www.medicaid.gov (accessed January 31, 2012).

[53] Ibid.

[54] Rules of Tennessee Department of Finance and Administration, Bureau of TennCare, Rule 1200-13-1-.15, pp. 107–108, http://tennessee.gov/sos (accessed Feb. 24, 2012).

[55] Jennifer Hall-Lande, Amy Hewitt, and Charles R. Moseley, *A National Review of Home and Community Based Services (HCBS) for Individuals with Autism Spectrum Disorders*, Policy Research Brief, Research and Training Center on Community Living, Institute on Community Integration, College of Education and Human Development, University of Minnesota, Vol. 21, No. 3, Dec. 2011, p. 5, http://ici.umn.edu (accessed Feb. 15, 2012).

[56] Steve Eiken, Brian Burwell, Lisa Gold, and Kate Sredl, Medicaid HCBS Waiver Expenditures: 2011 Update, Thomson Reuters, October 23, 2011, p. 4, http://www.hcbs.org (accessed Feb. 10, 2012).

[57] Ibid., pp. 5–7.

[58] See Medicaid.gov, "Waivers," http://www.medicaid.gov.

[59] Marc Lambright, Actuarial Cost Estimate:Virginia House Bill No. 303 and Senate Bill No. 464, Oliver Wyman Actuarial Consulting, Jan. 15, 2010, http://www.autismvotes.org (accessed Feb. 3, 2012).

[60] Victoria Craig Bunce and J.P. Wieske, *Health Insurance Mandates in the States 2010*, Council for Affordable Health Insurance, 2010, pp. 4 and 10, http://www.cahi.org (accessed March 19, 2012).

[61] National Conference for State Legislatures, "Insurance Coverage for Autism," Jan. 2012, http://www.ncsl.org (accessed Feb. 6, 2012).

[62] Ibid.

[63] Autism Speaks, "About Us," http://www.autismspeaks.org (accessed Feb. 2, 2012).

[64] Autism Speaks, "Resources and Programs," http://www.autismspeaks.org (accessed Feb. 2, 2012).

[65] Autism Speaks, "Where Can I Find an ATN Location?" http://www.autismspeaks.org (accessed Feb. 2, 2012).

[66] Autism Speaks, "What is the ATN?" http://www.autismspeaks.org (accessed Feb. 2, 2012).

[67] Tennessee Developmental Disabilities Network, http://tennddnetwork.org (accessed Feb. 2, 2012).

[68] Ibid.

[69] Boling Center, "Boling Center Mission and Goals," http://www.uthsc.edu (accessed Feb. 2, 2012).

[70] Vanderbilt Kennedy Center, The Treatment and Research Institute for Autism Spectrum Disorder, http://kc.vanderbilt.edu/triad/ (accessed Feb. 2, 2012).

[71] Tennessee Council on Developmental Disabilities, Vanderbilt Kennedy Center for Excellence in Developmental Disabilities, Tennessee Disability Pathfinder, http://kc.vanderbilt.edu (accessed Feb. 1, 2012).

[72] Ibid.

[73] Ibid.

[74] The Hilltop Institute, *Medicaid LongTerm Services and Supports in Maryland: The Autism Waiver, FY 2006 to FY 2009, A Chart Book*, Dec. 3, 2010, http://www.hilltopinstitute.org (accessed March 19, 2012).

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