

AUTISM SPECTRUM DISORDERS AND MANDATED BENEFITS COVERAGE IN HAWAII

MATTHEW COKE
VELMA KANESHIGE
Research Attorneys

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FOREWORD

This study was prepared in response to House Concurrent Resolution No. 177, S.D. 1 (2012). The Concurrent Resolution requested the Legislative Reference Bureau to study multiple impacts of a state mandate requiring insurers in Hawaii to provide benefits for treatments for autism spectrum disorders.

The Bureau extends its appreciation to the administration and representatives of the Department of Health, Department of Education, Med-QUEST Division, patient advocacy groups, insurers, and health care providers in Hawaii who provided information for this study. The Bureau also acknowledges the helpful assistance of contributing researcher, Taylor Yamauchi, who provided background information and research on autism spectrum disorders. The Bureau also thanks the staff of other states' agencies and institutions that we contacted for information, and all other organizations, agencies, and individuals that shared their time and expertise to assist the Bureau in preparing this study.

Charlotte Carter-Yamauchi
Acting Director

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Chapter 1

INTRODUCTION

This study was prepared in response to House Concurrent Resolution 177, S.D. 1 (2012) (hereafter "Resolution"), requesting the Legislative Reference Bureau to conduct a study on several possible effects of requiring insurance coverage for the diagnosis and treatment of autism spectrum disorders. (See Appendix A for the complete text of the House Concurrent Resolution 177, S.D. 1 (2012).) Specifically, the resolution requests the Bureau to:

- (1) Assess the impact of the Patient Protection and Affordable Care Act (P. L. 111-148) on the proposal in Senate Bill No. 2631, S.D. 2, Regular Session of 2012, to require insurance coverage for the diagnosis and treatment of autism spectrum disorders by accident and health or sickness insurers, mutual benefit societies, and health maintenance organizations;
- (2) Assess the impact that such an autism spectrum disorder coverage mandate would have on programs financed by the State, including but not limited to the Hawaii Employer-Union Health Benefits Trust Fund and QUEST programs;
- (3) Analyze the cost of providing insurance coverage for autism spectrum disorders in Hawaii, based upon actual cost effects experienced in other states that require such coverage, to the extent of available information;
- (4) Report information on the recommended clinical guidelines made by organizations such as the American Academy of Pediatrics, the United States Surgeon General, the National Institute of Mental Health, or the National Research Council for the treatment of autism spectrum disorders; and
- (5) Provide information on autism spectrum disorder treatments for which other states mandate insurance coverage and the extent to which those treatments are required to be covered, including any assessments of the effectiveness of the mandate in identifying and treating patients in those states, to the extent of available information.

Scope and Organization of the Report

In response to the Resolution, Bureau staff attempted to examine various aspects of state-mandated insurance coverage for autism spectrum disorder ("ASD") diagnosis and treatments. The amount of relevant literature available on ASDs, ASD treatments, and insuring ASD patients is enormous. Moreover, recent research into the causes and treatment of ASD reflects a tremendously evolving body of knowledge. Because of the volume of material to review, the amount of research entailed, and the time constraints imposed, no claim is made that the Bureau's examination has been comprehensive. The Bureau, however, has attempted to highlight some of

the major issues that the Legislature may wish to consider in deciding whether to mandate insurance benefits for individuals diagnosed with ASD. In some instances, insufficient information was available to allow for any informed conclusion or observation. These have been noted, and where appropriate, suggestions made for further action if the Legislature deems it necessary or desirable.

With regard to the impacts of the Patient Protection and Affordable Care Act ("PPACA"), Bureau staff attempted to prepare analysis using the latest guidance and information available from the U.S. Department of Health and Human Services. However, there is still a great deal of uncertainty as to how the PPACA will be implemented and administered, and the Department is currently in the process of promulgating regulations in this regard. Therefore, any analysis or conclusions made by this report with respect to the PPACA are subject to further rule-making by the Department.

The Bureau notes that various issues relating to insurance coverage for ASD treatments were addressed in both a report by the 2008 Autism Spectrum Disorders Benefits and Coverage Task Force and the 2009 State Auditor's Study of the Social and Financial Impacts of Mandatory Health Insurance Coverage for the Diagnosis and Treatment of Autism Spectrum Disorders. The reader may wish to review those reports to supplement the information provided here.

This report is organized as follows:

Chapter 1 presents introductory material.

Chapter 2 provides substantial background on autism spectrum disorders, methods for diagnosing and treating ASDs, and existing state resources that are available to persons with ASD. This chapter attempts to address the Resolution's request to report on recommended clinical guidelines for treating ASDs.¹

Chapter 3 attempts to provide an estimate of the pediatric ASD population in Hawaii, to the extent of available information.

Chapter 4 examines some of the general cost impacts of treating ASDs, particularly with regard to the costs of applied behavioral analysis. As noted above, a great deal of study has been devoted to this topic in recent years by a variety of parties. Chapter 4 attempts to distill some of their findings into a few core points about the cost impacts of mandating ASD benefits.

Chapters 5 and 6 attempt to address the Resolution's request to provide information on the cost effects of ASD benefits mandates in other states, as well as specific ASD treatments mandated by other states. (The effectiveness of those treatments is more closely examined in Chapter 2.) Chapter 5 provides cursory information on required ASD benefits in each of the 33 states that have enacted a mandate specific to ASDs and the coverage provided by the federal TRICARE program for military dependents. Chapter 6 provides a look at predicted impacts and actual experiences in selected states that have mandated coverage. States were selected for

¹ Chapter 2 was researched and written by LRB Research Attorney Velma Kaneshige.

INTRODUCTION

review based upon similar characteristics to Hawaii or noteworthy experiences in those states that may be illustrative to the Legislature. In preparing Chapter 6, Bureau staff relied upon numerous fiscal analyses prepared by state agencies and actuarial reports prepared by private entities. Bureau staff also gathered information through direct communications with staff in other states' insurance regulatory authorities and interested groups that work with autism issues in those states. As noted in Chapter 6, most states simply do not have longevity of experience with mandatory ASD benefits coverage, so the statements and information reported here are based upon the limited amount of data that was available.

Chapter 7 attempts to address the impact of the PPACA on an ASD benefit mandate in Hawaii, as specifically proposed in Senate Bill No. 2631, S.D. 2 (2012). This chapter provides background on federal requirements for health insurance plans to offer "essential health benefits" and attempts to analyze the interaction between state-mandated benefits and the PPACA. Chapter 7 also discusses the validity of proposed dollar value limitations on behavioral health treatments in Senate Bill 2631, S.D. 2 (2012), as well as the proposed age limit on mandated ASD treatments.

Chapter 8 attempts to address possible impacts of state-mandated ASD benefits on state-funded insurance programs, specifically, the Hawaii Employer-Union Health Benefits Trust Fund and Hawaii Med-QUEST, to the extent of available information. Further, although it is not a state-funded program, certain possible impacts on the Hawaii Health Connector are also noted in Chapter 8.

Chapter 9 summarizes other possible impacts or aspects of an ASD benefits mandate. Discussed are the adequacy of the behavioral health provider network, licensing and certification for behavior analysts, and recent court decisions that have impacted insurance coverage for ASD treatments in other areas of the country.

Chapter 10 presents a summary of the major conclusions of this report and recommendations for possible further action if the Legislature decides to pursue mandating insurance coverage for the diagnosis and treatment of ASD. Due to the complexity of the issue and the many unknown factors, the Bureau makes no specific recommendations for proposed legislation at this time.

Chapter 2*

AUTISM SPECTRUM DISORDERS AND TREATMENT

Autism Spectrum Disorders Defined

Autism spectrum disorders (ASDs) are currently widely recognized as neurodevelopmental disorders, but the disorders were not commonly known twenty years ago.¹ ASDs are now more common in the United States than pediatric AIDS, juvenile diabetes, and childhood cancer combined.² ASDs are present in every socioeconomic and ethnic group and affect all ages.³

The term "autism spectrum disorder" encompasses a range or spectrum of neurodevelopmental disorders, marked by communication and social impairments and repetitive and stereotyped behaviors.⁴ Despite these characteristic features, however, there is no one behavior that is always typical of an ASD, and the manifestations of the disorder vary across individuals and in an individual over the individual's lifetime.⁵ ASDs are notably heterogeneous with regard to the range of and differences in severity of medical and behavioral symptoms and conditions that appear in individuals.⁶

Autism spectrum disorders include autistic disorder (also known as "classic" autism), Asperger syndrome, and pervasive developmental disorder -- not otherwise specified (PPD-NOS).⁷ The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) classifies autistic disorder, Asperger's disorder (Asperger syndrome) and pervasive developmental disorder -- not otherwise specified, as well as childhood disintegrative disorder and Rett's disorder, as "Pervasive Developmental Disorders."⁸ Although the terms "autism spectrum disorder" and "pervasive developmental disorder" are sometimes used

* This Chapter was researched and written by LRB Research Attorney Velma Kaneshige.

¹ Interagency Autism Coordinating Committee, 2011 Strategic Plan for Autism Spectrum Disorder Research 1 (Jan. 2011), available at http://iacc.hhs.gov/strategic-plan/2011/IACC_2011_Strategic_Plan.pdf.

² *Id.*

³ National Institute of Neurological Disorders and Stroke, Autism Fact Sheet, NIH Pub. No. 09-1877 (Sept. 2009), www.ninds.nih.gov/disorders/autism/detail_autism.htm (last visited Sept. 14, 2012).

⁴ *Id.*

⁵ National Research Council, Committee on Educational Interventions for Children with Autism, Division of Behavioral and Social Sciences and Education, *Educating Children with Autism* 11 (Catherine Lord and James P. McGee, eds. 2001).

⁶ Interagency Autism Coordinating Committee, *supra* note 1, at 4.

⁷ National Institute of Child Health and Human Development, Autism Overview: What We Know 2, NIH Pub. No. 05-5592 (May 2005), www.nichd.nih.gov/publications/pubs/upload/autism_overview_2005.pdf (last visited Sept. 14, 2012).

⁸ American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* 69 (2000). *But see* discussion *infra* regarding the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), which is expected to be released in May 2013.

interchangeably,⁹ certain organizations such as the Centers for Disease Control and Prevention,¹⁰ and researchers define ASDs to include only autistic disorder, Asperger syndrome, and pervasive developmental disorder -- not otherwise specified.¹¹ For the purposes of this study, "autism spectrum disorder" is used.

Autistic disorder, also called childhood autism, Kanner's autism, or early infantile autism,¹² is the most severe form of ASD.¹³ Autistic disorder is characterized by impaired development in social and communication skills and restricted interests and activities.¹⁴ Impaired social behavior may include the impaired use of nonverbal behaviors such as facial expressions and gestures or a failure to develop relationships with peers.¹⁵ Impaired communication may include delayed speech or the lack of speech, with abnormal intonation, rhythm, or rate when speech develops.¹⁶ Restricted, repetitive, and stereotyped interests and behaviors may be shown by resistance to changes such as a change in the environment or stereotyped body movements such as clapping and rocking.¹⁷ A person is diagnosed with autistic disorder if the person displays delayed or abnormal functioning in language used in social communication, social interaction, or imaginative play before age three.¹⁸

Asperger syndrome or Asperger's disorder, as described in the Diagnostic and Statistical Manual of Mental Disorders, is characterized by severely impaired social interaction and restricted interests and behaviors.¹⁹ A person with Asperger's disorder does not show significant delays in speech.²⁰ However, the speech of a person with Asperger's disorder may be unusual as the person may be verbose and preoccupied with certain subjects.²¹

Pervasive developmental disorder -- not otherwise specified, which includes atypical autism, is diagnosed when a person shows severely impaired social development together with impaired communication skills or stereotyped behavior, but the criteria for a specific type of pervasive developmental disorder, schizophrenia, or other specified disorders are not met.²²

⁹ National Institute of Child Health and Human Development, *supra* note 7, at 3.

¹⁰ Centers for Disease Control and Prevention, CDC - Facts, Autism Spectrum Disorders - NCBDDD, <http://www.cdc.gov/NCBDDD/autism/facts.html> (last visited Sept. 16, 2012).

¹¹ See, e.g., Chris Plauche Johnson, et al., Identification and Evaluation of Children with Autism Spectrum Disorders, 120 Pediatrics 1183 (Nov. 2007) (Reaffirmed Sept. 2010); Joseph Piven and Peter Rabins, Autism Spectrum Disorders in Older Adults: Toward Defining a Research Agenda, 59 Journal of the American Geriatrics Society 2151 (Nov. 2011).

¹² Diagnostic and Statistical Manual of Mental Disorders, *supra* note 8, at 70.

¹³ National Institute of Neurological Disorders and Stroke, *supra* note 3.

¹⁴ Diagnostic and Statistical Manual of Mental Disorders, *supra* note 8, at 70.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.* at 71.

¹⁸ *Id.*

¹⁹ *Id.* at 80.

²⁰ *Id.*

²¹ *Id.* at 81.

²² *Id.* at 84.

Rett's disorder is characterized by multiple deficits that follow normal functioning after birth.²³ A child will show normal psychomotor development in the first five months after birth.²⁴ However, between five and thirty months of age, a child may show a loss of hand skills and develop stereotyped hand motions that resemble hand washing or hand-wringing.²⁵ The child later shows a decreased interest in the social environment, although social interaction may later develop.²⁶ Rett's disorder is a rare disorder that is more commonly found in females than in males.²⁷

Childhood disintegrative disorder, also known as dementia infantilis, Heller's syndrome, or disintegrative psychosis,²⁸ is also a rare condition.²⁹ This disorder is characterized by regression in functioning after at least two years of what appears to be normal development.³⁰ Before a child is 10 years old, however, the child will display a significant loss of skills in at least two of the areas of play, motor skills, social skills or adaptive behavior, expressive or receptive language, or bowel or bladder control.³¹

Individuals with ASDs may also have other co-occurring conditions, such as intellectual disability, sleep problems, sensory problems (e.g., overreaction or underreaction to particular smells, sounds, and sights, etc.),³² seizures,³³ and mental disorders such as depression or attention deficit hyperactivity disorder.³⁴ It is not known whether the co-occurring medical conditions, which are also sources of disability, are a primary or secondary part of an ASD.³⁵

Prevalence of ASDs and Cost

The total number of people with ASDs in the United States has not been determined.³⁶ The current estimated prevalence of ASDs for children in the United States is 1 in 88 (at age 8).³⁷

²³ *Id.* at 76.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ Fred R. Volkmar and Lisa A. Wiesner, A Practical Guide to Autism: What Every Parent, Family Member, and Teacher Needs to Know 415 (2009).

²⁸ Diagnostic and Statistical Manual of Mental Disorders, *supra* note 8, at 78.

²⁹ Volkmar and Wiesner, *supra* note 27, at 12.

³⁰ Diagnostic and Statistical Manual of Mental Disorders, *supra* note 8, at 77.

³¹ *Id.*

³² National Institute of Mental Health, "What Are Some Other Conditions that Children with ASD May Have?" in A Parent's Guide to Autism Spectrum Disorder 1, NIH Pub. No. 11-5511 (Revised 2011), available at <http://www.nimh.nih.gov/health/publications/a-parents-guide-to-autism-spectrum-disorder/parent-guide-to-autism.pdf>.

³³ *Id.* at 2.

³⁴ *Id.* at 3.

³⁵ Interagency Autism Coordinating Committee, *supra* note 1, at 4.

³⁶ National Institute of Child Health and Human Development, *supra* note 7, at 4.

³⁷ Centers for Disease Control and Prevention, Prevalence of Autism Spectrum Disorders--Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008, 61 Morbidity and Mortality Weekly Report, Surveillance Summaries 7 (Mar. 30, 2012).

ASDs occur almost five times more in boys (1 in 54) than in girls (1 in 252).³⁸ The 1 in 88 figure is based upon 2008 data from selected sites and is not representative of the entire country.³⁹ However, the 2008 data showed a significant 78% increase in the estimated prevalence of ASDs compared with data for 2002.⁴⁰ More diagnoses of ASDs are being made, but how much of this increase may be attributed to a broader definition of ASDs or better diagnosis efforts is not clear, and a real increase in the number of individuals with ASDs cannot be dismissed.⁴¹

The estimated annual cost of ASDs in the United States ranges from \$35 billion⁴² to \$126 billion.⁴³ It costs about \$3.2 million in direct and indirect costs to care for a person with an ASD over the person's lifetime.⁴⁴ Direct medical and nonmedical costs include the value of goods and services that are used such as drugs, physician and hospital services, and transportation, while indirect costs include the value of lost work time or income and benefits of people with ASDs and their caregivers.⁴⁵ The cost of adult care accounts for the largest lifetime direct cost.⁴⁶

Causes of ASDs

It was once popularly believed that ASDs were caused by "refrigerator mothers" who did not provide their children with enough love.⁴⁷ Some people believe that immunizations may be a cause of ASDs, even though studies have shown no link between the measles-mumps-rubella (MMR) vaccine and ASDs and there is no evidence that children with ASDs in the United States have increased concentrations of mercury or environmental exposures.⁴⁸

The exact cause of ASDs is still undetermined.⁴⁹ It appears that ASDs are largely caused by a variety of genetic factors, although environmental factors also play a part.⁵⁰ Many genetic

³⁸ Centers for Disease Control and Prevention, CDC Features - New Data on Autism Spectrum Disorders, <http://www.cdc.gov/Features/CountingAutism/> (last visited Sept. 14, 2012).

³⁹ Centers for Disease Control and Prevention, Prevalence of Autism Spectrum Disorders--Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008, *supra* note 37, at 3.

⁴⁰ *Id.* at 1.

⁴¹ Centers for Disease Control and Prevention, CDC - Research, Autism Spectrum Disorders - NCBDDD, <http://www.cdc.gov/ncbddd/autism/research.html> (last visited Sept. 14, 2012).

⁴² Michael L. Ganz, The Lifetime Distribution of the Incremental Societal Costs of Autism, 161 *Archives of Pediatrics & Adolescent Medicine* 343, 343 (Apr. 2007).

⁴³ Press Release, Autism Speaks, New Research Finds Annual Cost of Autism Has More Than Tripled to \$126 Billion in the U.S. and Reached £34 Billion in the U.K. (March 28, 2012), <http://www.autismspeaks.org/about-us/press-releases/annual-cost-of-autism-triples> (last visited Sept. 14, 2012).

⁴⁴ Ganz, *supra* note 42, at 348.

⁴⁵ *Id.* at 344.

⁴⁶ *Id.* at 348.

⁴⁷ Laura J. Hall, *Autism Spectrum Disorders: From Theory to Practice* 5-6 (2d ed. 2012).

⁴⁸ Chris Plauche Johnson, et al., Identification and Evaluation of Children with Autism Spectrum Disorders, 120 *Pediatrics* 1183, 1189 (Nov. 2007) (Reaffirmed Sept. 2010).

⁴⁹ *Id.* at 1186.

⁵⁰ *Id.*

abnormalities are involved in ASDs and none are found in all persons with ASDs.⁵¹ The genetic factor is evidenced by the fact, for example, that older ages of fathers and mothers have been linked to an increased risk of having children with ASDs.⁵² A recent study provided new evidence that men who started families at an older age could be at increased risk of having children with ASDs.⁵³ Identical twins have a higher chance of both having an ASD than fraternal twins, and a younger sibling of a person with an ASD has a higher risk of developing an ASD than a child without a sibling with an ASD.⁵⁴ A number of neurogenetic syndromes such as fragile X syndrome are also associated with ASDs.⁵⁵ Fragile X syndrome, a genetic disorder, is the most commonly known genetic cause of ASDs and intellectual disability in males.⁵⁶ Environmental factors may affect or interact with genetic factors that are already present in individuals.⁵⁷ Environmental factors may include drugs or possibly alcohol taken during pregnancy.⁵⁸

Diagnosis of ASDs

There is no cure for an ASD.⁵⁹ Individuals with ASDs can be helped by appropriate therapies, medication, and education to maximize their learning and minimize their symptoms.⁶⁰ Diagnosis and treatment received early in a person's life provide a person with the best possible chance of achieving the person's fullest potential.⁶¹ Regardless of the age at which a person is diagnosed with an ASD, however, the person can still benefit from treatment.⁶²

Diagnosing a child with an ASD frequently involves two stages.⁶³ In the first stage, a child receives developmental screening by a pediatrician, and a child who shows developmental impairment is referred for further evaluation. In the second stage, a team of health professionals evaluates the child and a diagnosis is made.⁶⁴ A diagnosis by age 2 by an experienced professional can be considered very reliable.⁶⁵

⁵¹ Autism Spectrum Disorders: What Every Parent Needs to Know 27 (Alan I. Rosenblatt and Paul S. Carbone, eds. 2012).

⁵² Johnson, et al., *supra* note 48, at 1186.

⁵³ Ewen Callaway, Fathers Bequeath More Mutations As They Age, *Nature News & Comment* (Aug. 22, 2012), <http://www.nature.com/news/fathers-bequeath-more-mutations-as-they-age-1.11247> (last visited Aug. 31, 2012).

⁵⁴ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 27.

⁵⁵ Johnson, et al., *supra* note 48, at 1187.

⁵⁶ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 28.

⁵⁷ Johnson, et al, *supra* note 48, at 1188; Interagency Autism Coordinating Committee, *supra* note 1, at 25.

⁵⁸ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 33.

⁵⁹ National Institute of Child Health and Human Development, *supra* note 7, at 7.

⁶⁰ *Id.* at 8.

⁶¹ *Id.* at 7.

⁶² *Id.*

⁶³ National Institute of Mental Health, "How is ASD Diagnosed?" in *A Parent's Guide to Autism Spectrum Disorder* 1, NIH Pub. No. 11-5511 (Revised 2011), <http://www.nimh.nih.gov/health/publications/a-parents-guide-to-autism-spectrum-disorder/parent-guide-to-autism.pdf>.

⁶⁴ *Id.*

⁶⁵ Centers for Disease Control and Prevention, CDC - Healthcare Providers, Autism Spectrum Disorders - NCBDDD, Screening and Diagnosis for Healthcare Providers, <http://www.cdc.gov/ncbddd/autism/hcp-screening.html> (last visited Sept. 14, 2012).

According to the Centers for Disease Control and Prevention, one-third to one-half of parents of children with ASDs observed a problem with their children before they were 1 year old, and almost 80% to 90% of the parents observed problems by the time their children were twenty-four months old.⁶⁶ Possible "red flags" include the following: the child does not respond to his or her name by the time the child is twelve months old; the child avoids eye contact and wants to be alone; the child does not point at objects to show interest by the time the child is fourteen months old; and the child flaps his or her hands, spins in circles, or rocks his or her body.⁶⁷

The American Academy of Pediatrics recommends addressing developmental concerns at every pediatric preventive care visit during the first five years of a child's life.⁶⁸ In addition, unless there are particular risk factors or concerns, the American Academy of Pediatrics recommends a general developmental screen at a child's nine-, eighteen-, and twenty-four- or thirty-month visits to the pediatrician⁶⁹ and an autism-specific screen at the eighteen- and twenty-four-month visits.⁷⁰ The Hawaii chapter of the American Academy of Pediatrics recommends screening for ASD at eighteen, twenty-four, and thirty-six months.⁷¹ The immediate referral of an infant or toddler to an early intervention program or to special education is recommended if the infant or toddler is suspected of having a delay or being at risk of a delay or an ASD.⁷²

The Individuals with Disabilities Education Act

The Education for All Handicapped Children Act of 1975 (Pub. L. 94-142) first guaranteed children with disabilities the right to receive a free appropriate public education.⁷³ However, a child with an ASD was not eligible to obtain special education services until 1990,⁷⁴ when Congress renamed the Education for All Handicapped Children Act to the Individuals with Disabilities Education Act (IDEA) (Pub. L. 101-476) and included autism as a disability for

⁶⁶ Centers for Disease Control and Prevention, CDC - Signs & Symptoms, Autism Spectrum Disorders - NCBDDD, <http://www.cdc.gov/ncbddd/autism/signs.html> (last visited Sept. 17, 2012).

⁶⁷ *Id.*

⁶⁸ American Academy of Pediatrics, Council on Children with Disabilities, Section on Developmental Behavioral Pediatrics, Bright Futures Steering Committee, and Medical Home Initiatives for Children with Special Needs Project Advisory Committee, Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening, 118 *Pediatrics* 405, 406-407 (July 2006) (Reaffirmed Dec. 2009) (Errata in 118 *Pediatrics* 1808-1809 (Oct. 1, 2006)).

⁶⁹ *Id.* at 409, 414.

⁷⁰ Johnson, et al., *supra* note 48, at 1206.

⁷¹ American Academy of Pediatrics, Hawaii Chapter, Position Paper - Development Surveillance and Screening in the Medical Home (Feb. 9, 2007), http://hawaii.aap.org/pdfs/DevelopmentalScreeningPP_09FEB2007.pdf (last visited Sept. 16, 2012).

⁷² Johnson, et al., *supra* note 48, at 1203.

⁷³ National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, National Assessment of IDEA Overview (July 2011) (NCEE 2011-4026) 2, <http://ies.ed.gov/ncee/pubs/20114026/pdf/20114026.pdf> (last visited Aug. 20, 2012).

⁷⁴ Johnson, et al., *supra* note 48, at 1186.

which services were eligible.⁷⁵ Prior to the IDEA, children had to be identified with conditions such as emotional disturbance, learning disability, mental retardation, or speech impairment to be eligible for services.⁷⁶

Presently, the Individuals with Disabilities Education Improvement Act of 2004 (Pub. L. 108-446), Part C, "Infants and Toddlers with Disabilities,"⁷⁷ provides for a federal grant program through which a state may operate a program of early intervention services for infants and toddlers with disabilities from birth through age 2 years and their families,⁷⁸ while Part B, "Assistance for Education of All Children with Disabilities,"⁷⁹ provides for the education of children ages 3 through 21 or the ages determined by the particular state.⁸⁰ Hawaii provides services for children from ages 3 to 20.⁸¹

Treatments for ASDs

Generally

A recent American Academy of Pediatrics publication succinctly explains the goal of treating people with ASDs:

The main goal of any ASD treatment is to help your child learn the skills he'll need to function in this world. For a child with an ASD, that means helping him gain essential communication and social skills, and eliminating behaviors that are disruptive or unhelpful. It's also important to teach your child how to apply those skills in different situations in ways that are socially appropriate, a process known as *generalization*. In other words, these interventions will help him get along with other children, learn the most he can at school, and master basic daily life skills.

The process won't be easy, and it may take months, even years, for you to see progress, depending on the degree of your child's ASD. But the end goal is this: you want to maximize your child's independence and quality of life and at the same time, alleviate stress on your family.⁸²

The Vanderbilt Evidence-based Practice Center, under contract to the Agency for Healthcare Research and Quality, reviewed evidence on treatments for children ages 2 to 12 with ASDs, including studies published from January 2000 to May 2010. The study found that the research literature on treatments for children with ASDs was highly variable in quality and

⁷⁵ National Center for Education Evaluation and Regional Assistance, *supra* note 73, at 2.

⁷⁶ Johnson, et al., *supra* note 48, at 1186.

⁷⁷ Individuals with Disabilities Education Improvement Act of 2004 §§631-644 (2004).

⁷⁸ National Early Childhood Technical Assistance Center, NECTAC: Early Intervention Program for Infants and Toddlers with Disabilities (Part C of IDEA), <http://www.nectac.org/partc/partc.asp> (last visited Sept. 14, 2012).

⁷⁹ Individuals with Disabilities Education Improvement Act of 2004 §§611-619 (2004).

⁸⁰ E-mail from Administrator, Special Education Section, Department of Education (Sept. 12, 2012, 1:12 p.m.) (on file with author).

⁸¹ *Id.*

⁸² Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 69.

limited and inconclusive in most specific areas. However, the study did conclude that, with regard to the behavioral literature, there was some evidence supporting early and intensive behavioral and developmental intervention, which included the University of California, Los Angeles/Lovaas focused approach and a developmentally focused Early Start Denver Model. However, the study cautioned that:

Not all children receiving such interventions demonstrate rapid gains, with some data suggesting that many children continue to display prominent areas of impairment and that subgroups may account for a majority of change within certain samples. It seems likely based on preliminary evidence that subgroups of children are more amenable to many of the interventions available. These could potentially include groups defined by initial IQ, language and verbal skills as well as severity of ASDs, but there may also be underlying skill differences that may better account for variability. Current evidence is insufficient, however, to adequately identify and target children most likely to benefit from specific interventions.⁸³

Further, while there is research available on treatment for children with ASDs,⁸⁴ little is known about the effectiveness of specific types of treatment for adolescents and adults.⁸⁵ Moreover, there is a lack of studies that compare the outcomes of particular treatments or that evaluate the cost effectiveness of specific treatments.⁸⁶

Although studies have shown that possibly 3% to 25% of children with ASDs may be able to improve so that their conditions no longer meet the diagnostic criteria for ASDs, most children who improve will have other behavioral and developmental symptoms.⁸⁷ A person with an ASD will generally have the disorder throughout the person's lifetime.⁸⁸ Chronic management is often essential.⁸⁹ Moreover, not much is known about the life expectancy or causes of death of adults with ASDs.⁹⁰ One study that focused on the receipt of speech therapy, mental health services, case management, and medical evaluation and assessment showed that once youths with ASDs left high school, there was a sharp decline in their receipt of the services.⁹¹ Many adults with ASDs live with their families, and only a minority of adults with

⁸³ Zachary Warren, et al., *Therapies for Children with Autism Spectrum Disorders* 125-26, Comparative Effectiveness Review No. 26, AHRQ Pub. No. 11-EHCO29-EF (Prepared by the Vanderbilt Evidence-Based Practice Center), Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services (Apr. 2011), available at www.effectivehealthcare.ahrq.gov/autism1.cfm.

⁸⁴ Julie Young, et al., *Autism Spectrum Disorders (ASDs) Services: Final Report on Environmental Scan 2* (Mar. 9, 2010), submitted to Centers for Medicare & Medicaid Services, et al., www.impaqint.com/files/4-content/1-6-publications/1-6-2-project-reports/finalasdreport.pdf.

⁸⁵ *Id.* at 65.

⁸⁶ *Id.* at 66.

⁸⁷ *Autism Spectrum Disorders: What Every Parent Needs to Know*, *supra* note 51, at 6.

⁸⁸ Joseph Piven and Peter Rabins, *Autism Spectrum Disorders in Older Adults: Toward Defining a Research Agenda*, 59 *Journal of the American Geriatrics Society* 2151, 2151 (Nov. 2011).

⁸⁹ Zachary Warren, et al., *A Systematic Review of Early Intensive Intervention for Autism Spectrum Disorders*, 127 *Pediatrics* e1303, e1304 (May 2011).

⁹⁰ Piven and Rabins, *supra* note 88, at 2152.

⁹¹ Paul T. Shattuck, et al., *Post-High School Service Use Among Young Adults with an Autism Spectrum Disorder*, 165 *Archives of Pediatrics & Adolescent Medicine* 141, 142-43 (Feb. 2011).

ASDs are employed.⁹² Further research is needed to provide information about ASDs in individuals over time and about their needs for social, medical, and other services.⁹³

It appears widely accepted that effective treatment for ASDs needs to be tailored to the needs of the specific person.⁹⁴ Perhaps in recognition of this, there do not appear to be clearly recommended clinical guidelines, as such, upon which to report, as envisioned by the Resolution.⁹⁵ While research supports the view that early intensive behavioral therapy can improve cognitive and language skills, there appears to be "no single best treatment for all children with ASD."⁹⁶ However, the National Research Council and the American Academy of Pediatrics have identified certain features of effective early intervention for children with ASDs, which include: providing intervention as soon as a diagnosis of an ASD is seriously considered; involving a family component, which would include parent training; ensuring a low student-to-teacher ratio to allow one-on-one time and instruction in small groups; providing intensive treatment, with active engagement of the child at least 25 hours a week, throughout the year; and incorporating a highly structured environment by using, for example, predictable routine and clear physical boundaries to lessen distractions.⁹⁷

The importance of early intensive treatment was emphasized by a recent study of children between eighteen and thirty months of age who were treated using the Early Start Denver Model (this model is discussed *infra*), which showed significant improvement in the children's diagnostic status, IQ, and adaptive behavior.⁹⁸ It was noted that the parents' use of the strategies at home was probably an important part of the success.⁹⁹

⁹² Piven and Rabins, *supra* note 88, at 2153.

⁹³ *Id.* at 2154.

⁹⁴ See, e.g., National Autism Center, National Standards Report 75 (2009), www.nationalautismcenter.org/pdf/NAC%20Standards%20Report.pdf. ("Treatment selection is complicated and should be made by a team of individuals who can consider the unique needs and history of the individual with Autism Spectrum Disorder (ASD) along with the environments in which he or she lives.")

⁹⁵ While not nationally recognized as clinical guidelines, the National Autism Center's National Standards Project, in a review of the literature relating to educational and behavioral treatments for ASD that existed prior to fall 2007, "identified 11 treatments as Established (i.e., they were established as effective) for individuals with Autism Spectrum Disorders (ASD). Established Treatments are those for which several well-controlled studies have shown the intervention to produce beneficial effects. There is compelling scientific evidence to show these treatments are effective; however, even among Established Treatments, universal improvements cannot be expected to occur for all individuals on the autism spectrum." The following interventions were identified as Established Treatments: antecedent package, behavioral package, comprehensive behavioral treatment for young children, joint attention intervention, modeling, naturalistic teaching strategies, peer training package, pivotal response treatment, schedules, self-management, and story-based intervention package. *Id.* at 43.

⁹⁶ National Institute of Mental Health, "How is ASD Treated?" in A Parent's Guide to Autism Spectrum Disorder 1 NIH Pub. No. 11-5511 (Revised 2011), available at <http://www.nimh.nih.gov/health/publications/a-parents-guide-to-autism-spectrum-disorder/parent-guide-to-autism.pdf>.

⁹⁷ National Research Council, *supra* note 5, at 218-19; Scott M. Myers and Chris Plauche Johnson, Management of Children with Autism Spectrum Disorders, 120 *Pediatrics* 1162, 1163-64 (Nov. 2007) (Reaffirmed Sept. 2010).

⁹⁸ Geraldine Dawson, et al., Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model, 125 *Pediatrics* e17, e18, e22 (Jan. 2010). This study used the Early Start Denver Model with children with autistic disorder or pervasive developmental disorder - not otherwise specified.

⁹⁹ *Id.* at e23.

It is important to recognize that although ASDs treatments have significant differences, the treatments also overlap.¹⁰⁰ For example, behavioral treatments use cognitive or developmental elements such as symbolic play, and the structured teaching of the Treatment and Education of Autistic and Related Communication Handicapped Children program and certain developmental models also include behavioral techniques.¹⁰¹ Moreover, people with ASDs often receive combinations of treatments that possibly include educational, behavioral, and medical therapies as well as other health and complementary treatments.¹⁰² Behavioral interventions may serve as the cornerstone of the treatment for many children.¹⁰³

The following discussion is intended to provide a general idea of the types of treatments that are used with persons with ASDs and is not meant to be exhaustive in scope.

Applied Behavior Analysis

Applied behavior analysis (ABA) is a behavioral approach that emphasizes positive behaviors and discourages negative behaviors.¹⁰⁴ A key concept of ABA is positive reinforcement, i.e., a behavior or response is immediately followed by a consequence or stimulus that results in a higher probability of the behavior or response at a later time.¹⁰⁵ For example, a child who displays a desired behavior may be given a reward for the behavior.¹⁰⁶ The reward is a positive reinforcer if there is an increase in the desired behavior.¹⁰⁷

The effectiveness of this treatment has been documented through fifty years of research.¹⁰⁸ A well-known 1987 report of intensive behavioral treatment with young children with autism by O. Ivar Lovaas revealed that 47% (nine of nineteen children) of the experimental group achieved average or above average IQ scores and passed regular first grade in public schools, compared to 2% of the control group.¹⁰⁹ The 1999 U.S. Surgeon General's Mental Health Report noted that research had shown that applied behavioral methods were effective "in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior."¹¹⁰

¹⁰⁰ Myers and Johnson, *supra* note 97, at 1163.

¹⁰¹ *Id.*

¹⁰² Warren, et al., *supra* note 89, at e1304.

¹⁰³ *Id.*

¹⁰⁴ Centers for Disease Control and Prevention, CDC - Treatment, Autism Spectrum Disorders - NCBDDD, <http://www.cdc.gov/ncbddd/autism/treatment.html> (last visited Sept. 14, 2012).

¹⁰⁵ Hall, *supra* note 47, at 77.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ Myers and Johnson, *supra* note 97, at 1164.

¹⁰⁹ O. Ivar Lovaas, Behavioral Treatment and Normal Educational and Intellectual Functioning in Young Autistic Children, 55 *Journal of Consulting and Clinical Psychology* 3 (1987). A follow-up report published in 1993 showed that eight of the nine members of the experimental group could be described as "normal-functioning." John J. McEachin, et al., Long-Term Outcome for Children with Autism Who Received Early Intensive Behavioral Treatment, 97 *American Journal on Mental Retardation* 359 (1993).

¹¹⁰ 1999 Mental Health: A Report of the Surgeon General 164, <http://137.187.25.243/library/reports/mentalhealth/home.html>.

ABA is widely accepted by health care professionals and is used in schools and clinics.¹¹¹ A recent report on educational and behavioral ASD treatment literature noted that about two-thirds of the treatments determined to be effective were developed exclusively from the behavioral literature, such as ABA and behavioral psychology, and 75% of the remaining one-third represented treatments for which research support came largely from the behavioral literature.¹¹² ABA has been described as having "the most evidence-based support in the scientific literature and ... [as being] currently regarded as one of the most effective interventions for children with ASDs."¹¹³

Discrete Trial Teaching is an ABA therapy frequently used in teaching skills such as following directions and paying attention.¹¹⁴ In Discrete Trial Teaching, an instructor gives a child a request or instruction, called a discriminative stimulus, and if the child responds as requested, the instructor praises the child and may provide the child a reward that the child enjoys. For example, to teach a child to say hello to people, an instructor will explain to the child as well as show the child that when the instructor comes into the room, the child should say hello. The instructor will walk into the room (the antecedent), the child says hello (the behavior), and the instructor praises the child and gives the child a reward (the consequence). If the child does not say hello, the instructor may say hello, a prompt, which the child repeats. The lesson is repeated until the child is able to provide the desired behavior without prompts. This may be done in different settings so that the behavior is generalized.¹¹⁵ The trial is discrete because it is marked by a beginning and end.¹¹⁶

Pivotal Response Training uses the same kind of behavioral principles as Discrete Trial Teaching, but is a more naturalistic approach, i.e., the training is done in the natural environment.¹¹⁷ For example, a child may be taught the concept of the color yellow by walking through a park and showing the child things that are yellow.¹¹⁸ In Pivotal Response Training, children are allowed a choice about the skill to be worked on, the training stimulus to be used, and the consequences, whereas in Discrete Trial Teaching, the therapist determines these factors.¹¹⁹ The child and the therapist also engage in turn-taking in Pivotal Response Training, involving give-and-take interaction.¹²⁰

Verbal Behavior is an ABA treatment that encourages a child to use language to obtain what the child wants.¹²¹ This treatment is directed at teaching a child different ways of using language and encourages the child to use language to discuss things and to make requests.¹²²

¹¹¹ Centers for Disease Control and Prevention, CDC - Treatment, Autism Spectrum Disorders - NCBDDD, *supra* note 104.

¹¹² National Autism Center, National Standards Report, *supra* note 94, at 52.

¹¹³ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 72.

¹¹⁴ *Id.* at 73.

¹¹⁵ *Id.* at 73-74.

¹¹⁶ Hall, *supra* note 47, at 91.

¹¹⁷ Laura Schreibman, The Science and Fiction of Autism 160-61 (2005).

¹¹⁸ *Id.* at 161.

¹¹⁹ *Id.* at 162-63.

¹²⁰ *Id.* at 164.

¹²¹ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 75.

Other ASD Treatments

The Treatment and Education of Autistic and Related Communication Handicapped Children program is a "structured teaching" program that provides a very structured environment in which each child is given educational tasks, generally visually oriented, to complete.¹²³ A child may be provided with a schedule made up of pictures that show the tasks that have to be completed in a session. The child knows what to do after completing one task and is able to proceed at the child's own pace.¹²⁴ This program emphasizes modifying the environment to accommodate the deficits of persons with ASDs and improving the skills of these individuals.¹²⁵

Some treatments are described as developmental models, i.e., based upon developmental theory,¹²⁶ or relationship-focused models. The Early Start Denver Model teaches developmental skills by using play with a parent or teacher.¹²⁷ The Early Start Denver Model combines ABA with relationship-based and developmental approaches and may be used with children as young as twelve months.¹²⁸ This is an intense intervention that may involve as many as 20 to 25 hours of work a week, which may include time working with both parents and child. In a treatment session, a child and a therapist or the child's parent interact in activities with turn-taking and give-and-take. The child's interests are important in determining the activities, and things found in the child's environment are used in the interaction. For example, a child and the therapist may engage in rolling a ball back and forth. Parents are heavily involved in the Early Start Denver Model and are taught to look for moments during the day when they can work with their children.¹²⁹

Floortime, which is based upon the Developmental, Individual-Difference, Relationship-Based model,¹³⁰ emphasizes "socially interactive relationships."¹³¹ Treatment begins at the child's level of development and works the child up through normal developmental milestones. In this approach, an adult works with a child on the floor in a series of twenty to thirty minute sessions during the day. The adult follows the child's lead in activities to encourage positive emotional and social interactions.¹³²

Responsive Teaching, a program designed for children with developmental disabilities younger than 6 years old, focuses on communication, social-emotional development, and

¹²² *Id.*

¹²³ Schreibman, *supra* note 117, at 179.

¹²⁴ *Id.*

¹²⁵ Myers and Johnson, *supra* note 97, at 1164.

¹²⁶ *Id.* at 1164-65.

¹²⁷ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 81.

¹²⁸ Dawson, et al., *supra* note 98, at e18.

¹²⁹ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 82.

¹³⁰ Schreibman, *supra* note 117, at 173. The Developmental, Individual-Difference, Relationship-Based Model is based on the concept that children must achieve certain developmental milestones to develop emotionally and intellectually. Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 76.

¹³¹ Schreibman, *supra* note 117, at 173.

¹³² *Id.* at 174-75.

cognition.¹³³ This treatment encourages development by a child's use of pivotal behaviors, such as exploration, joint attention,¹³⁴ and trust and is designed to be used by parents and caregivers who spend a lot of time interacting with children.¹³⁵ Daily routines are used to encourage pivotal behaviors.¹³⁶

Relationship Development Intervention emphasizes helping parents to develop a relationship with their child with regard to the child's social-emotional development, through guided participation.¹³⁷ This treatment attempts to develop a person's mindfulness, focusing on areas that are often difficult for persons with ASDs, such as ideas and emotions. Parents complete a parent's readiness curriculum and go through a guided participation program, sharing experiences with their children in "social communication interactions." For example, instead of asking a child what the child's favorite food is, a parent may state that the parent's favorite food is hamburger to try to involve the child to share the experience.¹³⁸ An example of a strategy used in Relationship Development Intervention is spotlighting communication by actions such as head nodding or pausing before making a gesture or saying something, so that the child knows that it is important and remembers the event.¹³⁹

The Social Communication, Emotional Regulation, and Transactional Support Model is based on elements from other approaches and focuses on social communication, emotional regulation, and transactional support.¹⁴⁰ This approach is based upon the belief that children learn best from and with other children and is usually used in a school setting by trained special education teachers or speech therapists.¹⁴¹

Other types of treatment include social skills therapy, speech-language therapy, and occupational therapy. Social skills training may include training in skills such as joint attention and symbolic play or pretend play, and teaches children how to respond to other children or adults and how to use different types of social skills.¹⁴² Speech-language therapy is used to address social communication deficits.¹⁴³ Augmentative and alternative communication systems, i.e., systems used to enhance or supplement writing or speech or as an alternative to speech,¹⁴⁴ such as sign language and gestures,¹⁴⁵ are often used. The Picture Exchange Communication System, based on ABA, teaches persons to communicate by exchanging pictures or photographs

¹³³ Hall, *supra* note 47, at 131.

¹³⁴ Joint attention describes the "behavior that involves enjoying an object or event with another person by looking back and forth between the two." Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 11.

¹³⁵ Hall, *supra* note 47, at 131.

¹³⁶ *Id.*

¹³⁷ *Id.* at 134.

¹³⁸ *Id.*

¹³⁹ *Id.* at 135.

¹⁴⁰ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 78-79.

¹⁴¹ *Id.* at 79.

¹⁴² *Id.* at 84.

¹⁴³ Myers and Johnson, *supra* note 97, at 1165.

¹⁴⁴ Hall, *supra* note 47, at 184.

¹⁴⁵ Myers and Johnson, *supra* note 97, at 1165.

for objects.¹⁴⁶ A voice-output communication aid or speech-generating device is another type of augmentative system used with persons with ASDs who lack functional speech or who may have a limited vocabulary or poor articulation.¹⁴⁷ These are portable devices that produce speech that is created from a synthesizer or recorded from people speaking.¹⁴⁸

Occupational therapy is used to assist a person with an ASD to develop academic skills such as writing, as well as skills for caring for oneself, such as personal hygiene and dressing.¹⁴⁹ Sensory integration therapy, which may be used alone or as part of an occupational therapy program,¹⁵⁰ helps a person with an ASD to cope with sensory information such as sights, smells, and sounds.¹⁵¹ This strategy provides a person with an ASD with "controlled sensory experiences," for example, by showing a person colored lights to work on visual function.¹⁵²

Medical Treatment

Persons with ASDs require basic health care the same as persons without disabilities.¹⁵³ They may also have special health care requirements due to conditions such as fragile X syndrome or epilepsy.¹⁵⁴ Although there is no medication that can cure ASDs or treat the main symptoms of ASDs,¹⁵⁵ medication may be used to deal with behaviors associated with ASDs such as aggression, hyperactivity, and irritability.¹⁵⁶ The antipsychotic drugs risperidone and aripiprazole have been approved by the U.S. Food and Drug Administration to address irritability in certain children with ASD.¹⁵⁷ Psychotropic medication is used to treat an estimated 45% of children and adolescents and about 75% of adults with ASDs.¹⁵⁸

Complementary and Alternative Medicine

The National Center for Complementary and Alternative Medicine defines complementary and alternative medicine (CAM) as "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional

¹⁴⁶ Hall, *supra* note 47, at 184.

¹⁴⁷ *Id.* at 187.

¹⁴⁸ *Id.*

¹⁴⁹ Myers and Johnson, *supra* note 97, at 1166.

¹⁵⁰ *Id.*

¹⁵¹ Centers for Disease Control and Prevention, CDC - Treatment, Autism Spectrum Disorders - NCBDDD, *supra* note 104.

¹⁵² Schreibman, *supra* note 117, at 187.

¹⁵³ Myers and Johnson, *supra* note 97, at 1167.

¹⁵⁴ *Id.*

¹⁵⁵ Centers for Disease Control and Prevention, CDC - Treatment, Autism Spectrums Disorders - NCBDDD, *supra* note 104.

¹⁵⁶ Myers and Johnson, *supra* note 97, at 1170.

¹⁵⁷ Centers for Disease Control and Prevention, CDC - Treatment, Autism Spectrum Disorders - NCBDDD, *supra* note 104; Autism Speaks, Medicines for Treating Autism's Core Symptoms/What is Autism?/Treatment, <http://www.autismspeaks.org/what-autism/treatment/medicines-treating-core-symptoms> (last visited Sept. 14, 2012).

¹⁵⁸ Myers and Johnson, *supra* note 97, at 1170.

medicine."¹⁵⁹ CAM treatments may be divided into "biological" (e.g., gastrointestinal treatments and dietary supplement regimens) and "nonbiological" categories (e.g., music therapy, facilitated communication, and dolphin-assisted therapy).¹⁶⁰ Approximately 30% to 90% of children with ASDs have been on CAM treatments to address health issues,¹⁶¹ but there is insufficient scientific evidence regarding the use of most of these treatments.¹⁶² However, research has shown that secretin, a hormone used in diagnosing certain pancreatic and gastrointestinal disorders,¹⁶³ is not effective for treating ASDs.¹⁶⁴ There is also evidence that facilitated communication, involving a trained facilitator who physically supports the hand or arm of a nonverbal person with an ASD while the person uses a computer keyboard or other instrument to spell, may not be a valid treatment for ASD.¹⁶⁵

Family Support

Significantly, the American Academy of Pediatrics has noted that providing support to families with persons with ASDs is an important part of ASDs management.¹⁶⁶ Parents and siblings of persons with ASDs suffer from greater depression and stress than those of persons with other disabilities or persons who are developing typically.¹⁶⁷ Parents of persons with ASDs can be supported, for example, by health care professionals helping them to access available resources and giving emotional support.¹⁶⁸

Literature on ASDs treatments shows that "many children who receive early intensive intervention, across methodologies, will not demonstrate dramatic gains in social, cognitive, adaptive, and educational functioning[,] . . . [and] many children who do show robust gains in certain domains (i.e., cognitive functioning or educational attainment) also continue to display other prominent areas of impairment."¹⁶⁹ However, "although dramatic improvements in standardized scores have been observed in only a subset of children to date, it is important to note that *even small improvements in standardized outcomes may translate into large, meaningful improvements in quality of life for children and their families.*"¹⁷⁰

¹⁵⁹ National Center for Complementary and Alternative Medicine, What is Complementary and Alternative Medicine?, <http://nccam.nih.gov/health/whatiscam> (last visited Sept. 14, 2012).

¹⁶⁰ Myers and Johnson, *supra* note 97, at 1173.

¹⁶¹ Autism Spectrum Disorders: What Every Parent Needs to Know, *supra* note 51, at 139.

¹⁶² Myers and Johnson, *supra* note 97, at 1173.

¹⁶³ Schreibman, *supra* note 117, at 190.

¹⁶⁴ Myers and Johnson, *supra* note 97, at 1173.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 1174.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ Warren, et al., *supra* note 89, at e1309.

¹⁷⁰ *Id.* (emphasis added).

Services Provided in Hawaii for Persons with ASDs

Department of Health

In this State, the Early Intervention Section of the Department of Health provides intensive behavioral support services for children with ASDs from birth up until the child's third birthday, as part of the child's individualized family service plan.¹⁷¹ If a child is eligible to enroll in early intervention services, an individualized family service plan is developed by a team which includes the care coordinator and the child's family. The individualized family service plan includes the child's strengths, challenges, and goals and strategies for reaching the goals. Services may include, among other things, occupational therapy, speech-language therapy, physical therapy, and intensive behavioral support services.¹⁷² A child with an ASD cannot receive intensive behavioral support services unless the child has been determined to be eligible to enroll in early intervention services.¹⁷³ The intensive behavioral support services are generally provided in a child's home or in any other "natural environment" such as a child care program or the home of a child care provider.¹⁷⁴ The Early Intervention Section provides services to infants and toddlers with special needs and their families as required by the IDEA, Part C and chapter 321, part XXVIII, sections 321-351 to 357, Hawaii Revised Statutes, "Infants and Toddlers" and part XXIX, sections 321-361 to 363, Hawaii Revised Statutes, "Statewide Newborn Hearing Screening Program."¹⁷⁵

Adults with ASDs who meet eligibility requirements are provided services by the Developmental Disability Division of the Department of Health through the Medicaid Waiver for Home and Community-Based Services. Services include adult day health programs, pre-employment and employment services, and behavioral consultation services.¹⁷⁶ These services are provided to individuals with moderate to profound adaptive behavior ranges and developmental or intellectual disabilities,¹⁷⁷ as required by chapter 333F, Hawaii Revised Statutes, "Services for Persons with Developmental or Intellectual Disabilities."¹⁷⁸

¹⁷¹ E-mail from Supervisor of Professional Support Services, Early Intervention Section, Department of Health (Aug. 30, 2012, 11:10 a.m.) (on file with author).

¹⁷² *Id.*

¹⁷³ E-mail from Supervisor of Professional Support Services, Early Intervention Section, Department of Health (Sept. 18, 2012, 11:51 a.m.) (on file with author).

¹⁷⁴ E-mail from Supervisor of Professional Support Services, Early Intervention Section, Department of Health, *supra* note 171.

¹⁷⁵ E-mail from Supervisor of Professional Support Services, Early Intervention Section, Department of Health (Sept. 20, 2012, 9:44 a.m.) (on file with author).

¹⁷⁶ E-mail from Chief, Developmental Disabilities Division, Department of Health (Sept. 17, 2012, 1:34 p.m.) (on file with author); e-mail from Medical Director, Developmental Disabilities Division, Department of Health (Aug. 7, 2012, 12:15 p.m.) (on file with author).

¹⁷⁷ E-mail from Chief, Developmental Disabilities Division, Department of Health, *supra* note 176; e-mail from Medical Director, Developmental Disabilities Division, Department of Health, *supra* note 176.

¹⁷⁸ Communication with Chief, Developmental Disabilities Division, Department of Health (Sept. 5, 2012).

Department of Education

Part B of the IDEA requires the Hawaii Department of Education (HIDOE) to provide a free appropriate public education to students eligible to receive special education services, including students with ASDs.¹⁷⁹ State law requires the HIDOE to provide a free appropriate public education to qualified students from ages 3 to 20.¹⁸⁰ Students must be placed in the least restrictive environment and are thus educated with nondisabled students, to the extent appropriate, where access to the general education curriculum is available.¹⁸¹ In December 2011, 27% of students with ASDs were in the general education setting for 80% or more of the school day, a percentage that has been increasing since the 20% figure for students in December 2008.¹⁸²

Each student with an ASD has an individualized education program (IEP) developed by an IEP team that may include, among others, the student's parents, special education or regular education teachers, a HIDOE representative, and whenever appropriate, the student.¹⁸³ The IEPs are reviewed not less than annually and revised, as appropriate.¹⁸⁴ Teachers, with the assistance of district experts as well as contract experts, determine the most effective methodology and interventions to be used with each student.¹⁸⁵ The intensity of a student's program, e.g., the amount of time that is to be spent on particular interventions per day or week, is decided by the IEP team. Instructional interventions used include ABA, communication, and language interventions.¹⁸⁶

The IEP also includes for each student from age 14, or younger if appropriate, a statement of the student's transition service needs under the components of the student's IEP that focuses on the student's courses of study.¹⁸⁷ Beginning no later than the first IEP to be in effect when the student is 16, or younger if appropriate, the IEP includes postsecondary goals based upon age appropriate transition assessments related to education, training, employment, and independent living skills, if appropriate, and the transition services needed to help the student to reach the goals.¹⁸⁸

The HIDOE may place a student in a private school when, for example, an IEP team determines that the public school system would not be able to sufficiently meet the needs of the student and that a private school placement may be able to better provide services to the student, or if the parents of a student initiate a due process complaint under chapter 8-60, Hawaii Administrative Rules, to request that the student be placed in a private school and the hearing

¹⁷⁹ E-mail from Administrator, Special Education Section, Department of Education, *supra* note 80.

¹⁸⁰ §8-60-3, Hawaii Administrative Rules.

¹⁸¹ E-mail from Administrator, Special Education Section, Department of Education, *supra* note 80; §8-60-15, Hawaii Administrative Rules.

¹⁸² E-mail from Administrator, Special Education Section, Department of Education, *supra* note 80.

¹⁸³ §8-60-45(a), Hawaii Administrative Rules.

¹⁸⁴ §8-60-48(b), Hawaii Administrative Rules.

¹⁸⁵ E-mail from Administrator, Special Education Section, Department of Education, *supra* note 80.

¹⁸⁶ *Id.*

¹⁸⁷ §8-60-44(b), Hawaii Administrative Rules.

¹⁸⁸ *Id.*

officer decides in the parents' favor or the parties settle the due process complaint and agree to place the student in a private school.¹⁸⁹ If the HIDEOE places a student in a private school or facility, an IEP is developed for the student before placement.¹⁹⁰ The HIDEOE is responsible for complying with the IDEA even if the student's IEP is implemented by the private school.¹⁹¹ The HIDEOE does not provide services if the parents of a child with an ASD decide to place their child at a private school at their own expense.¹⁹²

Department of Human Services

The Vocational Rehabilitation and Services for the Blind Division of the Department of Human Services assists persons with ASDs to obtain employment by providing services such as training, placement, and transportation. If therapy such as ABA is recommended by a physician as part of the vocational assistance necessary for a person with an ASD to obtain employment, the treatment is provided to the person.¹⁹³

Fifth Edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5)

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) is expected to be released in May 2013. In October 2012, the website for the proposed DSM-5, which was subject to revision, showed that the "Pervasive Developmental Disorder" category had been renamed the "Autism Spectrum Disorder" category and included the former disorders of autistic disorder (autism), Asperger's disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified. As proposed, the autism spectrum disorder was characterized by (1) social/communication deficits and (2) fixated interests and repetitive behaviors.¹⁹⁴ Besides this change from a multicategorical model to a single ASD diagnostic category, other proposed revisions included modifying the age at onset criteria and adding symptoms such as aversions and sensory interests.¹⁹⁵ The proposed DSM-5 criteria are intended to improve the ability to distinguish ASD from other disorders such as intellectual disability, language disorders, anxiety disorders, and attention deficit hyperactivity disorder.¹⁹⁶ The American Psychiatric Association voted on the changes to be made by the DSM-5 in early

¹⁸⁹ Communication with Administrator, Special Education Section, Department of Education (Oct. 8, 2012).

¹⁹⁰ §8-60-49(a), Hawaii Administrative Rules.

¹⁹¹ §8-60-49(c), Hawaii Administrative Rules.

¹⁹² E-mail from Administrator, Special Education Section, Department of Education, *supra* note 80.

¹⁹³ Communication with Administrator, Vocational Rehabilitation and Services for the Blind Division, Department of Human Services (Oct. 11, 2012).

¹⁹⁴ American Psychiatric Association, APA DSM-5, A 05 Autism Spectrum Disorder, <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=94> (last visited Oct. 8, 2012).

¹⁹⁵ Marisela Huerta, et al., Application of DSM-5 Criteria for Autism Spectrum Disorder to Three Samples of Children with DSM-IV Diagnoses of Pervasive Developmental Disorders, 169 *American Journal of Psychiatry* 1056 (Oct. 2012).

¹⁹⁶ *Id.* at 1061.

December 2012. Apparently, there will be a single autism spectrum disorder diagnostic category.¹⁹⁷

There is concern that the revised criteria of the DSM-5 may narrow the definition of pervasive developmental disorders to the extent that a number of individuals diagnosed with ASDs may no longer meet the criteria under the DSM-5.¹⁹⁸ Earlier studies on the proposed DSM-5 criteria had apparently shown that an estimated 45% or more of children diagnosed with ASDs would not qualify under the DSM-5 criteria.¹⁹⁹ However, a recent study using previously collected data showed that "the majority of children with DSM-IV PPD diagnoses" would still be eligible for an ASD diagnosis under the DSM-5²⁰⁰ and noted that earlier studies had looked at different versions of the DSM-5 criteria.²⁰¹ Although there appears to be general consensus that the proposed DSM-5 criteria are narrower and will probably result in fewer diagnoses of ASDs, the true effect of the DSM-5 criteria will not be known until the criteria are actually applied.²⁰²

¹⁹⁷ Elizabeth Lopatto, Psychiatrists Redefine Disorders Including Autism, *Businessweek* (Dec. 2, 2012), <http://www.businessweek.com/news/2012-12-02/psychiatrists-redefine-disorders-including-autism> (last visited Dec. 4, 2012); John Cloud, Redefining Crazy: Changes to the Bible of Psychiatric Disorders, *Time - Health & Family* (Dec. 3, 2012), http://healthland.time.com/2012/12/03/redefining-crazy-the-bible-of-psychiatry-changes/?hpt=hp_t3 (last visited Dec. 4, 2012).

¹⁹⁸ Huerta, *supra* note 195, at 1056.

¹⁹⁹ Benedict Carey, Report Sees Less Impact in New Autism Definition, *The New York Times - Health* (published Oct. 2, 2012) http://www.nytimes.com/2012/10/02/health/report-sees-less-impact-in-new-autism-definition.html?_r=1 (last visited Oct. 4, 2012).

²⁰⁰ Huerta, *supra* note 195, at 1063.

²⁰¹ *Id.* at 1056.

²⁰² Carey, *supra* note 199.

Chapter 3

PREVALENCE OF AUTISM SPECTRUM DISORDERS IN HAWAII

Because Senate Bill 2631, S.D. 2 (2012) addresses mandated insurance coverage for treatments for patients up to age 26, this report will focus on treatment for pediatric and young adult ASD patients.

Although the exact number of individuals in Hawaii with an autism spectrum disorder is not clear, there are several estimates. For the purposes of this study, the estimated number of individuals with autism in Hawaii under age 21 is 1,555. This number is based on information provided to the Bureau by the Hawaii Department of Health Early Intervention Section and the Hawaii Department of Education Special Education Division. In fiscal year 2011, the Early Intervention Section identified 165 children ages 0-3 with ASD.¹ Also, in fiscal year 2011, the Special Education Section of the Department of Education had 1,390 persons ages 3-21 with ASD enrolled in its special education programs.² Combined, these two programs identify 1,555 persons ages 0-21 with an ASD.³

While the Bureau obtained reliable data on persons ages 0-21 with ASD, we were unable to locate reliable information on persons ages 22-26 with ASD.⁴ In addition, the information provided by the Department of Health and the Department of Education only includes persons who are enrolled in those respective programs. Autistic persons who are not served by those state programs, i.e., children enrolled in private schools or children who have not been identified as having an ASD by the Early Intervention Section, would not be included in those totals. Accordingly, it would seem a safe assumption that the number of persons ages 0-26 with ASD in Hawaii who would be affected by the autism coverage mandate envisioned in SB 2631 may be higher than 1,555.

The Autism Society of Hawaii estimates Hawaii's total population of persons with ASD's ages 3-66 to be approximately 1,900.⁵ The Autism Society of Hawaii further notes that the actual number of ASD diagnoses in Hawaii may be higher than 1,900 because their estimate may

¹ Email from administrator, Department of Health, Early Intervention Section (June 7, 2012).

² Email from administrator, Department of Education, Special Education Section (June 15, 2012). This number differs from the number in Table 1 of this report, because it is the number of persons with an ASD enrolled as of December 2011. The information in Table 1 was obtained from a secondary source, and it reflects Hawaii's enrollment in 2010 as reported by that source.

³ In preparing this study, the Bureau contacted the national autism advocacy organization, Autism Speaks, for an estimate of the ASD population in Hawaii. The organization confirmed that estimates of any state's population may vary and suggested that this report base any calculations that it makes on the hard number of ASD diagnoses provided by the State's resource. (June 19, 2012).

⁴ Autism Society of Hawaii notes that it has a growing number of young adults who participate in its programs; however, the organization did not provide an exact number.

⁵ Communication with Executive Director, Autism Society of Hawaii (Oct. 9, 2012).

not take into account diagnoses of ASD among military personnel and their dependents stationed in Hawaii.⁶

Finally, a recent study funded by the U.S. Centers for Disease Control and Prevention estimates the number of children with ASD in the United States to be as high as 1 in 88.⁷ If the CDC's information is accurate, the number of persons in Hawaii with an ASD may be higher than either the Autism Society of Hawaii's estimate or the state program data suggests. When compared to other states, Hawaii ranks 40th among all states in overall population⁸ and 40th in the number of children with ASD enrolled in state special education programs (See Table 1 below).

**Table 1. Children Ages 3-21 with ASD
Enrolled in State Special Education Programs, 2010-2011⁹**

STATE	NO. ENROLLED IN SPECIAL EDUCATION PROGRAMS	STATE	NO. ENROLLED IN SPECIAL EDUCATION PROGRAMS
District of Columbia	423	Kentucky	3,927
Wyoming ¹⁰	465	Utah	3,987
North Dakota	590	Alabama	4,391
Montana	617	Tennessee	5,990
South Dakota	757	Connecticut	6,302
Iowa	765	Missouri	7,297
Alaska	828	Arizona	7,542
Vermont	852	Wisconsin	8,255
Delaware	982	Oregon	8,338
Hawaii ¹¹	1,298	Washington	8,598
West Virginia	1,381	Maryland	8,829
New Mexico	1,545	Georgia	11,306
New Hampshire	1,726	Virginia	11,658
Rhode Island	1,787	Indiana	11,751
Idaho	1,992	North Carolina	12,041
Nebraska	2,085	Massachusetts	12,114

⁶ *Id.*

⁷ See generally Centers for Disease Control and Prevention, Prevalence of Autism Spectrum Disorders--Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008, 61 Morbidity and Mortality Weekly Report, Surveillance Summaries 7 (Mar. 30, 2012). The CDC study used data gathered at 14 sites on the mainland United States that are part of the Autism and Developmental Disabilities Monitoring Network.

⁸ United States Census Bureau, Annual Estimates of the Population of the United States, Regions, States, and Puerto Rico: April 1, 2010, to July 1, 2011, www.census.gov/popest/data/historical/2010s/vintage_2011/state.html.

⁹ Data reflects each state's report to the U.S. Department of Education, pursuant to the Individuals with Disabilities Education Act. Data compiled by Easter Seals, Inc., and is available at http://www.easterseals.com/site/PageServer?pagename=ntlc8_autism_state_profiles.

¹⁰ Data is reported from Wyoming's 2008-2009 IDEA report.

¹¹ This reflects 2010 data. See *supra* note 2 and accompanying text.

PREVALENCE OF AUTISM SPECTRUM DISORDERS IN HAWAII

STATE	NO. ENROLLED IN SPECIAL EDUCATION PROGRAMS	STATE	NO. ENROLLED IN SPECIAL EDUCATION PROGRAMS
Puerto Rico	2,317	New Jersey	13,356
Mississippi	2,356	Minnesota	14,531
Kansas	2,624	Michigan	14,855
Maine	2,646	Ohio	16,411
Arkansas	2,857	Illinois	16,467
Oklahoma	3,062	Florida	19,532
Louisiana	3,517	Pennsylvania	21,083
Nevada	3,668	New York	23,182
Colorado	3,788	Texas	32,897
South Carolina	3,901	California	65,735

Chapter 4

GENERAL COST IMPACTS

General Assumptions About Costs

Autism spectrum disorders are expensive to treat, resulting in both medical and nonmedical costs for patients and their families over the course of a lifetime.¹ It has been predicted that the cost of treating autism is roughly \$3.2 million over the course of an autistic individual's lifetime.² This amount includes both the direct costs of care and treatment, as well as the societal costs of autism such as lost wages and lost productivity for the autistic individual.³ Lost productivity and adult care make up the highest percentage of lifetime costs.⁴

Children and adolescents with ASD have higher levels of medical utilization and costs -- on average four to six times greater -- than children and adolescents without an autism spectrum disorder.⁵ Further, 47% of pediatric patients with ASD have a co-occurring condition, such as hyperactivity disorder or attention deficit disorder, that also requires medical care.⁶ Medical expenses for these children may be up to 2.7 times more expensive than for children with ASD alone.⁷

Nevertheless, it is difficult to predict the exact cost of treating individuals with ASD over the course of a lifetime because of the wide variations in both the levels of severity of the illnesses and the responses to treatment.⁸ As numerous providers, clinicians, and advocacy groups have pointed out, each patient is different and the intensity and type of treatment needed to be effective varies from patient to patient.⁹

Despite individual variations, research suggests that some general assumptions may be made about treatment costs for a population of patients with ASD. For individuals between ages 3 and 7, direct medical costs may be high.¹⁰ These direct medical costs may include physician

¹ Michael L. Ganz, The Lifetime Distribution of the Incremental Societal Costs of Autism, 161 Archives of Pediatric & Adolescent Medicine 343 (Apr. 2007).

² *Id.* at 348.

³ *Id.* at 345.

⁴ *Id.* at 348.

⁵ Tom T. Shimbukuro, et al., Medical Expenditures for Children with an Autism Spectrum Disorder in a Privately Insured Population, J. Autism Dev. Disord., 38: 546-552 (2008).

⁶ Peacock, G., et al. Autism Spectrum Disorders and Health Care Expenditures: The Effects of Co-Occurring Conditions. 33(1) J. Dev. Behav. Pediatr. 2-8 (2012).

⁷ *Id.*

⁸ Interview with representative, Autism Speaks (Jul. 11, 2012); interview with representative, Hawaii Association for Behavioral Analysis (Sept. 14, 2012); telephone communication with Executive Director, Autism Society of Hawaii (Sept. 26, 2012); telephone communication with administrator, Trumpet Behavioral Health (Oct. 16, 2012); telephone communication with administrator, Hawaii Department of Health, Developmental Disabilities Division (Nov. 1, 2012).

⁹ *Id.*

¹⁰ Ganz *supra* note 1 at 345.

services, drugs, and behavioral treatments. According to one study, these costs may average approximately \$35,000 per year, and a large percentage of that cost may be attributable to behavioral treatments, such as ABA (approximately \$32,000 per year).¹¹ However, direct medical costs appear to decline significantly in following years, averaging around \$6,000 per year for ages 8-12, \$5,000 per year for ages 13-17, and \$2,900 per year for ages 18-22.¹² Between ages 23-27, direct medical costs for an ASD patient appear to average around \$1,500 each year.¹³ Behavioral treatments, while still making up the bulk of medical costs for ASD patients in early childhood, appear to decline proportionately in each year.¹⁴

This pattern in direct medical costs for treating ASD patients seems to reflect assertions in the medical community that, in general, intensive early treatment for children with autism spectrum disorders may result in a more stable condition as the child ages, requiring less treatment.¹⁵ In addition, many of the states that have adopted ASD treatment mandates impose declining annual dollar value limits on coverage, and this may reflect the trend towards providing more intensive treatment in a child's early years and seeing the need for such intense treatments decline into the child's adolescent and teenage years.¹⁶

In examining an entire population of ASD patients, it is difficult to predict the number of individuals within that population that will use the greatest number of treatment services or incur the greatest costs for care. One recent Pennsylvania study on the impact of autism legislation on service use found "no clear trend on expenditures for behavioral health services for children with ASD who incurred the greatest service costs" in that state.¹⁷ Between 2006 and 2010, children with total expenditures for ASD in excess of \$36,000 per year ranged from 7.1% to 8.4% of the total population.¹⁸ The Pennsylvania study also reported the mean cost of behavioral health services and medications for children with ASD in 2009-2010 to be \$14,316.¹⁹

While predictions of the impact of ASD benefits mandates on health care expenditures and insurance premiums differ, they do agree on one point -- overall costs will increase. One recent national analysis of autism coverage benefits suggested that an increase in annual healthcare expenditures for ASD would result in "relatively small increases" to insurance premiums, even considering a significant increase in the prevalence of ASD diagnoses.²⁰ The study suggested that, given current ASD prevalence and health care expenditures, an ASD benefits mandate would result in premium increases of approximately 1.0%, "with a lower bound

¹¹ Ganz *supra* note 1 at 345, 346. Note that the costs reported by the Ganz study reflect 2003 dollars.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ See Ganz *supra* note 1; telephone communication with administrator, Hawaii Department of Health, Developmental Disabilities Division (Nov. 1, 2012.)

¹⁶ See Chapter 5 of this report for information on each state's required ASD benefits limits.

¹⁷ Bradley D. Stein, et al., Impact of a Private Health Insurance Mandate on Public Sector Autism Service Use in Pennsylvania, 51:8 J. Am. Academy of Child & Adolescent Psych. (August 2012), at 773.

¹⁸ *Id.* ("Those with total expenditures in excess of \$36,000, were 7.1% in 2006-2007, with 11.0% in 2007-2008, with 10.5% in 2008-2009, and with 8.4% in 2009-2010.")

¹⁹ *Id.* at 774.

²⁰ James N. Boudier, et al. Brief Report: Quantifying the Impact of Autism Coverage on Private Insurance Premiums. J. Autism Dev. Disord. (June 2009): 39(3) 953, 956.

of 0.19% and an upper bound of 2.31%."²¹ Another more conservative analysis in 2009, when many states first began to consider ASD benefit mandates, suggested cost increases of approximately 1% annually, but caution that this may increase up to approximately 3% as the prevalence of ASD diagnoses and the demand for treatments increases.²²

Costs vs. Benefits

Although the costs of treating an individual during childhood may be high, there is evidence to suggest that effectively treating ASD patients in early childhood may yield multiple benefits over the course of the individual's lifetime.²³ These benefits include direct savings from reduced medical care costs as well as indirect benefits such as increased wages for individuals who are able to work.²⁴ Benefits also include reduced costs for care and treatment during adulthood.²⁵ Indirect benefits also include reduced financial strain on the families of ASD patients who may often reduce work hours to care for children with ASD or drain family savings to pay for treatments.²⁶ One cost-benefits analysis suggests that the costs of providing effective early behavioral treatments to ASD patients may result in millions of dollars in long-term cost savings.²⁷ Indeed, this position that diagnosis and intervention for ASD patients may yield long-term benefits has begun to be echoed in the courts. In a recent case challenging a state's Medicaid agency's denial of coverage for ABA, a federal court found that paying for the cost of ABA for autistic children would save public funds by reducing the publicly funded social services that would ultimately be used by the autistic individual for support and medical interventions.²⁸

Evidence also suggests that early behavioral intervention for young children with ASD may result in significant savings in special education services during the course of a student's remaining years in school following the early intervention.²⁹ Currently, the Hawaii Department of Education budgets approximately \$41 million each year to contract for services to provide ABA and other behavioral interventions to special needs students who have autism spectrum

²¹ *Id.*

²² Council for Affordable Health Insurance, *The Growing Trend Toward Mandating Autism Coverage*, Issues & Answers No. 152 (Mar. 2009), http://www.cahi.org/cahi_contents/resources/pdf/n152AutismTrend.pdf.

²³ Betsy W. Swope, et al., *Funding Behavior-Analytic Autism Interventions: Who Pays?* Speaker's Journal, Volume 8.7, Pennsylvania House of Representatives (Fall 2008).

²⁴ *Id.*

²⁵ *Id.* at 63. See also Ganz, *supra* note 1.

²⁶ See Swope, *supra* note 23, at 60.

²⁷ John W. Jacobson, et al. *Cost-Benefit Estimates for Early Intensive Behavioral Intervention for Young Children with Autism - General Model and Single State Case*, *Behav. Intervent.*, 13, 201-206, 213 (1998). (Estimating that at \$32,820 initial annual cost, early behavioral interventions result in cost-benefits savings up to \$282,689 to age 22, and up to \$2,816,535 for persons up to age 55, when adjusted for inflation.)

²⁸ *K.G. ex rel. Garrido v. Dudek*, 864 F. Supp. 2d 1314 (S.D. Fla. 2012).

²⁹ Gregory S. Chasson, et al., *Cost Comparison of Early Intensive Behavioral Intervention and Special Education for Children with Autism*, 16 *J. Child Fam. Stud.* 401 (2007). (Comparing the costs of eighteen years of special education for a child with ASD to the costs associated with an early intensive behavioral intervention program, the study estimated savings of approximately \$200,000 per child across eighteen years of education.) See generally Melissa Stuart, *Autism Insurance Reform: A Comparison of State Initiatives*, 8 *Ind. Health L. Rev.* 497 (2011).

disorders.³⁰ Therefore, another possible benefit of insurance coverage for ASD treatments may be cost savings for the Department of Education.

Costs in Hawaii -- Information to Consider

Understandably, there is considerable concern over the cost of an ASD benefits mandate in Hawaii. While difficult to predict an exact cost, it may be assumed that claims costs to insurers and premium costs to members will increase as ASD patients seek access to covered services. By way of illustration, roughly 90% of Hawaii's insured population are covered by two major health insurers in the State. One major insurer reported to the Bureau that it covered approximately 530 members under age 21 in 2011 who are diagnosed with ASD.³¹ Another major insurer reported to the Bureau that it currently insures approximately 360 members with an ASD diagnosis. This information suggests that a significant number of the children who are identified by the Hawaii Department of Health and Department of Education as having ASD may not be diagnosed by a physician, covered by health insurance, or receiving services for ASD that are reimbursed by insurance. If any of these possibilities are indeed the case, mandated coverage for ASD services may result in an increase in persons who seek treatment for ASD. However, despite a possible increase in utilization, evidence suggests that not all ASD patients would make use of the maximum annual benefit, such as the \$50,000 per year limit specified in SB 2631,³² in every year that they are eligible for treatment.³³ For example, a report to the Maine Legislature observed that cost estimates in that state do not assume that all autistic children will use ABA treatments because not all children with ASD are medically diagnosed and not all autistic children are good candidates for ABA therapy. The Maine report estimates that approximately 30% of autistic children "who would benefit from ABA therapy" in that state, would access it.³⁴ Similarly, provider data in Minnesota indicates that approximately only 20% of ASD-diagnosed 3- to 6-year-olds use ABA.³⁵

This also may be a reflection of the reality that the level of severity of the ASD and the intensity and type of treatment that will be effective varies widely. Indeed, as one insurer in Hawaii noted, early screening and identification of ASD is critical, but the focus on utilization or coverage of ABA treatments should not overshadow other treatment modalities for ASD.³⁶

³⁰ Telephone communication with administrator, Special Education Section, Department of Education (June 19, 2012).

³¹ This insurer reported to the Bureau that it paid approximately \$240,000 in ASD-related claims in 2011. These claims included physician office visits, psychotherapy office visits, speech and hearing evaluation, physical therapy evaluation, and occupational therapy evaluation.

³² See Chapter 7 for a full discussion of Senate Bill 2631, SD2 (2012) and its requirements for ASD benefits coverage.

³³ See notes 10-19, *supra*, and accompanying text.

³⁴ Report to the Joint Standing Committee on Insurance and Financial Services of the 124th Maine Legislature, Maine Department of Professional and Financial Regulation, Bureau of Insurance (Dec. 2009, corrected Jan. 14, 2010), at 23, 39.

³⁵ See Actuarial Cost Estimate: Hawaii Senate Bill 2631 S.D. 1, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 2, 2012), at 14, citing discussion with Dr. Eric Larsson, Executive Director, Clinical Services, The Lovaas Institute for Early Intervention (Feb. 2009).

³⁶ Interview with representative of Kaiser Permanente (Sept. 13, 2012).

Predictions of costs of an ASD benefits mandate in Hawaii have varied widely. A 2009 report by the Office of the Auditor reported that insurers in Hawaii expected "significant increases in the costs of treatment."³⁷ The Auditor calculated possible costs to health insurers for reimbursing policy holders to be over \$100 million per year.³⁸ However, the advocacy organization, Autism Speaks, commissioned the preparation of an actuarial cost estimate of SB 2631 that predicted an increase in premiums, attributable largely to ABA benefits covered, ranging from 0.09% to 0.35% in the first year to 0.26% to 0.53% per member over the long term.³⁹ In comparison, experiences in other states that have mandated coverage for ASD benefits vary, or are incomplete due to a scarcity of claims data. (See Chapter 6 of this report for a discussion of other states' experiences.)

Because ABA and other behavioral treatments appear to make up a significant share of the overall costs of treating an ASD patient, it may be instructive to look to ABA rates and utilization in Hawaii to help predict increased costs of mandating insurance coverage for these services. TRICARE is the health insurer for dependents of United States military personnel, and it offers coverage for ABA treatments for patients with ASD.⁴⁰ TRICARE's reimbursement rates for ABA treatment in Hawaii may be used as an example of a "market rate" for these services for the purposes of evaluating costs.⁴¹ TRICARE's current reimbursement for services by a board-certified behavior analyst ("BCBA") is \$125 per hour.⁴² Board certified assistant behavior analysts ("BCaBA") are also reimbursed at \$125 per hour for ABA homecare training.⁴³ Non-certified tutors (also referred to as "line therapists"), who work at the direction and supervision of a BCBA, are reimbursed at \$50 per hour.⁴⁴ The intensity of treatment varies among children with an ASD depending upon the severity of the disorder, and 20-40 hours per week of early intensive ABA treatment is not uncommon.⁴⁵ More severe cases of ASD may require even more

³⁷ Study of the Social and Financial Impacts of Mandatory Health Insurance Coverage for the Diagnosis and Treatment of Autism Spectrum Disorders, Office of the Auditor, Report N. 09-09 (July 2009), at 20.

³⁸ *Id.* at 21. This amount was calculated using the \$75,000 maximum annual benefit required by Senate Bill No. 2532, S.D. 1 (2008). The reader should note that the bill analyzed in Chapter 7 of this report includes a lower annual cap of \$50,000 on ABA benefits, subject to a \$300,000 lifetime maximum.

³⁹ Actuarial Cost Estimate: Hawaii Senate Bill 2631 S.D.1, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 2, 2012), at 1, 2. The Wyman firm has prepared actuarial analyses of ASD benefits coverage in many states that have recently considered mandating such coverage. It should be noted that Wyman's actuarial analysis for Hawaii appears to base assumptions on an ASD prevalence rate that is between 1 in 110 and 1 in 150. This ASD prevalence would be less than the Centers for Disease Control and Prevention's most recent estimated prevalence of 1 in 88. It is not clear how Wyman's analysis would change with the higher ASD prevalence rate. *Supra* at 10-12.

⁴⁰ See Chapter 5, notes 68-71 and accompanying text for a discussion of TRICARE.

⁴¹ TriWest notes that its reimbursement rates may be lower if there is a contractual discount.

⁴² Communication with representative of Hawaii Association for Behavioral Analysis (Sept. 14, 2012). *See also* TriWest Procedure Code Pricing: Hawaii, Procedure Code 99199, <http://www.triwest.com/provider/procedurepricing/Default.aspx>.

⁴³ Communication with representative of Hawaii Association for Behavioral Analysis (Sept. 14, 2012). *See also* TriWest Procedure Code Pricing: Hawaii, Procedure Code S5108, <http://www.triwest.com/provider/procedurepricing/Default.aspx>.

⁴⁴ Communication with representative of Hawaii Association for Behavioral Analysis (Sept. 14, 2012). *See also* TriWest Procedure Code Pricing: Hawaii, Procedure Code H2019, <http://www.triwest.com/provider/procedurepricing/Default.aspx>.

⁴⁵ *See* Actuarial Cost Estimate: Hawaii Senate Bill 2631 S.D. 1, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 2, 2012), at 15.

hours per week of treatment.⁴⁶ A common practice is for ABA providers to submit claims to TRICARE for up to 4 hours per month of services by a supervisory BCBA in conjunction with up to 15 hours per week of intensive hands-on treatment provided by a tutor who is supervised by the BCBA. This model of delivery of services fits within TRICARE's annual coverage limitations, but in many cases, patients continue to need additional hours⁴⁷ of treatment that may exceed TRICARE's annual coverage limit.⁴⁸

Given the difficulty of accurately predicting cost increases, consideration may be given to obtaining an independent actuarial analysis of an ASD benefits mandate in Hawaii that would apply statistical modeling to provide information specific to the ASD population and prevalence rate, provider networks, and health care market in Hawaii. Also, considering that ABA can be a major cost driver for ASD treatment, any analysis of cost impacts in Hawaii should specifically take into account the cost and use of ABA in Hawaii. Ultimately such an analysis may prove to be the best predictor of the effects of a mandate in Hawaii's market.

⁴⁶ Interview with representative of Autism Speaks (July 11, 2012).

⁴⁷ See Behavior Analyst Certification Board Guidelines for Health Plan Coverage of Applied Behavioral Analysis Treatment for Autism Spectrum Disorder (2012), at 23, http://www.bacb.com/Downloadfiles/ABA_Guidelines_for_ASD.pdf.

("If the goal of treatment is to bring the client's functioning to levels typical for that chronological age or maximize independence in multiple areas (e.g., cognitive, social, adaptive)...

— Comprehensive ABA requires intensive treatment, defined as 26-40 hours per week of direct treatment with adjustments based on individual client needs and response to treatment.

— Treatment hours are most commonly in the range of 26-30 hours per week for children under 3 years of age and 30-40 hours per week for children over 3 years of age.

— Treatment hours do not include time spent with other professionals or family members specifically trained to extend and amplify the benefits of treatment.")

⁴⁸ Communication with representative of Hawaii Association for Behavioral Analysis (Sept. 14, 2012). See also Chapter 5 of this study for a more complete description of TRICARE coverage for ABA.

Chapter 5

MANDATED AUTISM SPECTRUM DISORDER BENEFITS IN OTHER STATES

Senate Bill No. 2631, S.D. 2 (2012)

In evaluating a proposal for health insurers in Hawaii to cover autism spectrum disorder ("ASD") treatments, it is important to place Hawaii's proposal in context with ASD benefits mandates in other states. Overall, Hawaii's proposed mandate reflects many provisions found in the mandates of other states.

In general, S.B. No. 2631, S.D. 2 (2012) if enacted, would require insurers in Hawaii to cover screening, diagnosis, and treatment for autism spectrum disorders, including Asperger's disorder and pervasive developmental disorder, for persons under age 26. The treatments to be covered include behavioral health treatment, pharmacy care, psychiatric care, psychological care, and therapeutic care. Applied behavior analysis ("ABA") is specifically included as a type of behavioral health treatment to be covered. In addition, coverage for behavioral health treatment is limited to a maximum of \$50,000 per year, subject to a \$300,000 lifetime limit.¹

State-by-State

To date, thirty-three other states have passed laws that require insurers to either cover treatments for ASD or offer coverage for ASD.² Although specific terms in the mandate statutes vary from state-to-state, almost all states' ASD benefits mandates include the following among the covered treatments: pharmacy care, psychological care, therapeutic care, psychiatric care, habilitative or rehabilitative care, or behavioral health treatments. Most states appear to limit coverage to treatments that are deemed medically necessary by a treating physician or are prescribed according to a physician's treatment plan. Despite differences in terminology, all of these states³ require ASD coverage to include some level of coverage for ABA.⁴ However, twenty-seven states impose an annual dollar value limit on the amount of ASD treatments that insurers are required to cover. Of these, sixteen states impose an annual dollar limit on covered ABA only, and eleven states impose an annual dollar value limit for all ASD treatments combined, including ABA. Also, of the states with laws that mandate an annual dollar value limit on coverage, nine states provide for coverage limits that vary with the age of the

¹ See Chapter 7 for a more detailed discussion of SB 2631.

² Nevada and Alabama require insurers to *offer* coverage for ASD as an additional benefit or rider, but do not mandate coverage.

³ Ten states include ABA in the definition of "behavioral" treatments, 11 states include ABA in their definition of "habilitative or rehabilitative" treatment; and 12 states include it as a "treatment," "service," "benefit," or "coverage" for ASD.

⁴ See Chapter 2 of this report for a discussion of ABA.

beneficiary: specifically, a higher coverage limit for younger children and a lower coverage limit for older children and teenagers.

For the most part, state mandates for ASD benefits coverage are a recent development. As a result, there is not a great deal of complete information on the financial impacts of the mandates. For example, nineteen states' mandates either took effect or apply to health insurance plans issued in 2011 or later.⁵ Thirteen states' mandates took effect in 2008, 2009, or 2010, and one state, Indiana enacted its mandate in 2001. Although many states have reported effects from the first one or two years following enactment, there is no long-term data available.

Table 2, which follows, offers a snapshot of each state that mandates insurance benefits specifically for persons with an autism spectrum disorder.

Table 2. State-by-State Autism Spectrum Disorder Benefits Mandates

Note: The reader may also wish to review information on each state's mandate compiled by the National Conference of State Legislatures. See www.ncsl.org/issues-research/health/autism-and-insurance-coverage-state-laws.aspx.

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Alabama ⁶	Screening, diagnosis, and treatment for children age 9 and under; apply to plans offered by employers with at least 51 employees for 50% of working days in the previous year.	Yes, up to \$36,000 per year.	Oct. 31, 2012.	Requires insurance plans to <i>offer</i> coverage only, does not <i>require</i> coverage.
Alaska ⁷	Diagnosis and treatment, limited to persons under 21 years of age.	Yes, no dollar value limit. No limits on the number of visits to a provider.	Jan. 1, 2013.	Exempts insurer providing small group coverage to employer with 20 or fewer employees. Allows small employer plans (21-25 employees) to request an exemption from the mandate if premium costs increase more than 3% during a consecutive 12-month period.

⁵ Mandates in Alaska and Delaware will become effective in 2013.

⁶ See 2012 Ala. Acts, Act 298.

⁷ Alaska Stat. §21.42.397; 2012 Alaska Session Laws, Chap. 63.

AUTISM SPECTRUM DISORDERS AND MANDATED BENEFITS COVERAGE IN HAWAII

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Arizona ⁸	Diagnosis, assessment, and services for autism spectrum disorder.	Yes, up to \$50,000 per year up to age 9 and up to \$25,000 between ages 9-16.	July 1, 2009.	Exempts insurance issued to individual or small-employer (2-50 employees). ⁹
Arkansas ¹⁰	Diagnosis and treatment.	Yes, up to \$50,000 per year up to age 18.	Oct. 1, 2011.	Exempts coverage for benefits that exceed EHB required by PPACA when sold through state health insurance exchange. ¹¹
California ¹²	Diagnosis and medically necessary treatment of pervasive developmental disorder ¹³ (PDD) or autism.	Yes, no later than July 1, 2012. Provisions that require behavioral therapies become inoperative on 7/1/14 and sunset on 1/1/15 unless extended.	July 1, 2012.	Does not require provision of benefits that exceed EHB required by PPACA. ¹⁴
Colorado ¹⁵	Assessment, diagnosis, and treatment.	Yes, up to \$34,000 per year up to age 9 and up to \$12,000 for ages 9-18.	July 1, 2010 (ABA provisions).	Excludes state employee health plans, health plans offered by institutions of higher education, and CHIP. ¹⁶
Connecticut ¹⁷	Diagnosis and treatment.	Yes, up to \$50,000 per year up to age 9, up to \$35,000 for ages 9-12, and up to \$25,000 for ages 13 up to 15.	Jan. 1, 2010 (ABA provisions).	
Delaware ¹⁸	Screening, diagnosis, and treatment up to age 21.	Yes, up to \$36,000 per year.	2013.	

⁸ Ariz. Rev. Stat. Ann. §§20-826.04, 20-1057.11, 20-1402.03, 20-1403.03.

⁹ Ariz. Rev. Stat. Ann. §20-2301.

¹⁰ Ark. Code Ann. §23-99-418; 2011 Ark. Acts, Act 196.

¹¹ See Chapter 7 of this report for a discussion of essential health benefits ("EHB") mandated by the federal Patient Protection and Affordable Care Act.

¹² Cal. Ins. Code §§10144.5, 10144.51, 10144.52; Cal. Health & Safety Code §§1374.72, 1374.73.

¹³ See Chapter 2 of this report for a discussion of pervasive developmental disorder.

¹⁴ See Chapter 7 of this report for a discussion of essential health benefits ("EHB") mandated by the federal Patient Protection and Affordable Care Act.

¹⁵ Colo. Rev. Stat. §10-16-104 (1-4).

¹⁶ See Colorado Legislative Council Staff Fiscal Note on SB09-244, Drafting No. LLS 09-0894 (May 1, 2009).

¹⁷ Conn. Gen. Stat. §38a-514b.

¹⁸ Del. Senate Bill No. 22 (2012)(Signed by Governor Aug. 13, 2012, effective 120 days after signing).

MANDATED AUTISM SPECTRUM DISORDER BENEFITS IN OTHER STATES

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Florida ¹⁹	Well-baby and well-child screening to diagnose ASD; treatment of ASD; up to \$36,000 per year, subject to a \$200,000 lifetime maximum.	Yes.	Jan. 1, 2009.	
Illinois ²⁰	Diagnosis and treatment for individuals less than 21 years old, up to \$36,000 per year.	Yes.	2009.	
Indiana ²¹	Treatment for pervasive developmental disorder (includes autism) that are prescribed by treating physician in accordance with care plan.	Yes, provided that it is part of the physician's prescribed care plan. ²²	2001.	Required for large or small group plan. Individual plans must <i>offer</i> the option. ²³
Iowa	State employee health care plans to provide coverage for diagnostic assessment and treatment of covered ASD patients under age 21. ²⁴ Maximum benefit of \$36,000 per year.	Yes.	Jan. 1, 2011.	
Kansas ²⁵	State employee health care plans to provide coverage for diagnosis and treatment for covered ASD patients up to age 19. Maximum benefit of \$36,000 per year up to age 7, and \$27,000 per year for ages 7-19.	Yes.	Jan. 1, 2011.	Pilot project. State insurance commissioner to report on claims data after one year and recommend whether pilot project should continue. ²⁶

¹⁹ Fla. Stat. §§627.6686, 641.31098.

²⁰ 215 Ill. Comp. Stat. §5/356z.14.

²¹ Ind. Code §§27-8-14.2-1, 27-13-7-14.7.

²² See Indiana's Health Insurance Mandate for Autism Spectrum Disorder (ASDs) and Pervasive Developmental Disorders (PDDs), Indiana Resource Center for Autism, Indiana Institute on Disability and Community, Indiana University-Bloomington, <http://www.iidc.indiana.edu/www2/index.php?pageId=547>.

²³ *Id.*

²⁴ Iowa Code §514c-28.

²⁵ Kan. Stat. Ann. §75-6524.

²⁶ See Chapter 6 of this report for information on the Kansas Insurance Commissioner's report.

AUTISM SPECTRUM DISORDERS AND MANDATED BENEFITS COVERAGE IN HAWAII

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Kentucky	Large group health plans ²⁷ and state employee plans ²⁸ to provide coverage for diagnosis and treatment of ASD for covered persons ages 1-21.	Yes.	Jan. 1, 2011.	Maximum benefit of \$50,000 per year for ages 1-7 and \$1,000 per year ages 7-21.
	Individual and small-group health care plans to provide coverage for ASD for covered persons ages 1-21. ²⁹	Yes.	Jan. 1, 2011.	Maximum benefit of \$1,000 per month for ages 1-21.
Louisiana ³⁰	Coverage and treatment of ASD in individuals under age 21, up to a maximum benefit of \$36,000 per year. ³¹	Yes.	Jan. 1, 2009.	Exempts coverage for benefits that exceed EHB's required by PPACA when sold through state health insurance exchange.
Maine ³²	Diagnosis and treatment for covered individuals ages 5 and under.	Yes, up to \$36,000 per year.	Jan. 1, 2011. ³³	
Massachusetts ³⁴	Coverage for diagnosis and treatment of ASD.	Yes.	Jan. 1, 2011.	An insurer may apply for a 3-year exemption from the mandate to cover habilitative or rehabilitative care (includes ABA) if it can demonstrate that it will result in a threshold increase in costs and premiums.

²⁷ Ky. Rev. Stat. Ann. §319C; 2010 Ky. Acts. Chap 150.

²⁸ Ky. Rev. Stat. Ann. §18A.225.

²⁹ Ky. Rev. Stat. Ann. §304.17A-143.

³⁰ La. Rev. Stat. Ann. §22:1050; 2012 La. Acts, P.A. 208.

³¹ 2012 La. Acts. P.A. 208 amended §22:1050 to (1) increase the eligible age for ASD coverage from 17 to 21 years old; (2) repeal the lifetime benefit maximum of \$140,000; and (3) change the applicability to plans issued or renewed after Jan. 1, 2009, to plans issued or renewed after Jan. 1, 2014. Act 208 also added the provision exempting the coverage of benefits that exceed EHB.

³² Me. Rev. Stat. Tit. 24-A §2768.

³³ 2010 Me. Laws, Chap. 635.

³⁴ Mass. Gen. Laws Ann. Ch. IV 32A-25.

MANDATED AUTISM SPECTRUM DISORDER BENEFITS IN OTHER STATES

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Michigan ³⁵	Diagnosis and treatment, up to \$50,000 per year through age 6, up to \$40,000 per year for ages 7-12, and up to \$30,000 for ages 13-18.	Yes.	180 days after Apr. 18, 2012.	Exempts coverage for benefits that exceed EHB's required by PPACA when sold through state health insurance exchange.
Missouri ³⁶	Diagnosis and treatment.	Yes, up to \$40,000 per year through age 18; limit may be exceeded, with approval of health plan, if ABA services are medically necessary.	Jan. 1, 2011.	
Montana ³⁷	Diagnosis and treatment for children 18 and under, up to \$50,000 per year for age 8 and under, up to \$20,000 per year for ages 9-18.	Yes.	Jan. 1, 2010. ³⁸	
Nevada ³⁹	Screening and diagnosis and for treatment under age 18.	Yes, up to \$36,000 per year.	July 1, 2011. ⁴⁰	Coverage for treatment to be extended until age 22 if the person is enrolled in high school; requires health plans to offer the <i>option</i> of coverage for ASD treatment.
New Hampshire ⁴¹	Treatment and diagnosis of PDD or autism.	Yes, up to \$36,000 per year up to age 12, and up to \$27,000 from ages 13-21.	Jan. 1, 2011. ⁴²	
New Jersey ⁴³	Screening, diagnosis, and treatment, up to \$36,000 per year.	Yes, up to age 21.	180 days after Aug. 13, 2009. ⁴⁴	

³⁵ Mich. Comp. Laws §500.3406s; 2012 Mich. Pub. Acts, Act 100.

³⁶ Mo. Rev. Stat. §§337.300, 376.1224.

³⁷ Mont. Code. Ann. §§33-22-515, 33-22-706.

³⁸ 2009 Mont Laws, Chap 359.

³⁹ Nev. Rev. Stat. 689A.435.

⁴⁰ 2009 Nev. Stats. Chap. 331.

⁴¹ N.H. Rev. Stat. Ann. §417-E:2.

⁴² 2010 N.H. Laws, Chap 363.

⁴³ 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.

⁴⁴ 2009 N.J. Laws, Chap. 115, AB2238 of 2009.

AUTISM SPECTRUM DISORDERS AND MANDATED BENEFITS COVERAGE IN HAWAII

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
New Mexico ⁴⁵	Screening, diagnosis, and treatment for children up to age 19, up to \$36,000 per year, subject to a \$200,000 lifetime maximum.	Yes.	2009.	Coverage for treatment to be extended until age 22 if the person is enrolled in high school.
New York ⁴⁶	Screening, diagnosis, and treatment.	Yes, up to \$45,000 per year.	Nov. 1, 2012. ⁴⁷	
Pennsylvania ⁴⁸	Diagnosis and treatment for persons under age 21, up to \$36,000 per year.	Yes.	July 1, 2009.	Applicable to health insurance policies issued to groups of 51+ employees; includes government programs.
Rhode Island ⁴⁹	Diagnosis and treatment, up to age 15.	Yes, up to \$32,000 per year.	Jan. 1, 2012.	Excludes policies issued to individuals and small employers (less than 50 FTE). ⁵⁰
South Carolina ⁵¹	Treatment, up to age 16.	Yes, up to \$50,000 per year.	July 1, 2008.	Covered person must be diagnosed with ASD at age 8 or younger.
Texas ⁵²	"Generally recognized services" prescribed in relation to ASD through age 9. ⁵³	Yes.	Jan. 1, 2008. ⁵⁴	Coverage for treatment for ASD past age 9 is not precluded if the enrollee continues to need treatment.

⁴⁵ N.M. Stat. Ann. §§59A-22-49, 59A-23-7.9, 59A-46-50, 59A-47-45.

⁴⁶ N.Y. Insurance Law §§3216, 3221, 4303.

⁴⁷ 2011 N.Y. Laws, Chap 596.

⁴⁸ Pa. Cons. Stat. tit. 40, §764h.

⁴⁹ R.I. Gen. Laws §27-20.11-1 et seq.

⁵⁰ R.I. Gen. Laws §27-20.11-1. *See generally* R.I. Gen. Laws, Chap. 27-50, and R.I. Gen. Laws, Chap. 18.5.

⁵¹ S.C. Code Ann. §38-71-280.

⁵² Tex. Ins. Code §1355.015.

⁵³ *Id.* "Generally recognized services" includes "evaluation and assessment services, applied behavior analysis, behavior training and behavior management, speech therapy, occupational therapy, physical therapy, or medications and nutritional supplements" for ASD.

⁵⁴ In 2009, Texas's law was amended to change the age of eligibility from ages 2-6 to "from the date of diagnosis until the enrollee completes nine years of age." The current version of the law applies to health insurance plans issued or renewed after Jan. 1, 2010. *See* 2009 Tex. Gen. Laws, Chap. 1107. The previous, initial version of the law applied to health insurance plans issued or renewed after Jan. 1, 2008. *See* 2007 Tex. Gen. Laws, Chap. 877.

MANDATED AUTISM SPECTRUM DISORDER BENEFITS IN OTHER STATES

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Vermont ⁵⁵	"Evidence-based diagnosis and treatment of early childhood developmental disorders" (not limited to ASD) up to age 21.	Yes.	July 1, 2011. ⁵⁶	Exempts coverage for benefits that exceed EHB required by PPACA when sold through state health insurance exchange. ⁵⁷
Virginia ⁵⁸	Diagnosis and treatment from ages 2 through 6 (insurers are not precluding from covering treatments past age 6).	Yes, up to \$35,000 per year. Insurers may obtain exemption. ⁵⁹	2011.	Exempts coverage for benefits that exceed EHB required by PPACA when sold through state health insurance exchange. ⁶⁰
West Virginia ⁶¹	Diagnosis and treatment from ages 18 months through 18 years; provided that the person is diagnosed with ASD at age 8 or younger.	Yes, up to \$30,000 annually for the first three years after ABA treatment commences, and up to \$2,000 per month after those three years.	Jan. 1, 2012.	Exempts coverage for benefits that exceed EHB required by PPACA. ⁶²

⁵⁵ Vt. Stat. Ann. Tit. 8, §4088i.

⁵⁶ In 2012, Vermont's law was amended to change the ages of eligibility from 18 months to 6 years to "birth and continuing until the child reaches 21." The current version of the law applies to health plans issued or renewed after July 1, 2012. *See* 2012 Vt. Acts, Act 158. The previous, initial version of the law applied to health plans issued or renewed after July 1, 2011. *See* 2010 Vt. Acts, Act 127.

⁵⁷ *See* Chapter 7 of this report for a discussion of EHB mandated by the federal Patient Protection and Affordable Care Act.

⁵⁸ Va. Code. Ann. §38.2-4319.

⁵⁹ An insurer may submit an actuary's certification to the Commissioner of Insurance that "the costs associated with the behavioral health treatment required under this section and not covered as of December 31, 2011, exceeded one percent of the premiums charged" and "these costs solely would lead to an increase in average premiums charged of more than one percent for all insurance policies" issued by the insurer. If the commissioner approves the actuary's certification, the insurer is exempt from providing coverage for ABA for a period of one year. The Bureau contacted the Virginia Commissioner of Insurance to learn whether any insurer had requested such an exemption and whether the Commissioner had approved an exemption, but was unable to obtain an answer. However, it should be noted that Virginia's administrative rules relating to the mandate only took effect in September 2012, so realistically, there is little experience to draw from.

⁶⁰ *See* Chapter 7 of this report for a discussion of EHB mandated by the federal Patient Protection and Affordable Care Act.

⁶¹ W. Va. Code §5-16-7, §5-16B-6e, §33-16-3v, §33-24-7k, §33-25A-8j.

⁶² *See* Chapter 7 of this report for a discussion of EHB mandated by the federal Patient Protection and Affordable Care Act.

State	ASD Coverage Inclusions	Specifically Includes ABA	Effective Date	Special Conditions
Wisconsin ⁶³	Treatment.	Yes, includes both "intensive level services" ⁶⁴ and "nonintensive-level services." ⁶⁵ Coverage "shall provide at least \$50,000 for intensive-level services per insured per year, with a minimum of 30-35 hours of care per week for a minimum duration of 4 years, and at least \$25,000 for nonintensive-level services per insured per year" ⁶⁶	2009. ⁶⁷	

TRICARE

In addition to insurance mandates in many states, TRICARE, the health benefits plan for dependents of United States military personnel, provides coverage for ASD treatment. Until recently, TRICARE's Basic insurance program, which is available to active duty and retired military personnel, provided coverage for certain behavioral health treatments, but generally did not cover ABA for ASD patients.⁶⁸ ABA treatment is covered through TRICARE's Extended Care Health Option ("ECHO"), which is only available to dependents of active duty military personnel.⁶⁹ The ECHO program covers ABA treatments for military dependents with ASD up to \$36,000 per year. Under the ECHO program, ABA providers must be approved by TRICARE.⁷⁰ The two-tiered model of delivery of services under ECHO consists of a treatment plan provided and overseen by a supervisory level Board Certified Behavior Analyst and more

⁶³ Wis. Stat. §632.895(12m), §609.87.

⁶⁴ Wis. Stat. §632.895(12m)(a)(3). ("Intensive-level services" means evidence-based behavioral therapy that is designed to help an individual with autism spectrum disorder overcome the cognitive, social, and behavioral deficits associated with that disorder.")

⁶⁵ Wis. Stat. §632.895(12m)(a)(4). ("Nonintensive-level services" means evidence-based therapy that occurs after the completion of treatment with intensive-level services and that is designed to sustain and maximize gains made during treatment with intensive-level services or, for an individual who has not and will not receive intensive-level services, evidence-based therapy that will improve the individual's condition.")

⁶⁶ Wis. Stat. §632.895(12m)(c)(1).

⁶⁷ See 2009 Wis. Laws, Act 28 §9326(8L).

⁶⁸ See Chapters 6 and 9 of this report for discussions of the expansion of coverage of ABA in the TRICARE program in response to a recent court decision.

⁶⁹ The program is called the Enhanced Access to Autism Services Demonstration. The program was created to allow beneficiaries to access a greater range of ASD treatment providers. Enrollees in the program must pay a monthly cost-share amount that varies depending on the member's military pay grade.

⁷⁰ TRICARE Provider Handbook (Jan. 2012), at 41, http://www.triwest.com/en/provider/provider-handbook/provider_handbook.pdf?epslanguage=en.

intensive hands-on treatments that are provided by non-certified "tutors" or "line therapists" who work under the close supervision of the certified behavior analyst.⁷¹

⁷¹ *Id.* at 41-42. Under the ECHO program, TRICARE will pay for "hands-on ABA services provided by TRICARE authorized providers," but will not pay for these services when "provided by family members, trainers or other individuals who are not TRICARE-authorized."

Chapter 6

EXPERIENCES IN SELECTED STATES THAT HAVE ENACTED AUTISM SPECTRUM DISORDER BENEFITS MANDATES

This chapter focuses its review on insurance cost impacts in states with ASD benefits coverage mandates that also have a population of persons with an ASD diagnosis similar to Hawaii.¹ Experiences in states similarly situated to Hawaii may be more illustrative than the experiences of states with significantly larger or smaller populations of persons with ASD diagnoses. (See Table 1 in Chapter 3 for state-by-state ASD populations, as reported to the U.S. Department of Education.) In general, however, information from other states is limited, as most states have no more than a few years of experience with state-mandated ASD benefits.² The chapter also examines other states' experiences that, although dissimilar to Hawaii, may be of interest to the Legislature.

New Hampshire

New Hampshire requires insurers to cover the treatment and diagnosis of pervasive development disorder or autism. Its mandate includes coverage for applied behavior analysis ("ABA") up to \$36,000 per year for children through age 12, and up to \$27,000 per year for children ages 13 to 21. New Hampshire's ASD benefits mandate took effect on January 1, 2011.³ New Hampshire may be particularly significant to Hawaii's analysis of costs because it possesses many characteristics that are similar to Hawaii. It has a similar overall population,⁴ and

¹ Hawaii's population of persons with an ASD is estimated to be 1,555, based on recent information obtained from the Department of Education and the Department of Health. For the purposes of this report, estimates of other states' ASD population are based on those states' 2010-2011 reports to the U.S. Department of Education of the number of persons with ASD, age 3-21, who are enrolled in those state's special education programs. Like Hawaii's estimate, these figures may not reflect children who are not identified by a state program and may be lower than the actual number of persons with ASD living in the State.

² Despite the existence since 2001 of a mandate for insurers in Indiana to cover ASD diagnosis and treatment, there is likewise little information available on the effects in that state. In preparing this study, the Bureau contacted the Indiana Department of Insurance, the Indiana Resource Center for Autism at the University of Indiana - Bloomington, and a member of the Indiana State Benefit Mandate Task Force for information on that state's experience. These sources confirmed that although Indiana's mandate does not specifically identify ABA as a covered therapy, insurers in that state generally cover ABA. No specific claims or cost data has been provided to these entities by insurers, and it is not clear that the Department tracks insurance information relating to ASD claims or costs. It was expressed, however, that it was initially estimated that the mandate would result in a 1% to 3% increase in premiums. That estimate has not been updated, but it was observed that no data has been produced by the insurers in Indiana to suggest that the actual amount of costs have exceeded these estimates in the years since the mandate was enacted. It was also noted that Indiana's mandate was enacted several years before ABA became a prominent therapy for ASD.

³ See Table 2 in Chapter 5 of this report.

⁴ 2010 United States Census, <http://www.census.gov/popfinder/>. (According to the 2010 U.S. Census, New Hampshire had a population of 1,316, 470.)

according to its 2010-2011 IDEA Part B report, New Hampshire has 1,726 persons ages 3-21 with an ASD diagnosis.⁵ Also, like Hawaii, the New Hampshire health insurance market contains only a few major health insurers.⁶

Costs

Prior to the enactment of New Hampshire's ASD benefits mandate, an initial assessment prepared for the New Hampshire Insurance Department estimated that the cost of the mandate to policy holders would range from \$2 to \$4 million per year.⁷ It was also estimated that, as a result, premiums would increase by 0.2% to 0.4%.⁸ It was further estimated that premiums would increase by \$0.83 to \$1.37 per member per month across the insured population that is subject to the effect of the insurance mandate.⁹ The Department reports that early estimates provided by insurers were somewhat higher.¹⁰

Since the enactment of the mandate in New Hampshire, insurers there have reported an increase in premium costs of over \$1.00 per member per month.¹¹ Insurers were unable to calculate an exact cost because many of the covered services tend to cross over into other diagnoses that may co-occur with an ASD.¹² Insurance regulators in New Hampshire could not verify the insurer's assessments, but they concur that, to their knowledge, the actual costs of the insurance mandate have been somewhat less than predicted to date.¹³

West Virginia

In 2010-2011, West Virginia reported 1,381 persons ages 3-21 with an ASD diagnosis, similar to Hawaii's estimate.¹⁴ Also, like Hawaii, West Virginia's insurance market is served by only a few major insurers.¹⁵ West Virginia's mandate requires the state's Children's Health Insurance Program ("CHIP"), public employees' insurance program, and large group plans to cover ASD diagnosis and treatment. Coverage is mandated for ABA for children ages 18 months through 18 years, up to \$30,000 annually for the first three years after treatment starts and up to \$20,000 per month after those three years.¹⁶

⁵ See Table 1 in Chapter 3 of this report.

⁶ Telephone communication with administrator, New Hampshire Insurance Department (Nov. 7, 2012).

⁷ Actuarial Assessment of House Bill 569: An Act Requiring Insurance Coverage for Diagnosis and Treatment of Autism Spectrum Disorders, prepared by Compass Health Analytics (Oct. 5, 2009), at 19.

⁸ *Id.* at 18.

⁹ *Id.*

¹⁰ New Hampshire Insurance Department, *supra* note 6.

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ See Table 1 in Chapter 3 of this report.

¹⁵ Telephone communication with administrator, West Virginia Offices of the Insurance Commissioner (Oct. 18, 2012).

¹⁶ See Table 2 in Chapter 5 of this report.

Costs

Initial fiscal analyses of West Virginia's ASD mandate projected a total cost to the CHIP program of approximately \$3,300,000 in the first year.¹⁷ Early fiscal analyses also predicted a first-year total cost to the states' public employee health insurance program of providing ASD benefits of approximately \$14,000,000 to \$23,000,000.¹⁸ These analyses predicted a steady increase in claims costs for ASD treatment over the first few years as provider networks are established in the state.¹⁹ The projected cost effects on other health benefit plans included in the mandate, including private large group plans, is not known.

West Virginia's ASD benefits mandate took effect on January 1, 2012. While the West Virginia Office of the Insurance Commissioner reports that overall cost information is limited due to the newness of the mandate, the state's largest health insurer, which covers 180,000 persons, has reported approximately \$455,000 in claims relating to ABA services for ASD patients since the mandate took effect through September 2012.²⁰

ABA Providers

West Virginia's ASD benefits mandate requires that covered ABA treatments be provided or supervised by a behavior analyst who is certified by the Behavior Analyst Certification Board.²¹ Currently, West Virginia has 39 analysts certified by the Behavior Analyst Certification Board.²² It is not clear that this provider network is currently adequate to serve the needs of that state's ASD population, and early fiscal analyses predicted growth in that state's provider network for ASD in the next several years.²³

Arkansas

Arkansas has a population of 2,857 persons with an ASD diagnosis, according to its 2010-2011 IDEA Part B report.²⁴ Arkansas's mandate requires health plans to cover diagnosis and treatment for ASD, including ABA. Like Hawaii's proposed SB 2631, Arkansas's mandate caps the maximum required benefit for ABA at \$50,000 per year; however, Arkansas requires

¹⁷ West Virginia Children's Health Insurance Program fiscal note, HB4260, [http://www.legis.state.wv.us/Fiscalnotes/FN\(2\)/fnsubmit_recordview1.cfm?RecordID=20056208](http://www.legis.state.wv.us/Fiscalnotes/FN(2)/fnsubmit_recordview1.cfm?RecordID=20056208). The fiscal note predicts a cost to the state of approximately \$600,000 and approximately \$2,700,000 to be allocated to the federal government.

¹⁸ West Virginia Public Employees' Insurance Agency fiscal note, HB2693, [http://www.legis.state.wv.us/Fiscalnotes/FN\(2\)/fnsubmit_recordview1.cfm?RecordID=20055254](http://www.legis.state.wv.us/Fiscalnotes/FN(2)/fnsubmit_recordview1.cfm?RecordID=20055254); see also West Virginia Public Employees' Insurance Agency fiscal note, HB4260, [http://www.legis.state.wv.us/Fiscalnotes/FN\(2\)/fnsubmit_recordview1.cfm?RecordID=20056193](http://www.legis.state.wv.us/Fiscalnotes/FN(2)/fnsubmit_recordview1.cfm?RecordID=20056193).

¹⁹ West Virginia Children's Health Insurance Program fiscal note, *supra* note 17.

²⁰ Email from administrator, West Virginia Offices of the Insurance Commission (Oct. 18, 2012).

²¹ See generally W.Va. HB4260 of 2012, as enacted.

²² Behavior Analyst Certification Board, Certificant Registry: West Virginia, <http://www.bacb.com/index.php?page=100155&by=state>.

²³ West Virginia Children's Health Insurance program fiscal note, HB 2693, *supra* note 17.

²⁴ See Table 1 in Chapter 3 of this report.

ABA coverage only up to age 18.²⁵ Because Arkansas's ASD benefits mandate only took effect on October 1, 2011, there is little data available on the cost effects of its mandate.²⁶

Costs

Early analyses of an ASD benefits mandate in Arkansas commissioned by Autism Speaks and conducted by Oliver Wyman Actuarial Consulting, Inc., predicted premium increases of 0.11% to 0.54% in the short term and premium increases of 0.34% to 0.82% beyond year six of the mandate.²⁷ While the state has not undertaken a research survey to follow up on claims and cost increases among private insurers, the largest health insurer in Arkansas has not reported a significant increase in the number of claims for ASD-related treatments.²⁸ Early estimates by the Arkansas Employee Benefits Division estimated that the mandate would result in additional short-term costs of approximately \$2.00 per member per month.²⁹ An administrator for the health plan that serves state and public school employees reported to the Bureau that there were 399 new claims for ABA services to plan beneficiaries during the first year of the mandate.³⁰ It was also reported that all claims relating to ASD diagnoses increased from 403 in 2011 to 1143 in 2012 for the state and public school employee plan.³¹

ABA Providers

Initially there was concern that Arkansas's provider network for ABA treatment would be inadequate to meet patients' demands for services.³² At the time Arkansas's mandate took effect, there were few qualified behavior analysts in the state;³³ however, there are now 21 board-certified analysts,³⁴ and it is reported that there are at least two analysts in every major city in the

²⁵ See Table 2 in Chapter 5 of this report.

²⁶ Telephone communication with administrator, Arkansas Department of Insurance (Sept. 5, 2012).

²⁷ The long term increase equates to an annual increase of \$10.10 to \$24.60 per member. The report cautions that the long-term projection is uncertain due, in part, to the limited supply of ABA providers. See Actuarial Cost Estimate: Arkansas Senate Bill 913, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 18, 2009), at 16.

²⁸ Arkansas Department of Insurance, *supra* note 26.

²⁹ Email from administrator, Arkansas Department of Finance and Administration Employee Benefits Division (Dec. 18, 2012). It was also explained that cost projections for an earlier version of the mandate that allowed coverage up to age 26 were approximately \$4.00 per member per month.

³⁰ *Id.*

³¹ *Id.*

³² A 2009 report by the Arkansas Legislative Task Force on Autism expressed concern for the general lack of autism services in that state, stating: "The range and intensity of services and supports to enable individuals with autism to prepare for, survive, and thrive in life are simply not present across Arkansas. An increase in the level of support and services provided for individuals and families living with autism is imperative." The task force further noted that one of the results of the inadequacy of the ASD treatment network is that patients must seek services in other states. See Arkansas Legislative Task Force on Autism, Final Report (Aug. 29, 2008), at 6, <http://www.arkleg.state.ar.us/bureau/research/Publications/Task%20Forces/Legislative%20Task%20Force%20on%20Autism/Final%20Report%20of%20the%20Arkansas%20Legislative%20Task%20Force%20on%20Autism%20as%20created%20by%20Act%201016%20of%202007.pdf>.

³³ Arkansas Department of Insurance, *supra* note 26.

³⁴ Behavior Analyst Certification Board, Certificant Registry: Arkansas, <http://www.bacb.com/index.php?page=100155&by=state>.

state.³⁵ Further, patients and providers have not reported insufficiencies in the ABA provider network since the start of the mandate.³⁶ The Bureau also learned that the University of Arkansas is developing a master's degree level program to train and assist with certifying behavior analysts to meet future demand.³⁷

Rhode Island

Rhode Island requires insurers to provide coverage for ASD, including ABA treatments, up to age 15. Required coverage for ABA is limited to a maximum of \$32,000 per year.³⁸ Rhode Island's population of persons with an ASD diagnosis, at 1,787, is comparable to Hawaii's.³⁹ Due to this similarity, Rhode Island's experience with its ASD benefits mandate may offer insight to Hawaii's policy makers at some point. An actuarial analysis commissioned by Autism Speaks and conducted by Oliver Wyman Actuarial Consulting, Inc., predicted that an ASD benefits mandate would result in premium increases of 0.09% to 0.40% in the short term and premium increases of 0.27% to 0.60% beyond year six after the mandate.⁴⁰ The study ultimately estimated an annual premium increase of \$17.80 across all insurance markets affected by the mandate, including state employee programs.⁴¹ However, because Rhode Island's mandate only became effective on January 1, 2012, no follow-up data is apparently available at this time on cost increases, premium increases, or other effects of that state's mandate.⁴²

New Mexico

Another state that may be instructive for Hawaii due the size of its ASD population is New Mexico. New Mexico requires insurers in that state to cover screening, diagnosis, and treatment, including ABA, for ASD patients up to age 19, or up to age 22 if the patient is enrolled in high school.⁴³ In 2010-2011, New Mexico reported 1,545 persons ages 3-21 with an ASD diagnosis.⁴⁴ While the dollar amounts differ, New Mexico's mandate imposes an annual benefit limit (\$36,000) and a lifetime cap (\$200,000), similar to Hawaii's proposed mandate.⁴⁵

³⁵ Arkansas Department of Finance and Administration, *supra* note 29.

³⁶ Telephone communication with representative, Arkansas Autism Resource and Outreach Center (Nov. 15, 2012); Arkansas Department of Finance and Administration, *supra* note 29.

³⁷ Arkansas Autism Resource and Outreach Center, *supra* note 36.

³⁸ See Table 2 in Chapter 5 of this report.

³⁹ See Table 1 in Chapter 3 of this report.

⁴⁰ Actuarial Cost Estimate: Rhode Island Senate Bill 107, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 25, 2011), at 17-18.

⁴¹ *Id.*

⁴² Telephone communication with representative of Rhode Island Office of the Health Insurance Commissioner (Nov. 15, 2012).

⁴³ See Table 2 in Chapter 5 of this report.

⁴⁴ See Table 1 in Chapter 3 of this report.

⁴⁵ New Mexico's dollar value caps appear to apply to the sum of all ASD treatments, not only applied behavioral analysis. S.B. No. 2631, S.D. 2 (2012) proposed an annual cap of \$50,000 and a lifetime cap of \$300,000.

Costs

A legislative fiscal impact report on New Mexico's mandate predicted that it would have "potentially significant" impacts on state programs that provide health benefits and private health insurance in the first year.⁴⁶ However, a program manager at the University of New Mexico School of Medicine who works with autism issues opined to the Bureau that there has been an increase in medical costs and premiums since the mandate took effect in 2009, but it has not been significant.⁴⁷ Furthermore, she suggested that it is not clear whether the cost increase is the result of the mandate or simply the overall increase in the prevalence of ASD diagnoses. She further opined that New Mexico's provider network for ABA treatment was inadequate to meet the demand for ABA when the mandate was enacted.⁴⁸ In 2009, New Mexico had 4 board-certified behavior analysts, and according to the Behavior Analyst Certification Board, that number has increased to 21.⁴⁹ Despite the increase, however, it is not clear that this number fully meets patients' demands for services.

Maine

Maine's ASD benefits mandate requires coverage for diagnosis and treatment of ASD for children ages 5 and under. Required coverage for ASD is limited to a maximum of \$36,000 per year.⁵⁰ At 2,646, Maine has a slightly larger population of persons with an ASD diagnosis than Hawaii.⁵¹

Costs

An initial version of Maine's mandate bill, LD 1198, would have required insurers in the state to cover ASD benefits for persons up to age 21 and would have allowed insurers to limit coverage to \$36,000 per year.⁵² In a report to the Maine Legislature providing a fiscal analysis of the impacts, the Maine Bureau of Insurance noted that costs of ABA therapy would be the primary driver of cost increases to insurers and members and predicted a possible initial premium increase of approximately \$1.65 per member per month, or 0.5% of premium costs.⁵³ Once the ABA provider network expanded to meet demand, these costs could grow as high as \$2.30 per member per month or 0.7% of premium costs.⁵⁴ Further, if the \$36,000 limit on

⁴⁶ Fiscal Impact Report on Senate Bill 39 (2009), New Mexico Legislative Finance Committee (updated Mar. 17, 2009).

⁴⁷ Telephone communication with autism education and outreach manager, University of New Mexico School of Medicine, Center for Development and Disability (Nov. 15, 2012).

⁴⁸ *Id.*

⁴⁹ Behavior Analyst Certification Board, Certificant Registry: New Mexico, <http://www.bacb.com/index.php?page=100155&by=state>.

⁵⁰ See Table 2 in Chapter 5 of this report.

⁵¹ See Table 1 in Chapter 3 of this report.

⁵² Maine LD 1198 of 2010.

⁵³ Review and Evaluation of LD 1189 - An Act to Reform Insurance Coverage to Include Diagnosis for Autism Spectrum Disorders, A Report to the Joint Standing Committee on Insurance and Financial Services of the 124th Maine Legislature, Maine Bureau of Insurance (Dec. 2009, corrected Jan. 14, 2010), at 3.

⁵⁴ *Id.*

coverage were to be eliminated, these costs could increase yet again to \$2.95 per member per month, or 0.8% of premium costs.⁵⁵ The report further noted that insurers in Maine predicted LD 1198 would result in an increase in premiums between \$1.48 and \$5.00 per member per month.⁵⁶

An amended version of LD 1198 reduced the age of persons eligible for ASD benefit coverage to 5 and under.⁵⁷ It is not clear if the Maine Bureau of Insurance adjusted its predictions for private insurers, but a fiscal note on the amended bill reduced its original predicted costs to state programs by half.⁵⁸ The note also suggested potential savings to the Maine Department of Education, although it did not elaborate.⁵⁹

The Maine Bureau of Insurance tracks insurers' claims as a result of that state's various insurance mandates. It does not single out data relating to the ASD benefits mandate; rather it includes that claims information along with data on all other mental health services. Although not completely illustrative of the cost effects of the ASD benefits mandate in Maine, it is noteworthy that mental health claims make up approximately 3% of all group health claims and that this percentage has remained consistent over the past four years, despite the enactment of the ASD benefits mandate.⁶⁰ However, it should be noted that claims for behavioral day treatment, which includes ABA treatment for children, have risen from 1.58% of the total number of mental health claims in 2008 to 2.11% of the total in 2011.⁶¹

ABA Providers

The Maine Bureau of Insurance's report on LD 1198 also indicated that there were only 26 qualified ABA providers in Maine at that time and that the provider network for ABA services was limited.⁶² The report projected that provider charges for ABA treatment may increase as demand for ABA services in the existing market increased as a result of the mandate.⁶³ However, the report also suggested that increased demand would cause more ABA providers to enter the market and the addition of new providers could drive charges for ABA down.⁶⁴ Maine's provider network has since grown to include 64 board-certified behavior analysts.⁶⁵

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ See Table 2 in Chapter 5 of this report. LD 1198 was enacted as 2010 Me. Laws Chap 635.

⁵⁸ Fiscal Note for Bill As Amended, Committee: Insurance and Financial Services, 124th Maine Legislature, LD 1198, LR 969(02).

⁵⁹ *Id.*

⁶⁰ Telephone communication with administrator, Maine Bureau of Insurance (Sept. 6, 2012). See also Report of the Superintendent of Insurance on Mandated Health Insurance Claims for Substance Abuse and Mental Health Services, Mammography and Breast Cancer Treatment, and Chiropractic Services for the Year 2011, <http://www.maine.gov/pfr/legislative/documents/2011%20Mandated%20Benefits%20Year%20End%20Report.pdf>.

⁶¹ Superintendent's Report, *supra* note 60, at Table VI.

⁶² Maine Bureau of Insurance report, *supra* note 53.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ Behavior Analyst Certification Board, Certificant Registry: Maine, <http://www.bacb.com/index.php?page=100155&by=state>.

Kansas

Kansas's ASD mandate requires insurers in the state employee's health plans to cover diagnosis and treatment, including ABA, up to age 19. Required coverage is limited to a maximum of \$36,000 per year up to age 7, and \$27,000 per year from ages 7 to 19.⁶⁶ Kansas has an estimated 2,624 persons with an ASD diagnosis, which represents a slightly larger total population than Hawaii.⁶⁷ Kansas's ASD benefits mandate makes it noteworthy for the purposes of this report because Kansas's mandate to cover ASD benefits only applies to the state's employee health plan. The mandate took effect on January 1, 2011, and required the Kansas State Employees Health Care Commission to report utilization and cost data to the legislature.⁶⁸ The Commission report notes that 126 members of State Employees Health Plan received services for ASD.⁶⁹ The Health Care Commissioner reported "minimal impact" on the State Employees Health Plan during 2011.⁷⁰ The total expenses for all ASD services among eligible beneficiaries of the employees' health plan was \$214,656, of which \$92,394 was for ABA services.⁷¹ The report observed that, as members and providers become more aware of the availability of ASD benefits coverage, utilization of those services, and accordingly claims for those services, will likely increase.⁷² Nonetheless, the Commissioner's report recommended that the ASD benefits coverage pilot continue for the purposes of gathering more cost and utilization data.⁷³

Pennsylvania

Pennsylvania's ASD benefits mandate requires insurers to cover diagnosis and treatment, including ABA, for persons under age 21, up to a maximum of \$36,000 per year.⁷⁴ While its ASD population is nearly ten times the size of Hawaii's (21,083),⁷⁵ that state offers valuable information on the comparison of projected costs of an ASD benefits vis a vis actual costs of the mandate.

⁶⁶ See Table 2 in Chapter 5 of this report.

⁶⁷ See Table 1 in Chapter 3 of this report.

⁶⁸ Kansas State Employees Health Care Commission, Report on Insurance Coverage for Autism Spectrum Disorder Pilot, required by 2010 Senate Substitute for House Bill No. 2160, at 1, http://www.kdheks.gov/hcf/sehp/download/Autism_Pilot_Report.pdf.

⁶⁹ *Id.* This number equates to a prevalence rate of ASD among SEHP members of 1 in 800, which is significantly lower than the CDC's reported national prevalence rate.

⁷⁰ *Id.* at 5. The plan year under review encompassed January through December 2011.

⁷¹ *Id.*

⁷² *Id.* at 6.

⁷³ *Id.*

⁷⁴ See Table 2 in Chapter 5 of this report.

⁷⁵ See Table 1 in Chapter 3 of this report.

Costs

Since the enactment of Pennsylvania's ASD benefits mandate in 2009,⁷⁶ the rate of increase in premium per member per month appears to have been less than one percent. Pennsylvania's largest private insurer reported that the ASD benefits mandate added 0.6% to 1% to member premiums.⁷⁷ This appears to validate early estimates that the ASD mandate would increase premiums by less than 1%, while proving to be less than the 2% to 11% premium increases that other groups predicted prior to the enactment of the mandate.⁷⁸

Missouri

Missouri's ASD benefits mandate took effect on January 1, 2011, and it requires insurers to cover diagnosis and treatment for ASD, including up to \$40,000 in ABA services per year, up to age 18.⁷⁹ Missouri's estimated population of persons with an ASD diagnosis is significantly greater than Hawaii's (7,297).⁸⁰ However, its experience with an ASD benefits mandate is noteworthy because of the availability of recent information on the impact of the mandate.⁸¹

Costs

The Missouri Department of Insurance, Financial Institutions & Professional Regulation reported that in the first year of the mandate, nearly 4,000 persons received treatment for an ASD.⁸² Insurers reported \$4.3 million in claims relating to an ASD, of which \$1.1 million were for ABA services.⁸³ This equates to \$0.25 and \$0.06 per member per month in ASD claims and ABA claims, respectively.⁸⁴ The Department reports that these amounts are "well below" its initial estimates of additional treatment costs for ASD.⁸⁵ The Missouri Department of Insurance, Financial Institutions, and Professional Regulation predicts that claims costs will rise in 2012 as

⁷⁶ Pennsylvania Act 62 of 2008. *See generally* Autism Spectrum Disorders Mandated Benefits Review Panel Report: Evidence Submitted Concerning Pennsylvania HB 1150, prepared for Pennsylvania Health Care Cost Containment Council by Abt Associates, Inc. (Jun. 18, 2008).

⁷⁷ Phil Galewitz, Parents Fear Health Care Law Could Derail Autism Coverage, Kaiser Health News (Sept. 24, 2011), <http://www.kaiserhealthnews.org/Stories/2011/September/24/autism-health-insurance-benefits.aspx>.

⁷⁸ Betsy Swope, Funding Behavior - Analytic Autism Interventions: Who Pays?, Speakers Journal, Volume 8.7, Pennsylvania House of Representatives (2008) at 64, 65.

⁷⁹ *See* Table 2 in Chapter 5 of this report. Oliver Wyman Actuarial Consulting, Inc., conducted an analysis of an earlier proposed ASD benefits mandate in Missouri. That bill, Senate Bill 167 (2009), contained a coverage limit considerably higher than Missouri's existing mandate. Due to marked differences in the two mandates, it is not clear that Wyman's study would inform this discussion of Missouri's law. *See generally*, Actuarial Cost Estimate: Missouri Senate Bill 167, prepared by Oliver Wyman Actuarial Consulting, Inc. (Feb. 23, 2009).

⁸⁰ *See* Table 1 in Chapter 3 of this report.

⁸¹ *See generally* Insurance Coverage for Autism Treatment & Applied Behavioral Analysis, Annual Report to the Missouri Legislature, Missouri Department of Insurance, Financial Institutions, and Professional Regulation (Jan. 31, 2012), <http://insurance.mo.gov/consumers/autismFAQ/documents/2012autismreport.pdf>.

⁸² *Id.* at 2. This figure amounts to 1 in 350 insureds.

⁸³ *Id.* The figures equate to 0.1% and 0.02%, respectively, of total claims during 2011.

⁸⁴ *Id.*

⁸⁵ *Id.* at 10. The Missouri Department of Insurance, Financial Institutions, and Professional Regulation estimated that the autism mandate would result in additional treatment costs between 0.2% and 0.8% .

its provider network for ASD services grows, but it does not expect that costs for ASD treatments will have a significant impact on insurance premiums.⁸⁶

ABA Providers

Missouri requires that behavior analysts and assistant behavior analysts obtain a license to practice in the state. Licensure requires board-certification and successful completion of an examination.⁸⁷ The Department of Insurance, Financial Institutions and Professional Regulation reported that it began to issue licenses in December 2010, and by January 2012, there were 120 licensed behavior analysts and 24 licensed assistant behavior analysts in Missouri.⁸⁸ Currently, there are 178 behavior analysts in Missouri who are certified by the Behavior Analyst Certification Board,⁸⁹ but it is not clear how many of these currently hold a license to practice in Missouri. In any event, it would appear that Missouri's provider network for ASD treatment is growing to meet the demands of that state's ASD benefits mandate.

Connecticut

Connecticut's ASD benefits mandate requires diagnosis and treatment for ASD, including ABA. Required coverage for all behavioral treatments, including ABA, is limited to \$50,000 per year for children up to age 9, up to \$35,000 per year for children ages 9 to 12, and up to \$25,000 per year for children ages 13 to 15.⁹⁰ Connecticut, with a higher ASD population⁹¹ than Hawaii, recently reviewed the annual costs of its state-mandated benefits.⁹² Using 2010 claims data, the report predicted that the increase to premium costs attributable to behavioral therapy for ASD patients in 2012 would be \$0.40 per member per month.⁹³ The total premium impact, including additional administrative expenses is predicted to be \$0.47 per member per month.⁹⁴ Predictions of premium increases over five years range from \$0.56 to \$1.07 per member per month in 2016.⁹⁵ It is not clear what the actual cost impact of Connecticut's ASD benefits mandate was in

⁸⁶ *Id.* at 2. See also letter from John M. Huff, Director, Missouri Department of Insurance, Financial Institutions, and Professional Regulation to Governor Jeremiah W. Nixon (Feb. 1, 2012). ("While costs are expected to increase somewhat as a result, no credible evidence suggests that they will exceed 0.2 - 0.5 percent of claim costs, and a smaller percentage of premiums.")

⁸⁷ Report to Missouri Legislature, *supra* note 81 at 9.

⁸⁸ *Id.*

⁸⁹ Behavior Analyst Certification Board, Certificant Registry: Missouri, <http://www.bacb.com/index.php?page=100155&by=state>.

⁹⁰ See Table 2 in Chapter 5 of this report.

⁹¹ See Table 1 in Chapter 3 of this report. Connecticut reported having 6,302 individuals with an ASD diagnosis enrolled in its special education programs.

⁹² Review and Evaluation of Certain Benefit Mandates in Connecticut 2012, University of Connecticut Center for Public Health and Health Policy (Jan. 2012). The review included Connecticut's mandated coverage for ASD benefits as well as certain other state-mandated health benefits. The Connecticut Insurance Department contracted with OptumInsight actuarial firm to conduct a fiscal analysis of claims data used in the report.

⁹³ *Id.* at 8.

⁹⁴ *Id.*

⁹⁵ *Id.* at 36.

2012, and the Bureau is unaware of a follow-up report that confirms the earlier report's predictions.⁹⁶

Virginia

Virginia requires insurers to cover the diagnosis and treatment of ASD for persons ages 2 through 6. Required coverage for ABA is limited to an annual maximum of \$35,000.⁹⁷ Out of apparent concern for potentially excessive costs of an ASD benefits mandate to insurers, Virginia provides a process by which an insurer can obtain an exemption from the ASD benefits mandate. In addition to other information, an insurer seeking an exemption must submit a certified actuarial analysis to the commissioner of insurance that demonstrates that the costs of covering ASD treatments will result in a threshold premium increase, in this case, one percent.⁹⁸ If the commissioner approves the certification of the actuary, the insurer may be exempt for up to one year, subject to an application for a subsequent year of exemption.⁹⁹ The Bureau could not learn whether any insurers in Virginia have applied for the exemption or whether the Virginia Insurance Commissioner has granted an exemption. Similarly, Alaska and Massachusetts also include exemption provisions in their ASD benefits mandates.¹⁰⁰

TRICARE

As noted earlier in this report, TRICARE provides coverage for ASD treatments, including ABA, up to \$36,000 per year, through its ECHO program. In 2010, there were 2.2 million military dependents age 18 and younger covered by TRICARE.¹⁰¹ Of these, 23,500 beneficiaries were diagnosed with an ASD, and 4,900 of these were enrolled in the Extended Care Health Option (ECHO) program or the Department of Defense Enhanced Access to Autism Services Demonstration.¹⁰² Of these enrollees, 3,600 beneficiaries submitted claims for ABA services in 2010.¹⁰³ The costs of these ABA claims is unknown, but it would appear from these totals that only 75% of the eligible ECHO beneficiaries and less than 20% of all beneficiaries

⁹⁶ It should be noted that Autism Speaks commissioned an actuarial analysis, conducted by Oliver Wyman Actuarial Consulting, Inc., of proposed Connecticut Senate Bill 301 (2009). The ASD benefits mandate proposed in this bill differs from the existing law in Connecticut in that it would have mandated coverage for behavioral therapy (including ABA) up to \$50,000 per year for children up to age 9 and up to \$35,000 per year for children ages 9 through 12, only. This analysis predicted a similar range of premium cost increases over five years (\$7.20 to \$18.80 annually). The Wyman report also predicted an annual premium increase ranging from \$7.80 to \$20.20 per member if benefits were expanded to age 16. *See generally* Actuarial Cost Estimates: Connecticut Senate Bill 301, prepared by Oliver Wyman Actuarial Consulting, Inc. (Mar. 11, 2009).

⁹⁷ *See* Table 2 in Chapter 5 of this report.

⁹⁸ *Supra* Chapter 5, note 60, and accompanying text. *See also* Va. Code Ann., §38.2-3418.17(J).

⁹⁹ *Id.* (It is not clear from the language of Virginia's statute how many one-year exemptions may be approved.)

¹⁰⁰ *See* Table 2 in Chapter 5 of this report.

¹⁰¹ Letter from Deputy Chief, TRICARE Policy and Operations, Office of the Assistant Secretary of Defense Health Affairs to Rep. John B. Larson, U.S. House of Representatives (Sept. 12, 2011) (on file with author).

¹⁰² *Id.*

¹⁰³ *Id.*

with ASD submitted claims for ABA treatments.¹⁰⁴ This may be noteworthy because it may generally support the observation made previously that not all ASD patients will access ABA treatments.¹⁰⁵

It is also unknown how the pilot program expanding ABA coverage to dependents of active duty and retired military personnel, as a result of a recent court decision, will affect claims and costs for TRICARE.¹⁰⁶ The National Defense Authorization Act for Fiscal Year 2013¹⁰⁷ contains a provision that directs the Department of Defense to implement a one-year pilot program in which TRICARE would cover behavioral health treatments, including ABA, as a benefit for all military dependents whether retired or active duty. The legislation does not state what coverage limits will apply to the program.¹⁰⁸ Congress acknowledged the ongoing litigation over TRICARE's ABA coverage limitations in the *Berge* case,¹⁰⁹ and created the pilot project "in order to allow [the Department of Defense] to assess such coverage independent from litigation proceedings."¹¹⁰

Other States

The national patient advocacy organization Autism Speaks has conducted its own research on the financial impacts of ASD benefit mandates in states following the enactment of ASD benefits mandates in those states. The organization reports that in South Carolina, Illinois, Florida, Arizona, and Kentucky, the costs of coverage after one year range from \$0.09 to \$0.30 per member per month, with an average cost of coverage of \$0.15 per member per month.¹¹¹ After two years of coverage, the costs of coverage range from \$0.10 to \$0.43 per member per month, with an average of \$0.31.¹¹² Overall, the information reported by the organization suggests that costs associated with the ASD benefits mandates in these states were much lower in the first two years than what was originally predicted by fiscal analyses at the time the mandates

¹⁰⁴ The Bureau repeatedly attempted to contact TRICARE Management Activity at the U.S. Department of Defense. The authors believed that, as an insurer with a significant history of covering ABA, the Department of Defense would be able to provide information on the number of claims for ABA and valuable insight on the overall costs of covering ABA for its insured. However, the authors have received no response from the Department as of the time of this writing.

¹⁰⁵ See Chapter 4, note 34 and accompanying text.

¹⁰⁶ See notes 24-35 and accompanying text in Chapter 9 of this report for a discussion of recent changes to TRICARE's coverage of ABA in response to a recent court decision.

¹⁰⁷ National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239.

¹⁰⁸ *Id.* at § 705; See also Obama Signs Bill Expanding ABA Care for Military Kids, Autism Speaks (Jan. 3, 2012), <http://www.autismspeaks.org/advocacy/advocacy-news/obama-signs-bill-expanding-aba-care-military-kids>. See generally Actuarial Cost Estimate: H.R. 2288 -- "Caring for Military Kids with Autism Act," Oliver Wyman Actuarial Consulting, Inc., prepared for Autism Speaks (May 18, 2012) (analyzing projected costs of a similar proposed bill that would expand ASD treatment coverage for military dependents).

¹⁰⁹ See note 106 *supra*.

¹¹⁰ Joint Explanatory Statement of the Committee on Conference on H.R. 4310 (Dec.18, 2012), at 123, http://www.rules.house.gov/Media/file/PDF_112_2/PDF/HR4310crJES.pdf.

¹¹¹ Information provided by Autism Speaks. See Table 1 of Appendix C of this report.

¹¹² Information provided by Autism Speaks. See Table 2 of Appendix C of this report. Two-year data is reported for SC, IL, LA, FL, and AZ. KY is not reported.

were being considered by those states' legislatures.¹¹³ While the information is included for reference in this report as Appendix C, the Bureau notes that it has made no attempt to verify the data contained therein. Further, it is observed that the figures reported reflect only one to two years of claims data. As noted in earlier discussions of other states, it is not clear how changes in the number of ABA providers may affect future costs of mandates in the states reviewed by Autism Speaks.

¹¹³ Information provided by Autism Speaks. See Table 3 and Appendix 2 (Claims Data) of Appendix C of this report.

Chapter 7

IMPACT OF PATIENT PROTECTION AND AFFORDABLE CARE ACT ON AUTISM SPECTRUM DISORDER BENEFITS MANDATE IN HAWAII

House Concurrent Resolution 177, S.D. 1 (2012) requests the Bureau to examine the impacts of the Patient Protection and Affordable Health Care Act ("PPACA")¹ on the autism treatment mandate described in Senate Bill No. 2631, S.D. 2 (2012). The bulk of the relevant provisions of the PPACA will not take effect until January 1, 2014.² Thus, this analysis would be applicable after that date, subject to any additional rules or guidance that the U.S. Department of Health and Human Services ("DHHS") may release in the interim.³

Because much of the DHHS guidance on implementation of the PPACA is still under development, numerous details about the PPACA's ultimate effect on an autism insurance mandate in Hawaii may not be known with certainty. Accordingly, the Bureau's analysis of the PPACA's effect is based upon the information available at the time of the preparation of this report.

Senate Bill 2631, S.D. 2 (2012)

Generally, Senate Bill 2631, S.D. 2 (2012) ("SB 2631") would mandate insurance coverage for the screening, diagnosis, and treatment of autism spectrum disorders. (See Appendix B for full text of SB 2631.) SB 2631 would amend Hawaii's insurance code to require each:

- (1) Accident and health or insurance policy;⁴
- (2) Individual or group hospital or medical service plan, policy, contract, or agreements issued by a mutual benefit society;⁵ and

¹ Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, <http://www.gpo.gov/fdsys/pkg/PLAW-111pub1148/pdt1PLAW-111pub1148.pdf>. The PPACA was later amended by the Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, <http://www.gpo.gov/fdsys/pkg/PLAW-111pub1152/pdt1PLAW-111pub1152.pdf>.

² Essential health benefits provisions of the PPACA become effective for plan or policy years beginning on or after January 1, 2014. *See* PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70688 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 147).

³ Proposed rules on essential health benefits were published on Nov. 20, 2012, and public comments were due by Dec. 26, 2012. DHHS expects to consider the comments that it received, adjust its policies as needed, and publish final rules in early 2013. *See* Frequently Asked Questions on Exchanges, Market Reforms, and Medicaid, Centers for Medicare and Medicaid Services (Dec. 10, 2012), <http://cciio.cms.gov/resources/files/exchanges-faqs-12-10-2012.pdf>.

⁴ SB 2631 §2 at 1.

⁵ SB 2631 §3 at 7.

(3) Policy, contract, plan, or agreement by a health maintenance organization;⁶

issued in Hawaii after December 31, 2012, to provide its policyholders (or members, in the case of mutual benefit societies and health maintenance organizations) and individuals covered under the policy who are under 26 years of age with coverage for "well-baby and well-child screening and the diagnosis and treatment of autism spectrum disorders."⁷ The bill offers a broad definition of "autism spectrum disorder" that is informed by the diagnosis of ASD in the current edition of the Diagnostic and Statistical Manual of Mental Disorders.⁸ Specifically, SB 2631 states:

"Autism spectrum disorders" means any of the pervasive developmental disorders as defined by the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders, including autistic disorder, Asperger's disorder, pervasive developmental disorder not otherwise specified, Rett's disorder, and childhood disintegrative disorder.⁹

SB 2631 defines "treatment for autism spectrum disorders" to include "care and related equipment prescribed or ordered for an individual diagnosed with an autism spectrum disorder by a licensed physician, licensed psychologist, or registered nurse practitioner if the care is determined to be medically necessary."¹⁰ The definition further specifies among the treatments: behavioral health treatment, pharmacy care, psychiatric care, psychological care, and therapeutic care.¹¹ The term "behavioral health treatment" is then defined in SB 2631 to mean "professional counseling and treatment programs, including applied behavior analysis, that are necessary to develop, maintain, or restore, to the maximum extent practicable, the functioning of an individual."¹² Perhaps most significant to this report are behavioral health treatments, specifically applied behavior analysis ("ABA"), because it historically has not been covered by health insurance and, consequently, has been the impetus for ASD benefits mandates in many states. (Behavioral health treatments for ASD, including ABA, are discussed in Chapter 2.)

SB 2631 limits benefits for behavioral health treatments to a minimum of \$50,000 per year or \$300,000 during the lifetime of the covered individual. The bill also directs the Hawaii Insurance Commissioner to adjust these dollar value limits periodically for inflation.¹³ The bill provides that coverage for ASD treatments may be subject to co-payments, deductibles, and co-insurance provisions that are commensurate with similar provisions for other medical services covered by the policy.¹⁴ Further, the bill authorizes insurers to request a review of an individual's outpatient treatments no more than every twelve months, at the insurer's expense.¹⁵

⁶ SB 2631 §§4-5 at 12.

⁷ SB 2631 §2 at 1, §3 at 7.

⁸ See Chapter 2 of this report for a discussion of the Diagnostic and Statistical Manual of Mental Disorders definition of autism spectrum disorder.

⁹ SB 2631 §2 at 5, §3 at 10.

¹⁰ SB 2631 §2 at 6, §3 at 11.

¹¹ SB 2631 §2 at 6, §3 at 12.

¹² SB 2631 §2 at 5, §3 at 10.

¹³ SB 2631 §2 at 2-3, §3 at 8.

¹⁴ *Id.*

¹⁵ SB 2631 §2 at 3, §3 at 9.

The bill also prohibits denial of coverage on the basis that treatments are "habilitative or non-restorative in nature."¹⁶

SB 2631 specifically addresses qualifications of providers of ABA by requiring coverage only when these services are provided or supervised by a "board-certified behavior analyst."¹⁷ The bill does not specify what licensing board or authority may issue a qualifying certification; however, it may be assumed that this refers to the Behavior Analyst Certification Board. SB 2631 also allows for coverage of ABA treatments when provided by a licensed psychologist so long as the services are within the psychologist's formal training and supervised experience.¹⁸

Finally, SB 2631 specifically addresses the application of the ASD benefits mandate to insurance plans offered through the Hawaii Health Connector.¹⁹ After January 1, 2014, the bill excludes from insurance plans sold through the Hawaii Health Connector those benefits mandated by SB 2631 that exceed the essential health benefits required by the PPACA.²⁰ The requirement to cover ASD treatments will continue to apply to insurance plans sold outside of the Hawaii Health Connector.²¹

Background on PPACA and Essential Health Benefits

The PPACA requires certain health insurance plans sold in the United States to provide their members with certain established levels of coverage for "essential health benefits." The PPACA requires individual market and small-group market health plans, whether sold inside or outside of a state's health insurance exchange, to cover ten broad categories of essential health benefits.²² These essential health benefit ("EHB") categories are:

- Ambulatory patient services;
- Emergency services;
- Hospitalization;
- Maternity and newborn care;
- Mental health and substance abuse disorder services, including behavioral health treatments;
- Prescription drugs;

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ SB 2631 §2 at 4, §3 at 9.

¹⁹ *See generally* Haw. Rev. Stat. Chapter 435H. (Authorizing the creation and specifying the duties of Hawaii's health insurance exchange.)

²⁰ SB 2631 §2 at 4.

²¹ *Id.*

²² PPACA § 1302; PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70669 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 156). *See also* Essential Health Benefits Bulletin, Center for Consumer Information and Insurance Oversight (Dec. 16, 2011), http://cciio.cms.gov/resources/files/Files2/12162011/essential_health_benefits_bulletin.pdf. Self-insured plans, large group health plans, and grandfathered health plans are not included in the PPACA's requirement to provide coverage for the ten categories of EHB.

- Rehabilitative and habilitative services and devices;
- Laboratory services;
- Preventative and wellness services and chronic disease management; and
- Pediatric services, including oral and vision care.²³

The PPACA directs the U.S. Department of Health and Human Services (DHHS) to define the scope of EHB, and the law requires that the level of coverage of EHB be equal to the scope of the benefits provided under a typical employer-based plan.²⁴ Each state will be allowed to select its own benchmark health plan that reflects the scope of services offered by a typical employer plan in that state.²⁵ This provision of the PPACA was intended to offer each state the flexibility to select a benchmark plan that provides coverage for EHB in a manner that best meets the needs of its citizens.

States would be allowed to select as a benchmark from among:

- The largest plan, by enrollment, in any of the three largest small group insurance products in the state's small group market;
- Any of the largest three state employee health benefit plans by enrollment;
- Any of the largest three national Federal Employee Health Benefit Plans options, by enrollment; or
- The largest insured commercial non-Medicaid health maintenance organization operating in the state.²⁶

All ten categories of EHB must be covered by a state's choice of benchmark plan, and if not, the benchmark plan must be supplemented to include benefit categories that are not already covered.²⁷

Proposed Rules Regarding Mental Health Services

Of particular relevance to this report is the EHB category of mental health and substance abuse services. This category specifically includes behavioral health treatments.²⁸ While there is evidence to suggest that Congress included behavioral health treatments specifically to address

²³ PPACA § 1302(b)(1).

²⁴ *Id.* at § 1302(b)(2).

²⁵ See Essential Health Benefits Bulletin, *supra* note 22.

²⁶ PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70669 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 156). See also Essential Health Benefits: Illustrative List of the Largest Three Small Group Products by States, Center for Consumer Information and Insurance Oversight (July 3, 2012), <http://cciio.cms.gov/resources/files/largest-smgroup-products-7-2-2012.pdf>.PDF.

²⁷ PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70669 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 156).

²⁸ PPACA § 1302(b)(1)(E). "[T]he secretary shall define the essential health benefits, except that such benefits shall include at least the following general categories and the items and services covered with the categories : (E) Mental health and substance abuse disorder services, including behavioral health treatment.")

coverage for treatment for autism spectrum disorders,²⁹ the PPACA does not specify the types of behavioral health treatments that are to be included. Consequently, there is no specific reference to the types of behavioral health therapies that are commonly used to treat ASD, including applied behavior analysis.³⁰ Proposed rules recently published by DHHS shed light on the mental health services category of EHB, but they, too, do not specify the types of behavioral health treatments that are to be included.³¹ It remains to be seen whether future guidance from DHHS will specifically address the inclusion of behavioral health treatments for ASD patients in essential health benefits.

State Mandated-Benefits and EHB

Under the PPACA, states may require qualified health plans³² offered through their state health insurance exchanges to offer benefits in excess of the ten EHB mandated by the PPACA. However, states must assume the costs of these excess state-mandated benefits.³³ To defray the

²⁹ See Letter from Sen. Robert Menendez to Honorable Kathleen Sebelius, Secretary of Health and Human Services (Jan 31, 2012) (on file with author). See also Statement of Sen. Robert Menendez (Sept. 25, 2009), <http://www.menendez.senate.gov/newsroom/press/release/?id=52ffc47e-cec3-4071-9242-0d9045b31b95>

("A major goal of real health insurance reform is to ensure that insurance plans won't deny coverage for necessary and important services – and that certainly includes behavioral health treatment," said Menendez. "With the highest rate of Autism Spectrum Disorders in the nation, the people of New Jersey certainly understand how important it is not only to have access to this type of treatment but to have insurance coverage for it. Families affected by these conditions shouldn't have to worry about going bankrupt because of it, and we are trying to help ensure that they don't.").

³⁰ See Chapter 2 of this report for a discussion of applied behavior analysis as a treatment for ASD.

³¹ PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70670 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 156). The proposed rules require compliance with 45 C.F.R. § 146.136 implementing the Mental Health Parity and Addiction Equity Act of 2008. Among other provisions, 45 C.F.R. § 146.136 prevents a group health plan from applying "any financial requirement or treatment limitation to mental health or substance abuse disorder benefits that is more restrictive than the predominant financial requirement or treatment limitation" that is applied to medical/surgical benefits that are also covered by the plan.

³² The term "qualified health plans" refers to health insurance plans that include the EHB, meet other requirements of the PPACA, and have been approved by a state's health exchange authority for sale in a state's health insurance exchange. In Hawaii, qualified health plans need to be approved by the Hawaii Insurance Commissioner and the board of directors of the Hawaii Health Connector before they may be deemed to be qualified health plans and offered for sale in the Hawaii Health Connector. See PPACA § 1301(e); Haw. Rev. Stat. § 435H-6.

³³ PPACA § 1311(d)(3)(B), as amended by PPACA § 10104(e):

("(3) Rules relating to additional required benefits.

- (A) In general.—Except as provided in subparagraph (B), an Exchange may make available a qualified health plan notwithstanding any provision of law that may require benefits other than the essential health benefits specified under section 1302(b).
- (B) States may require additional benefits.
- (i) In general. -- Subject to the requirements of clause (ii), a State may require that a qualified health plan offered in such State offer benefits in addition to the essential health benefits specified under section 1302(b)
- (ii) State must assume cost. -- A State shall make payments
 - (I) to an individual enrolled in a qualified health plan offered in such State; or (II) on behalf of an individual described in subclause (I) directly to the qualified health plan in which such individual is enrolled; to defray the cost of any additional benefits described in clause (i).").

Footnote continued on next page.

cost of the additional benefits, states may make payments to either the insurance enrollee or directly to the issuer of the qualified health plan.³⁴ The plan issuer is required to calculate the cost attributable to the additional benefit mandated by the state.³⁵

It appears that a state-mandated benefit that is enacted after December 31, 2011, and that is not already included in the state's EHB benchmark plan may not be added to the State's EHB benchmark plan without the state having to defray the costs of the additional benefit.³⁶ Guidance from DHHS specifically states:

Could a State add State-mandated benefits to the State-selected EHB benchmark plan today without having to defray the costs of those mandated benefits?

A: No. We intend to clarify that under the proposed approach *any State-mandated benefits enacted after December 31, 2011 could not be part of EHB for 2014 or 2015*, unless already included within the benchmark plan regardless of the mandate. Note that any State-mandated benefits enacted by December 31, 2011, would be part of EHB if applicable to the State-selected EHB benchmark plan.³⁷ [emphasis added]

The DHHS has acknowledged that 2014 and 2015 will be transitional years, and it has stated that it intends to revisit its approach to benchmark plans and inclusion of state-mandated benefits in 2016.³⁸

Hawaii's Benchmark Plan and the State's Responsibility to Defray Costs of Mandated Treatments

In September 2012, Hawaii proposed as its benchmark plan³⁹ the HMSA Preferred Provider Plan 2010.⁴⁰ (See Appendix D for a description of Hawaii's proposed benchmark plan.)

See also PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, 77 Fed. Reg. 70644, 70668 (Nov. 26, 2012) (to be codified at 45 C.F.R. pt. 155).

³⁴ PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, *supra* note 33.

³⁵ *Id.*

³⁶ PPACA; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation, *supra* note 33. See also commentary on state required benefits, *supra* at 70647.

³⁷ Frequently Asked Questions on Essential Health Benefits Bulletin, Centers for Medicare and Medicaid Services (Feb. 17, 2012), <http://cciio.cms.gov/resources/files/Files2/02172012/ehb-faq-508.pdf>. See also commentary on state required benefits, *supra* note 36.

³⁸ See Frequently Asked Questions on EHB, *supra* note 37.

³⁹ http://hawaii.gov/dcca/ins/Insurance%20Division%20Handout_Benchmark%20Plan_9.10.12.pdf. See also Essential Health Benefits: List of the Largest Three Small Group Products by State, Center for Consumer Information and Insurance Oversight (Jul. 3, 2012), <http://cciio.cms.gov/resources/files/largest-smgroup-products-7-2-2012.pdf>. Hawaii selected its benchmark plan from among the three largest small group plans, which are, by enrollment, HMSA Preferred Provider Plan 2010 (PPO), UHA 300, and Kaiser Foundation Health Plan Small Groups (HMO).

⁴⁰ Proposed Hawaii EHB Benchmark Plan, Centers for Medicare and Medicaid Services, Center for Consumer Information and Insurance Oversight, <http://cciio.cms.gov/resources/EHBBenchmark/proposed-ehb-benchmark-plan-hawaii.pdf>. See also PPACA Essential Health Benefits - Benchmark Benefits Package, Hawaii Department of Footnote continued on next page.

Coverage for screening and diagnosis of ASD⁴¹ and certain prescription drugs used to treat ASD are included in the benchmark plan.⁴² Mental health services and some behavioral health treatments are covered generally under the plan (to the extent that they would be required under the federal mental health parity law).⁴³ However, applied behavior analysis for ASD is not among the autism services or behavioral health treatments that the benchmark plan would cover.⁴⁴ Therefore, given that neither the PPACA nor federal guidelines specifically include the types of behavioral health services typically used to treat ASD, and coverage for ABA treatments for ASD is not included in the health plan that Hawaii has selected as its benchmark plan, those treatments would not appear to be part of Hawaii's package of essential health benefits.

A statutory mandate that health plans in Hawaii cover screening, diagnosis, and treatment for ASDs, including behavioral health treatments and specifically ABA, would not automatically result in inclusion of those benefits in the State's benchmark for EHB. According to DHHS, state-mandated benefits enacted after December 31, 2011, would be in excess of EHB unless those benefits were *already* included in the benchmark plan.⁴⁵ Therefore, because any Hawaii mandate for ASD benefits now would take effect after December 31, 2011, those mandated benefits (specifically ABA) would not be included in Hawaii's EHB benchmark plan, and thus they would be considered an additional benefit. However, like other categories of EHB, should the DHHS at some point clarify that behavioral health treatments for ASD specifically are to be part of EHB, then Hawaii would have to supplement its benchmark plan to include this new category of benefits.⁴⁶

As noted earlier in this chapter, a state that mandates benefits in addition to EHB would be required to defray the cost of those benefits when those benefits are included in health plans offered through a state's health insurance exchange. Thus, under ordinary circumstances, Hawaii would be required to defray any costs of providing mandated treatments that are not already covered by its benchmark plan for persons insured under qualified health plans offered through the Hawaii Health Connector.

Commerce and Consumer Affairs,

http://hawaii.gov/dcca/ins/Benchmark%20Benefit%20Package%20Grid_Final%20for%20DCCA%20Site.pdf.

⁴¹ The EHB benchmark plan includes age-appropriate developmental/behavioral assessment services, including autism screening in early childhood, as recommended by the Bright Futures/American Academy of Pediatrics schedule of well-child visits. Proposed Hawaii EHB Benchmark Plan, *supra* note 40. *See also* HMSA Preventative Health Guidelines - Newborns and Children,

http://www.hmsa.com/portal/provider/MM.14.002_Preventive_Health_Guidelines_Newborns_and_Children_082412.pdf. *See also* Bright Futures/American Academy of Pediatrics Recommendations for Preventative Pediatric Health Care, <http://brightfutures.aap.org/pdfs/AAP%20Bright%20Futures%20Periodicity%20Sched%20101107.pdf>.

⁴² Proposed Hawaii EHB Benchmark Plan, *supra* note 40. HMSA Drug Formulary, http://www.hmsa.com/portal/provider/DR_Formulary_HTML.htm.

⁴³ *See* Proposed Hawaii EHB Benchmark Plan, *supra* note 40.

⁴⁴ *Id.* *See also* HMSA Preferred Provider Plan 2010 Benefit Plan Summary,

http://www.hmsa.com/mediacenter/print/assets/ppp_benefitssummary%28800%29.pdf. *See also* HMSA PPP and CompMED Member Handbook, at 24, http://www.hmsa.com/mediacenter/print/assets/memberhandbook_ppo.pdf.

⁴⁵ *See* note 37 *supra* and accompanying text.

⁴⁶ *See* note 27 *supra* and accompanying text.

However, SB 2631 includes language that specifically exempts qualified health plans in Hawaii that are offered through the Hawaii Health Connector from the requirement to cover ASD benefits, if those benefits would be in excess of Hawaii's essential health benefits.⁴⁷ By excluding these health plans from the mandate, the State would be relieved of its responsibility under the PPACA to defray the cost of those mandated ASD benefits that fall outside Hawaii's EHB benchmark.⁴⁸ However, while this language, if made part of any mandate adopted by the Legislature, would seem to exempt qualified health plans offered through the Hawaii Health Connector from covering ABA treatments, health plans offered *outside* the Hawaii Health Connector would continue to be subject to the mandate to provide coverage for ASD treatments, including ABA.⁴⁹

PPACA's Effect on Annual Coverage Limits for Behavioral Health Treatments

As noted, SB 2631 would permit insurers to limit the mandated benefits for behavioral health treatments to a minimum of \$50,000 per year or \$300,000 during the lifetime of the individual.⁵⁰ It is not clear whether these dollar value limits would be valid under the PPACA. Generally speaking, the PPACA prohibits health plans from establishing lifetime dollar limits on essential health benefits.⁵¹ DHHS rules prohibit both lifetime dollar limits and annual dollar limits on EHB, beginning January 1, 2014.⁵² These prohibitions apply to self-insured group health plans, large group health plans, grandfathered health plans, as well as small group and individual health plans.⁵³ However, because it is not clear whether behavioral health treatments for ASD are considered an EHB, and because they are not included in Hawaii's benchmark plan of essential health benefits, it is not clear whether the prohibition on dollar value limits in SB 2631 would apply.

DHHS has issued guidance stating that health plans will be permitted to make "actuarially equivalent substitutions" for dollar value caps within categories of EHB. Plans would be able to impose "non-dollar limits, consistent with other guidance, that are at least actuarially equivalent to the annual dollar limit."⁵⁴ Thus, it would appear that service limits, such as hours of therapy,⁵⁵ rather than dollar value limits would be allowable;⁵⁶ however, the

⁴⁷ SB 2631 §2 at 4.

⁴⁸ This exclusion provision in SB 2631 is not unusual. Arkansas, California, and Rhode Island all include similar language in their ASD benefits mandate statutes to prevent those states from defraying costs for mandated benefits that are not part of their EHB.

⁴⁹ SB 2631, *supra* note 47. ("Nothing in this subsection shall nullify the application of this section to plans offered outside the Hawaii health connector.")

⁵⁰ SB 2631 §2 at 2, §3 at 8.

⁵¹ PPACA § 1001(5), amending §2711 of the Public Health Service Act.

⁵² 45 C.F.R. §147.126.

⁵³ See Frequently Asked Questions on EHB, *supra* note 37.

⁵⁴ *Id.*

⁵⁵ Note that Wisconsin's ASD benefits mandate includes a minimum of 30-35 hours of care per week in its ASD benefits mandate. See Table 2 in Chapter 5 of this report.

⁵⁶ In fact, Ohio's governor recently included behavioral health treatments for autism in that state's essential health benefits benchmark plan, specifically, "up to 20 hours per week of non-specific evidence based therapy and up to 30

Footnote continued on next page.

Bureau was unable to locate any guidance from DHHS on determining "actuarial equivalence" for the purposes of substituting service limits for dollar value caps.⁵⁷

Many states' autism mandates contain lifetime or annual dollar value limits on ASD treatments,⁵⁸ but at least one state reported to the Bureau that it will be introducing a bill during its upcoming legislative session to remove the dollar value limits from its statute in order to comply with PPACA.⁵⁹ Until DHHS issues rules to directly address this issue, it may be more feasible for states to impose a limit on services, rather than impose a dollar value amount on a mandated benefit.⁶⁰

Mandated Coverage for ASD Treatment up to Age 26

It is difficult to analyze the impact of the insurance mandate in SB 2631 with respect to the young adult population up to age 26, other than to state that the bill requires insurers to cover treatment for ASD up to that age. This provision of SB 2631 appears to be intended to make Hawaii's mandate consistent with provisions of the PPACA that allow dependents to be covered under their parents' health insurance up to age 26.⁶¹ The bulk of research on the effectiveness of applied behavior analysis as a treatment for ASD concerns the pediatric population, and there is significantly less available research on the effectiveness or use of behavioral analytic treatments in the adult ASD population.⁶² However, behavioral therapy providers in Hawaii have confirmed that they do treat some, but not many, adult ASD patients with ABA.⁶³ Generally speaking, it would seem that use of behavioral therapies as a treatment for ASD, as well as their

visits per year for mental/behavioral outpatient services." It should also be noted that, at the time the Governor's office announced the policy, a spokesman for the Governor's office "could not elaborate on how much this coverage is expected to raise premiums." See "Governor Kasich Announces New Autism Policy," Autism Society of Ohio, http://www.autismohio.org/index.php?option=com_content&view=article&id=3924:governor-kasich-announces-new-autism-policy&catid=308:latest&Itemid=188. See also "Governor Mandates Coverage for Autism: Insurers to Include Treatment, Therapy," Toledo Blade (Dec. 22, 2012), <http://www.toledoblade.com/news/2012/12/22/Governor-mandates-coverage-for-autism-Insurers-to-include-treatment-therapy.html>. See generally Proposed Ohio EHB Benchmark Plan, Center for Consumer Information and Insurance Oversight, <http://cciio.cms.gov/resources/EHBBenchmark/proposed-ehb-benchmark-plan-ohio.pdf.pdf>.

⁵⁷ The Center for Consumer Information and Insurance Oversight issued a bulletin outlining its approach to actuarial value for coverage of essential health benefits, but it does not address calculating actuarial equivalence for the purpose of substituting lifetime or annual dollar value limits. See Actuarial Value and Cost-Sharing Reductions Bulletin, Center for Consumer Information and Insurance Oversight (Feb. 24, 2014), <http://cciio.cms.gov/resources/files/Files2/02242012/Av-csr-bulletin.pdf>.

⁵⁸ See Table 2 in Chapter 5 of this report.

⁵⁹ Telephone communication with representative, New Mexico Public Regulation Commission (Oct. 29, 2012).

⁶⁰ One state reported to the Bureau that, despite the existence of dollar value limitations, insurers in that state generally do not enforce the limits due to the administrative difficulty of tracking individual members' claims for ASD treatment services. Telephone communication with representative, Wisconsin Office of the Commissioner of Insurance (Nov. 29, 2012).

⁶¹ See generally PPACA § 1001. (As written, SB 2631 would allow any insured, not only dependents covered under a parent's health plan, to have benefit coverage up to that age.)

⁶² See generally Peter F. Gehrhardt, *Applied Behavior Analysis and Adults with Autism: Applications to Promote Competence and Quality of Life*, Association of Behavior Analysts International, <http://www.abainternational.org/aba/newsletter/vol321/Gerhardt.Peter.asp>

⁶³ Telephone communication with administrator, Trumpet Behavioral Health (Oct. 16, 2012).

cost, is less among the adult ASD population than pediatric patients.⁶⁴ It should also be noted that no other state's ASD benefits mandate caps eligibility for ASD treatments at an age above 21 years old, and several states set a cap somewhere below age 21.⁶⁵

⁶⁴ Michael L. Ganz, The Lifetime Distribution of the Incremental Societal Costs of Autism, 161 *Archives of Pediatrics & Adolescent Medicine* 343, 345 (Apr. 2007).

⁶⁵ See Table 2 in Chapter 5 of this report.

Chapter 8

IMPACT OF AUTISM SPECTRUM DISORDERS BENEFITS MANDATE ON CERTAIN PUBLIC HEALTH PROGRAMS IN HAWAII

Med-QUEST

The full measure of the impact of an ASD benefits mandate on Hawaii's Med-QUEST program is not clear. Under the federally-mandated Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program, Hawaii's Medicaid programs are required to provide medically necessary services to qualified low-income persons up to age 21. At this time, the Med-QUEST programs do not cover ABA services for ASD patients because they are not considered by the program to be evidenced-based and, therefore, not medically necessary.¹

As with other insurers in the State, a requirement for Med-QUEST to provide ASD benefits that include ABA may be expected to result in increased costs. The Med-QUEST Division estimates that approximately 20% of Hawaii's total population is covered by its programs.² It is unknown how many of those individuals are diagnosed with an ASD, but given the prevalence rate of ASD, the number could be significant. The agency states that approximately half of the additional costs for providing additional ASD benefits would be covered through federal Medicaid funds, but the State would need to appropriate moneys to cover its portion of the additional costs.³

The agency has not undertaken a study of the impacts of covering ASD treatments, including behavioral health treatments and ABA, through its health plans.⁴ Accordingly, without a full actuarial analysis, the amount of cost increases is unknown.

However, in providing information for this report, the Med-QUEST Division raised several points worth noting. The Division suggested that a review of the effectiveness of ABA may be available through the federal Agency for Healthcare Research and Quality's (AHRQ) Evidence-based Practice Centers program.⁵ If the State wishes to pursue a thorough and scientific review of the issue, consideration should be given to nominating this topic for review by the AHRQ.⁶

¹ Interview with administrator, Med-QUEST Division (Sept. 24, 2012).

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.* See discussion in Chapter 2, note 83 and accompanying text. The Vanderbilt Evidence-based Practice Center recently reviewed for AHRQ evidence on therapies for children ages 2-12 with ASD.

⁶ Healthcare topics that are selected under the Agency for Healthcare Research and Quality's Evidence-based Practice Centers (EPC) Program undergo a rigorous review of all relevant scientific literature by a broad range of healthcare stakeholders. Eligible topics include clinical, behavioral, organizational, and financing issues relating to healthcare organization and delivery. Reviews under the program result in reports that are used to develop, among
Footnote continued on next page.

Further, it was pointed out that if behavioral health treatments, including ABA, are mandated for coverage in Hawaii, they should not be limited specifically to ASD because individuals with other conditions that may benefit from these treatments may also seek access to them.⁷ Closely related to this, it was observed that limiting ABA services to persons with ASD could result in physicians misdiagnosing patients with other illnesses as having ASD, in order to qualify those patients for treatments that would not otherwise be covered by insurers or Medicaid.⁸ The agency also suggested that an ASD treatment mandate that covers ASD patients up to age 26 would be inconsistent with the EPSDT requirement to provide medically necessary services to patients up to age 21.⁹

Hawaii Employer-Union Health Benefits Trust Fund

The exact impact of an ASD benefits mandate on health benefits plans provided to state and county employees through the Hawaii Employer-Union Health Benefits Trust Fund ("EUTF") is unknown and it appears EUTF has not considered the issue.¹⁰ As of 2010-2011, approximately 51,000 active employees were enrolled in EUTF medical plans, with annual premiums of \$270,743,951.¹¹ Considering the estimated prevalence rate of ASDs in Hawaii, it seems reasonable to assume that a number of enrollees would be consumers of ASD treatment services, including ABA. Therefore, under an ASD benefits mandate, it seems likely that claims for ABA treatments would rise, with claim costs and premiums also increasing as a result. Beyond this assumption, the Bureau is unable to comment on the possible effects of such a mandate on the EUTF.

Hawaii Health Connector

Although the Hawaii Health Connector is established as an independent nonprofit entity, not a state agency, the potential effect of mandated ASD benefits on the enrollees of qualified health plans purchased through the Connector should be noted.

Early estimates provided by the Hawaii Health Connector and the Hawaii Insurance Commissioner suggest that approximately 53,900 persons would be candidates to purchase

other things, healthcare coverage decisions and quality measures. See Evidence-based Practice Centers website, <http://www.ahrq.gov/clinic/epc/>. See also <http://www.effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/>.

⁷ MedQUEST Division, *supra* note 1.

⁸ *Id.*

⁹ *Id.*

¹⁰ The Bureau contacted the Hawaii Employer-Union Trust Fund for information; however, EUTF was unable to provide specific information relating to this issue.

¹¹ Hawaii Employer-Union Health Benefits Trust Fund, Annual Report Fiscal Year 2010-2011 (Dec. 2011), <http://eutf.hawaii.gov/eutf-board-proceedings/Board%20Proceedings%20-%20Annual%20Reports/EUTF%20Annual%20Report%202010-11%20Final.PDF>. (This total does not include former Hawaii State Teachers Association voluntary employees' beneficiary association members who transitioned into EUTF plans in 2011.)

individual health plans through the Hawaii Health Connector.¹² It is also estimated that 151,000 individuals in Hawaii are covered under a small group policy that presumably may be purchased through the Connector.¹³ Thus, there are approximately 200,000 persons who potentially could be insured by qualified health plans purchased through the Hawaii Health Connector. Again, given the estimated prevalence rate of ASD in the State, it seems likely that some of these persons would be potential consumers of ASD treatment services. However, as discussed previously, Senate Bill No. 2631, S.D. 2 (2012) would exempt plans purchased through the Connector from its ASD benefits coverage mandate.¹⁴ Accordingly, under such provisions, there could be a significant number of persons who would not be eligible for ASD benefits, despite having an ASD diagnosis and health insurance.

¹² Email from Hawaii Health Connector (Oct. 11, 2012); email from Health Insurance Division, Department of Commerce and Consumer Affairs (Oct. 22, 2012).

¹³ Email from Health Insurance Division, Department of Commerce and Consumer Affairs (Oct. 22, 2012).

¹⁴ See Chapter 7, note 20 and accompanying text.

Chapter 9

OTHER CONCERNS

Additional Administrative Costs for Insurers

A mandatory coverage of ASD benefits may be expected to result in an added administrative burden on all insurers affected. For instance, initial administrative duties for Hawaii's Med-QUEST program would include adjusting capitation rates and amending contracts with providers.¹ Long-term cost impacts to the program may include costs of additional administrative overhead, monitoring compliance with any federal or state reporting requirements, and handling increased grievances, appeals, and challenges to coverage decisions.² Private insurers contacted for this study predict similar increased administrative costs, including additional staff and case managers to handle referrals, certifications, and adjustments to coding.³

Adequacy of ABA Provider Network

Behavioral health treatments, and applied behavior analysis (ABA) specifically, are generally provided by a team of trained professionals.⁴ The Behavior Analyst Certification Board (BACB) is a national accrediting organization that certifies behavior analysts and assistant behavior analysts.⁵ Typically, a plan for providing ABA treatment to a patient is overseen by a behavior analyst with a master's degree level of training, known as a board-certified behavior analyst, or BCBA. More intensive one-on-one therapies are delivered by a board-certified assistant behavior analyst, known as a BCaBA, or a non-certified "line therapist" or "tutor," who has a bachelor's degree level of training. Assistant behavior analysts and line therapists are required to work under the supervision of a behavior analyst.

If a mandate to cover behavioral health treatments for ASDs, such as the mandate in SB 2631, is enacted in Hawaii, the existence of a robust network of qualified providers of treatment services will be critical. Not only is this important for patients' access to treatment, but SB 2631 restricts insurance reimbursement to only certified providers.⁶ Arkansas has an ASD

¹ Interview with administrator, Hawaii Med-QUEST Division (Sept. 24, 2012).

² *Id.*

³ Interview with representative, HMSA (Sept. 12, 2012); interview with representative, Kaiser Permanente (Sept. 13, 2012).

⁴ A general description of ABA treatments and methods are provided in Chapter 2 of this report. Note that qualified psychologists also administer ABA, and indeed, SB 2631 provides for delivery of ABA by a licensed psychologist. See SB 2631 § 2 at 4, § 3 at 9.

⁵ See generally Behavior Analyst Certification Board website, <http://www.bacb.com>. See also Behavior Analyst Certification Board Guidelines for Health Plan Coverage of Applied Behavior Analysis Treatment for Autism Spectrum Disorder (2012), at 38-40 for a description of eligibility requirements for BACB certification.

⁶ Senate Bill 2631, § 2 at 4, § 3 at 9. ("Coverage shall be required for applied behavioral analysis services only when provided or supervised by a board-certified behavior analyst or by a licensed psychologist . . . Reimbursement . . . Footnote continued on next page.

mandate that requires coverage for ABA, and its state programs reports a similar number of children with ASD as in Hawaii, so the experience in Arkansas may be instructive. Arkansas has reported that its provider network of board-certified behavior analysts was initially quite small and unable to serve all of the new ASD patients who requested treatment services, especially ABA.⁷ Despite the existence of the mandate, insurers in Arkansas reported little initial activity, presumably due to limited access to certified or licensed providers.⁸ However, since the enactment of its mandate, Arkansas's provider network appears to be growing to meet the new demand. Arkansas also hopes to meet future demand by creating a master's level certification program through the University of Arkansas.⁹

According to the Behavior Analyst Certification Board, there are 53 board-certified behavior analysts and 20 board-certified assistant behavior analysts¹⁰ in Hawaii. At least one patient advocacy group in Hawaii has suggested that the present number of qualified ABA providers in Hawaii would be adequate to treat the population of persons with an ASD in the State.¹¹ Similarly, a provider interviewed for this report suggested that, while an ASD benefits mandate would create a large caseload for the existing number of ABA providers, "it would not be insurmountable."¹² However, until the actual demand for services is known, insurers, providers, and patient advocates should be cognizant of access to care issues. Access to care takes on additional implications when one considers the needs of patients on the Neighbor Islands. Although the State as a whole may appear to have a sufficient number of qualified behavior analysts, it is not clear that patients on each island will be adequately served. Of the board-certified behavior analysts and assistant behavior analysts in Hawaii, 63 are based on Oahu, whereas only 5 are based on Maui, 3 are based on Hawaii, and 2 are based on Kauai.¹³ Accordingly, should an ASD benefits mandate be enacted, it will be important to ascertain the adequacy of the provider network on the Neighbor Islands and take measures to ensure that ASD patients on those islands have access to qualified providers.

Licensing for ABA Providers

Closely related to the issue of whether the ABA provider network is sufficient to meet demand for services under a mandate is the need to ensure adequate qualifications and training of ABA providers. As noted above, SB 2631 requires behavior analysts who provide ABA to be board-certified. However, there is no separate state licensing requirement for behavior analysts in Hawaii. An issue that has been raised for consideration is whether, under a mandate,

shall include reimbursement for the therapists working under the supervision of the board-certified behavior analyst or licensed psychologist.")

⁷ See Chapter 6, note 32 and accompanying text.

⁸ Telephone communication with administrator, Arkansas Department of Insurance (Sept. 5, 2012).

⁹ Telephone communication with administrator, Arkansas Autism Resource and Outreach Center (Nov. 15, 2012).

¹⁰ Behavior Analyst Certification Board, Certificant Registry: Hawaii,

<http://www.bacb.com/index.php?page=100155&by=state>. It has been suggested that Hawaii has such a high number of certified providers because TRICARE provides coverage for ABA treatments, and there is a large number of military dependents in Hawaii who are insured by TRICARE.

¹¹ Telephone communication with administrator, Autism Society of Hawaii (Sept. 26, 2012).

¹² Telephone communication with administrator, Trumpet Behavioral Health (Oct. 16, 2012).

¹³ BACB Hawaii registry, *supra* note 10.

specialists who administer ABA should be regulated by a state licensing board, in addition to the certification requirement by a national accrediting body.

Nearly all of the 33 states that mandate ASD benefits specifically require certification by the BACB or a "nationally recognized board" for behavioral analysts who provide ABA treatment to ASD patients. At least nine of these states¹⁴ require licensing by a state regulatory authority for behavioral analysts providing services to ASD patients. In five of these nine states, however, the state law requires the state licensing authority to accept BACB certification as a qualifying credential for licensing.¹⁵

In providing information for this study, several providers and insurers in Hawaii expressed the need for a licensing requirement. It was suggested that licensing would ensure the quality and training of behavior analysts and their assistants who provide services in Hawaii.¹⁶ It was also contended that adequate licensing or certification for behavior analysts may be a necessary prerequisite to ensure Medicaid and insurer reimbursement to providers for their specialized services.¹⁷ At least one provider has suggested that a state licensing authority could create an effective path for state licensing by recognizing the national certifications of the Behavior Analyst Certification Board, similar to the practice in several states.¹⁸ In addition, criminal background checks were strongly recommended as a part of any licensing process, because of the proximity of ABA providers to children.¹⁹

Although licensing provisions might provide some measure of confidence in ensuring the safety and competency of ABA providers, at least one state's experience highlights the need to ensure that licensing provisions not restrict patients' access to services. For instance, Virginia's mandate requires that behavior analysts be licensed with that state's Board of Medicine. However, at the time the mandate was enacted, the Board had not adopted administrative rules for licensing behavior analysts. Many patients were initially unable to make insurance claims for ABA services because there were no licensed providers in the State, and as a result, patients remained unable to have their ABA services covered.²⁰ Licensure regulations became effective on September 19, 2012,²¹ over nine months after the ASD benefits mandate took effect. There are now 131 behavior analysts and 6 assistant behavior analysts licensed to practice in Virginia.²²

¹⁴ Alabama, Arizona, Kentucky, Missouri, Nevada, Pennsylvania, Rhode Island, Virginia, and Wisconsin.

¹⁵ Kentucky, Missouri, Nevada, Virginia, and Wisconsin. *See* Behavior Analyst Certification Board; Behavior Analyst Licensure/Certification Statutes (updated November 2012), www.bacb.com/index.php?page=100170&type=link_low. Note that this number may not be inclusive, as a number of ASD benefits mandate statutes direct a state agency to develop standards or qualifications for behavior analysts.

¹⁶ Interview with representative, Kaiser Permanente (Sept. 13, 2012); telephone communication with administrator, Autism Society of Hawaii (Sept. 26, 2012).

¹⁷ Interview with administrator, Hawaii MedQUEST Division (Sept. 24, 2012).

¹⁸ Telephone communication with administrator, Trumpet Behavioral Health (Oct. 16, 2012). *See* note 15 *supra* and accompanying text.

¹⁹ Telephone communication with administrator, Autism Society of Hawaii (Sept. 26, 2012).

²⁰ Jonathan Wilson, Virginia Drops Ball on Licensing for Autism Treatment, WAMU 88.5 American University Radio (Dec. 19, 2011), http://wamu.org/news/11/12/19/virginia_drops_ball_on_licensing_for_autism_treatment.

²¹ Virginia Board of Medicine website, <http://www.dhp.virginia.gov/medicine/>.

²² Telephone communication with administrator, Virginia Board of Medicine (Dec. 10, 2012).

If the Legislature chooses to enact a mandate for ABA treatments, it has been suggested that a simpler alternative to a licensing requirement, and the concomitant creation of a new licensing entity, but that nevertheless would ensure the training and proficiency of ABA providers in the State, could be establishing a registry of board-certified analysts and non-certified line therapists who practice in Hawaii and who have completed a criminal background check.²³

Recent Judicial Action Relating to ASD Benefits Coverage and ABA

Recently, courts around the country have begun to consider whether ABA treatments are medically necessary treatments for ABA. For example, in *Berge v. U.S.*,²⁴ plaintiffs contested an administrative decision by the United States Department of Defense to deny coverage for ABA treatments for dependants of retired military members who are enrolled in the TRICARE Basic insurance program.²⁵ The Department of Defense interpreted the regulatory language authorizing insurance payments for only "medically or psychologically necessary" treatments and restricting coverage for "unproven" treatments as precluding insurance reimbursements for ABA in the TRICARE Basic program.²⁶ However, the same "unproven" standard applies in the TRICARE ECHO program, which covers ABA treatments only for dependents of active duty military members.

After examining the extensive documentation on ABA therapy that was available to the agency, the court concluded that "there appears to be a general consensus that ABA therapy does indeed improve the functioning of children with ASD."²⁷ The court further found that the agency "failed to articulate a reasoned explanation for its determination that ABA therapy is unproven, particularly in light of evidence before it suggesting the contrary."²⁸ Ultimately, the *Berge* court found that the agency's decision to deny ABA coverage to beneficiaries in one TRICARE program but permit coverage in another TRICARE program, despite both programs having the same restriction with respect to covering unproven care, was arbitrary and capricious.²⁹ Accordingly, the Court ordered the department to provide coverage for ABA treatment for all qualified TRICARE Basic program beneficiaries, whether the members were retired or active duty.³⁰ The Department of Defense is revising its TRICARE policies to comply

²³ This approach was suggested by an administrator at the Arkansas Autism Resource and Outreach Center (Nov. 15, 2012).

²⁴ *Berge v. U.S.*, No. 10-0373 CIV-A (RBW), __ F. Supp 2d __, 2012 WL 3039736 (D.D.C. Jul. 26, 2012).

²⁵ TRICARE is the Department of Defense's health benefits program for dependents of military service members. The TRICARE Basic program provides health coverage to dependents of active duty and retired military personnel, but does not provide coverage for ABA. Coverage for ABA therapies is available through the TRICARE Extended Care Health Option (ECHO) program. However, the ECHO program is available to active duty dependents only and not available to dependents of military retirees. See discussion of TRICARE in Chapter 6, notes 101-110 and accompanying text.

²⁶ See *Berge*, *supra* note 24, at 2.

²⁷ *Id.* at 29.

²⁸ *Id.* at 34.

²⁹ *Id.* at 31, 34-35.

³⁰ *Id.* at 35.

with the court's ruling to cover ABA treatment for all eligible TRICARE beneficiaries, and the agency expects to issue guidance to the public and its beneficiaries in the near future.³¹ At the same time, the Department of Defense has indicated that it will appeal the court's decision.³² In the meantime, Congress has directed the agency to create a one-year pilot program to provide for the treatment of autism spectrum disorders including ABA. The program must begin no later than ninety days from the effective date of the authorizing act.³³ At the end of the year, the agency must report its findings and recommendations to Congress on the feasibility and advisability of establishing a beneficiary cost-share for ASD treatments.³⁴ Congress offered no guidance on coverage limits or other features of the pilot program. It is also unclear how the pilot program will affect the provision of ABA benefits under TRICARE ECHO.³⁵

More recently, a class action was certified in a Pennsylvania federal court challenging insurer CIGNA's denial of benefits for certain autism treatments, including ABA.³⁶ A similar class action on behalf of plaintiffs who were denied ABA treatment for autism by Blue Cross Blue Shield of Michigan is pending in a Michigan federal court.³⁷ In contrast, a Tennessee federal court declined to certify the class of plaintiffs in a similar case regarding ABA treatments that were denied by an insurer.³⁸ Similar class actions in Washington State have led at least one insurer there to suspend its limitations on coverage for ABA and other neurodevelopmental treatments pending the court's decision or the release of rules from that state's insurance commissioner.³⁹

³¹ See TRIWest, TRICARE Benefits, Applied Behavior Analysis (ABA) Therapy, <http://www.triwest.com/en/beneficiary/tricare-benefits/Knowledgebase-Archive/applied-behavior-analysis-aba-therapy/>. ("TRICARE Management Activity (TMA) is covering applied behavior analysis (ABA) therapy under the TRICARE basic benefit. Coverage includes ABA therapy for all TRICARE-eligible beneficiaries who meet the coverage eligibility criteria. This benefit and related coverage continues to be developed by TMA.") See also notes 106-109 and accompanying text in Chapter 5.

³² Patricia Kime, Tricare Expands Autism Therapy for Families, Army Times (Nov. 28, 2012), <http://www.armytimes.com/news/2012/11/military-tricare-expands-autism-therapy-112812w/>.

³³ Defense Authorization Act for Fiscal Year 2013, Pub. L. 112-239, § 705. The act was signed into law on Jan. 2, 2013.

³⁴ *Id.*

³⁵ *Id.*

³⁶ Churchill v. CIGNA Corp., No. 10-6911 CIV-A, Slip Copy, 2012 WL 3590691 (E.D. Pa. Aug. 21, 2012). (Order granting in part and denying in part Plaintiff's motion to expand the class definition.) Although Pennsylvania now has an ASD benefits mandate, the class of plaintiffs includes persons who were denied coverage prior to the mandate.

³⁷ Potter v. Blue Cross Blue Shield of Michigan, No. 10-cv-14981 (E.D. Mich. 2011). (Michigan's ASD mandate became effective in 2012, but the Potter case was initiated prior to the mandate.) See also Tracey S. Belapianta, Applied Behavioral Analysis Treatment for Autism Spectrum Disorder - The Fight for Coverage Under ERISA Plans, Bloomberg Law Reports, <http://about.bloomberglaw.com/2012/03/30/treatment-for-autism-spectrum-disorder/>.

³⁸ Grady v. Blue Cross Blue Shield of Tennessee, 4:09-cv-84 (E.D. Tenn.). See also Belapianta, *supra* note 37.

³⁹ Ostrom, C., Parents Sue to Demand Equal Insurance Coverage for Autism, The Seattle Times (Nov. 17, 2012), http://seattletimes.com/html/localnews/2019705690_autismlimits18m.html.

Recent Developments in the Federal Employee Health Benefits Program

Coverage for applied behavior analysis services may soon be a coverage option offered in insurance plans in the Federal Employee Health Benefits Program (FEHBP). On April 19, 2012, the United States Office of Personnel Management issued guidance for its fee-for-service carriers that authorizes benefits plans to include coverage for ABA for autistic patients. The guidance letter states:

The OPM Benefit Review Panel recently evaluated the status of Applied Behavior Analysis (ABA) for children with autism. Previously, ABA was considered to be an educational intervention and not covered under the FEHB Program. The Panel concluded that there is now sufficient evidence to categorize ABA as a medical therapy. Accordingly, plans may propose benefits packages which include ABA.⁴⁰

Because the policy allows insurers, but does not require them, to offer ABA coverage, it is unclear how many carriers in the FEHB Program will ultimately offer coverage for the treatment. For example, only 67 health plans, out of a total of 230 plans that participate in FEHBP, will offer ABA in 2013.⁴¹ The result may be that, in many states, ABA will be a covered treatment for FEHBP insurance beneficiaries in some areas, but not others.⁴²

⁴⁰ U.S. Office of Personnel Management, Healthcare and Insurance, Federal Employee Health Benefits Program Carrier Letter, Letter No. 2012-12(c) (Apr. 19, 2012).

⁴¹ Joe Davidson, Lack of Autism Coverage Leaves Parents Upset, Washington Post (Dec. 4, 2012), http://www.washingtonpost.com/local/lack-of-autism-coverage-leaves-parents-upset/2012/12/04/a86be9f8-3e50-11e2-bca3-aadc9b7e29c5_story.html.

⁴² *Id.*

Chapter 10

CONCLUSIONS AND RECOMMENDATIONS

As discussed in Chapter 1, House Concurrent Resolution No. 177, S.D.1 (2012), requests the Bureau to:

- (1) Assess the impact of the Patient Protection and Affordable Care Act (P.L. 111-148) on the proposal in Senate Bill No. 2631, S.D. 2, Regular Session of 2012, to require insurance coverage for the diagnosis and treatment of autism spectrum disorders by accident and health or sickness insurers, mutual benefit societies, and health maintenance organizations;
- (2) Assess the impact that such an autism spectrum disorder coverage mandate would have on programs financed by the State, including but not limited to the Hawaii Employer-Union Health Benefits Trust Fund and QUEST programs;
- (3) Analyze the cost of providing insurance coverage for autism spectrum disorders in Hawaii, based upon actual cost effects experienced in other states that require such coverage, to the extent of available information;
- (4) Report information on the recommended clinical guidelines made by organizations such as the American Academy of Pediatrics, the United States Surgeon General, the National Institute of Mental Health, or the National Research Council for the treatment of autism spectrum disorders; and
- (5) Provide information on autism spectrum disorder treatments for which other states mandate insurance coverage and the extent to which those treatments are required to be covered, including any assessments of the effectiveness of the mandate in identifying and treating patients in those states, to the extent of available information.

This chapter *summarizes* the Bureau's findings and conclusions with respect to each request made by the Legislature. In addition, this chapter summarizes other relevant findings that the Bureau believes to be worthy of consideration. (Responses appear here in the same order that they were addressed in the previous chapters.) Where appropriate, the Bureau's recommendations are noted.

Information on recommended clinical guidelines for the treatment of autism spectrum disorders.

Findings and Conclusions

- Autism spectrum disorders, or ASD, encompass a wide range of neurodevelopmental disorders, marked by communication and social impairments and repetitive and stereotyped behaviors. ASD includes classic autism, Asperger syndrome, and pervasive developmental disorder.¹ The exact cause of ASD is unknown, but there is evidence that genetic factors play a large role.² Individuals with ASD may have other co-occurring conditions such as intellectual disability, sensory problems, seizures, depression, or attention deficit hyperactivity disorder.³
- There appears to be no cure for ASD, but individuals with ASD can be helped by appropriate treatment, medication, and education to minimize symptoms. Diagnosis and treatment received early in a person's life can provide the person with the best possible chance of achieving the person's fullest potential. The American Academy of Pediatrics recommends addressing developmental concerns at every pediatric preventive care visit during the first five years of a child's life. Regardless of the age at which a person is diagnosed with ASD, however, it appears the person can still benefit from treatment.⁴
- According to the Centers for Disease Control, the prevalence rate for ASD in the United States is 1 in 88 children.⁵ According to the most current information available to the Bureau, at least 1,555 individuals under age 21 in Hawaii have ASD. This estimate reflects information provided to the Bureau by the Hawaii Department of Education and the Hawaii Department of Health of individuals enrolled in those agencies' early intervention and special education programs. This total does not reflect persons with ASD who are not identified by those programs, such as children enrolled in private schools or children who have not yet been medically diagnosed as having ASD. Accordingly, the actual number of persons under age 21 with ASD is likely higher.⁶
- It appears widely accepted that effective treatment for ASD needs to be tailored to the specific needs of the individual. As such, there do not appear to be clearly recommended clinical guidelines upon which to report, as envisioned by House Concurrent Resolution No. 177, S.D. 1 (2012). While research supports the view that early intensive behavioral therapy can improve cognitive and language skills, there

¹ See discussion in Chapter 2, note 4, and accompanying text.

² See discussion in Chapter 2, note 49, and accompanying text.

³ See discussion in Chapter 2, note 32, and accompanying text.

⁴ See discussion in Chapter 2, note 62, and accompanying text.

⁵ See discussion in Chapter 2, note 37, and accompanying text.

⁶ See discussion in Chapter 3, note 1, and accompanying text.

appears to be no single best treatment for all children with ASD.⁷ However, the National Research Council and the American Academy of Pediatrics have identified certain features of effective early intervention for children with ASD, which include: providing intervention as soon as a diagnosis of an ASD is seriously considered; involving a family component, which would include parent training; ensuring a low student-to-teacher ratio to allow one-on-one time and instruction in small groups; providing intensive treatment, with active engagement of the child at least twenty-five hours a week, throughout the year; and incorporating a highly structured environment by using, for example, predictable routine and clear physical boundaries to lessen distractions.⁸

- Applied behavior analysis, or ABA (which is specifically included as a covered treatment for ASD in Senate Bill No. 2631, S.D. 2 (2012)), is a type of behavioral health treatment that approaches treating ASD by using positive reinforcement to emphasize positive behavior and discourage negative behavior. The effectiveness of ABA has been documented through 50 years of research, and ABA is widely used as a treatment for ASD.⁹

Information on ASD treatments for which other states mandate insurance coverage, and the extent to which those treatments are required to be covered, including any assessments of the effectiveness of the mandate in identifying and treating patients in those states, to the extent of available information.

Findings and Conclusions

- To date, thirty-three states have passed laws that require insurers to either cover treatments for ASD or offer coverage for ASD treatments. All of those states include ABA among the treatments to be covered.¹⁰
- Twenty-seven states that have mandated insurance coverage impose a dollar value limit on the amount of ASD treatment that an insurer is obligated to cover. Eleven of these states limit the required dollar value of all ASD coverage combined, while sixteen of these states specifically limit the required dollar value of ABA coverage alone. Nine states provide for coverage limits that vary with the age of the beneficiary: specifically, a higher coverage limit for younger children and a lower coverage limit for older children and teenagers.¹¹
- In addition to insurance mandates in many states, TRICARE, the health benefits plan for dependents of United States military personnel, provides coverage for ASD

⁷ See discussion in Chapter 2, notes 94-96, and accompanying text.

⁸ See discussion in Chapter 2, note 97, and accompanying text.

⁹ See discussion in Chapter 2, note 104, and accompanying text.

¹⁰ See Table 2 in Chapter 5.

¹¹ *Id.*

treatment. ABA treatment has been available only to dependents of active duty military personnel through TRICARE's Extended Care Health Option ("ECHO"), up to \$36,000 per year.¹² However, in response to a recent court decision, the Department of Defense will institute a one-year pilot program in which ABA benefits will be available to dependents of both active duty and retired military personnel. The Department and the TRICARE Management Activity are currently developing policies relating to the expansion of coverage.¹³

- State mandates for ASD benefits coverage are a fairly recent development. As a result, there is not a great deal of complete information on the outcomes of the mandates. For example, nineteen states' mandates either took effect or apply to health insurance plans issued in 2011 or later. Thirteen states' mandates took effect in 2008, 2009, or 2010, and one state, Indiana enacted its mandate in 2001. Although several states have reported effects from the first one or two years following enactment, there is no long-term data available.¹⁴

Costs of providing insurance coverage for autism spectrum disorders in Hawaii, based upon actual costs experienced in other states that require such coverage, to the extent of available information.

Findings and Conclusions

- Generally speaking, autism spectrum disorders are potentially expensive disorders to treat, resulting in medical and nonmedical costs over the course of a patient's lifetime. Children with ASD tend to have higher levels of medical utilization and costs than children without ASD. Costs and utilization may be even higher for children who have a co-occurring condition in addition to ASD. In addition to the direct costs of care and treatment, ASD results in indirect societal costs such as lost wages and productivity.¹⁵
- Predicting the cost of treating ASD patients is difficult because of considerable variations in the severity of the illness and individual responses to treatment.¹⁶
- Research has shown that costs of treating ASD may be high during early childhood when intensive therapy may produce the most benefit. In many cases, however, costs of treating these individuals may decline in later childhood and teenage years as treatment proves effective and less treatment may be needed.¹⁷

¹² See discussion in Chapter 5, note 68, and accompanying text.

¹³ See discussion in Chapter 9, note 24, and accompanying text.

¹⁴ See discussion in Chapter 5, note 5, and accompanying text.

¹⁵ See discussion in Chapter 4, notes 1-7, and accompanying text.

¹⁶ See discussion in Chapter 4, note 8, and accompanying text.

¹⁷ See discussion in Chapter 4, note 10, and accompanying text.

- Although there are considerable costs associated with treating ASD patients, there is evidence that effectively treating these individuals early may yield greater societal benefits throughout their lifetimes. These benefits may include reduced costs for care and treatment in teenage years and adulthood and increased wages and productivity over the lifetime of the individual.¹⁸
- While states with ASD benefits mandates have generally reported an increase in costs and claims for ASD services, they do not report significant cost impacts. In many cases, the increases in costs are less than what was predicted prior to enactment of the mandates.¹⁹ However, it should be noted that many of these states' ASD benefits mandates are new; therefore there is little claims data available, and the data that is available does not reflect long-term trends.²⁰ Analyses in several of the states reviewed for this study predicted higher long-term cost increases as demand for services grow and provider networks increase to meet that demand.²¹
- Out of apparent concern over potentially excessive costs of an ASD benefits mandate to insurers, several states offer an exemption for insurers that can demonstrate that the costs of covering ABA treatment exceeds a certain threshold. For instance, Virginia provides for a process by which an insurer can apply to its commissioner of insurance for a one-year exemption from the ASD benefits mandate. In addition to other information, an insurer seeking an exemption must submit an actuarial analysis to the commissioner demonstrating that the costs of covering ASD treatments will result in a threshold premium increase of one percent. (The Bureau is not aware that an insurer has applied for such an exemption in Virginia thus far.)²²

Assess the impact of the Patient Protection and Affordable Care Act on the proposal in S.B. No. 2631, S.D. 2 (2012) to require insurance coverage for the diagnosis and treatment of autism spectrum disorders.

Findings and Conclusions

- The Department of Health and Human Services only released its proposed rules for essential health benefits in November 2012. A Final Rule is not expected for a few months; therefore, the Final Rule may contain changes to the Department's approach to essential health benefits and benchmark plans.²³
- Although it has been suggested that the categories of essential health benefits in the PPACA were intended to include behavioral health treatments for ASD, neither the

¹⁸ See discussion in Chapter 4, note 23, and accompanying text.

¹⁹ See discussion in Chapter 6, notes 7, 17, 27, 46, 60, 70, 77, and 85, and accompanying text.

²⁰ See discussion in Chapter 6, note 2, and accompanying text.

²¹ See discussion in Chapter 6, notes 40, 54, and 72, and accompanying text.

²² See discussion in Chapter 6, note 98, and accompanying text.

²³ See discussion in Chapter 7, note 3, and accompanying text.

PPACA nor existing versions of federal rules specifically include those treatments, including ABA, among essential health benefits. It is not clear when, or if, the Department of Health and Human Services intends to specifically address this issue. Unless specifically mandated by federal rule, the inclusion of ABA in a state's package of essential health benefits, like all other individual covered treatments, will be left to the state to decide.²⁴

- The Department of Health and Human Services intends years 2014 and 2015 to be transitional years for the implementation of the PPACA. The Department is expected to reevaluate its approach to essential health benefits, benchmark plans, and state-mandated benefits in 2016.²⁵
- While the State's current selection of a benchmark plan for essential health benefits includes diagnosis and screening for ASD in early childhood, it does not include coverage for behavioral health treatments for autism, such as ABA.²⁶
- Because any state mandate for ASD benefits coverage in Hawaii would take effect after the U.S. Department of Health and Human Services' deadline of December 31, 2011, a state mandate for Hawaii insurers to cover behavioral health treatments, including ABA, for patients with ASD would not automatically result in the inclusion of those treatments in Hawaii's essential health benefits benchmark plan.²⁷
- Generally speaking, the PPACA requires states to defray the cost of state-mandated benefits that are not essential health benefits for qualified health plans offered in a state's health insurance exchange. At this time, a state-mandated benefit, such as the mandate in SB 2631 for ASD treatments (specifically behavioral health treatments, including ABA), would be considered to be outside the scope of Hawaii's benchmark plan for essential health benefits.²⁸
- SB 2631 contains a provision that would exempt qualified plans in the Hawaii Health Connector from covering ASD benefits that exceed essential health benefits. This provision would appear to relieve the State of the obligation to defray the cost of mandated ASD benefits for plans sold through the Hawaii Health Connector. However, the effect is that those members of qualified health plans sold through the Hawaii Health Connector would not be eligible for coverage for ASD benefits. On the other hand, health plans offered outside the Hawaii Health Connector would continue to be subject to the mandate.²⁹

²⁴ See discussion in Chapter 7, note 29, and accompanying text.

²⁵ See discussion in Chapter 7, note 38, and accompanying text.

²⁶ See discussion in Chapter 7, note 41, and accompanying text.

²⁷ See discussion in Chapter 7, notes 36-45, and accompanying text.

²⁸ See discussion in Chapter 7, notes 33 and 44, and accompanying text.

²⁹ See discussion in Chapter 7, notes 19 and 47, and accompanying text.

- The PPACA prohibits insurers from imposing annual and lifetime caps on the dollar value of essential health benefits. It is not clear whether the \$50,000 annual cap and \$300,000 lifetime cap on behavioral health treatments in SB 2631 would be valid under the PPACA because those treatments for ASD are not part of Hawaii's selected EHB benchmark plan.³⁰
- Guidance issued by the Department of Human Services indicates that, in place of dollar value limits, insurers may impose "actuarially equivalent" service limits on benefits; however, there is no additional guidance on calculating actuarial equivalence for these purposes. As a result, at least one state has indicated that it will consider legislation this year to remove the dollar value caps from its state's ASD benefits mandate statute.³¹
- SB 2631 would require ASD benefits to be covered for beneficiaries up to age 26. The reasoning for this age limit in Hawaii is not clear, and it should be noted that no other state's ASD benefits mandate requires coverage above age 21. This provision may have been intended to reconcile SB 2631 with the PPACA's requirement that dependents remain eligible for coverage under their parents' insurance plans up to age 26. However, SB 2631 would require ASD benefits coverage for all beneficiaries, whether they are dependent or primary subscribers.³²
- The effects of mandating ASD benefits coverage into early adulthood are not clear, as there is very limited information on the number of ASD patients in Hawaii over 21, and there seems to be little research on the use or effectiveness of behavioral treatment or ABA on adult ASD patients.³³

Assess the impact that such an autism spectrum disorder coverage mandate would have on programs financed by the State, including but not limited to the Hawaii Employer-Union Health Benefits Trust Fund and QUEST programs.

Findings and Conclusions

- Neither the EUTF nor the Med-QUEST Division reported to the Bureau that it has studied the impact of including ASD benefits, including ABA, in its health plans.³⁴
- Due to uncertainties surrounding the total number of individuals with an ASD in Hawaii, and the associated costs of treating these individuals, the full impact on state-financed programs is unknown.³⁵

³⁰ See discussion in Chapter 7, notes 50-53, and accompanying text.

³¹ See discussion in Chapter 7, notes 54-60, and accompanying text.

³² See discussion in Chapter 7, note 61, and accompanying text.

³³ See discussion in Chapter 7, note 62, and accompanying text.

³⁴ See discussion in Chapter 8, notes 4, 10, and accompanying text.

³⁵ See discussion in Chapter 8, notes 1-11, and accompanying text.

- As with private insurance plans, an ASD benefits mandate may be expected to result in increases in claims and costs to Med-QUEST and EUTF plans for treating enrollees who have an ASD. However, the amount of these increases is unknown.³⁶
- Early estimates suggest that approximately 53,900 persons in Hawaii may be candidates to purchase individual health plans through the Hawaii Health Connector. It is also estimated that approximately 151,000 persons in Hawaii are covered under a small group policy. Thus, approximately 200,000 persons potentially could be insured by qualified health plans purchased through the Hawaii Health Connector. Because SB 2631 exempts plans purchased through the Connector from the ASD benefits mandate, there could be a significant number of persons who are excluded from ASD coverage because their plans are offered through the Hawaii Health Connector.³⁷

Other Considerations

Provider network of behavior analysts in Hawaii.

Findings and Conclusions

- Applied behavior analysis (ABA) is specifically named in SB 2631 as an ASD treatment to be covered. Behavior analysts are the main providers of ABA (although ABA may also be provided by qualified licensed psychologists),³⁸ and there are currently 53 behavior analysts and 20 assistant behavior analysts practicing in Hawaii who are accredited by the national Behavior Analyst Certification Board. However, the vast majority of these ABA providers appear to be located on Oahu, and very few providers are located on the Neighbor Islands.³⁹
- Providers have opined that the present number of ABA providers may be adequate to meet the expanded needs of Hawaii's ASD population if insurance coverage for ABA is mandated.⁴⁰ Further, if the experiences in other states are any indication, the number of certified behavior analysts may be expected to grow to keep up with the demand for services.⁴¹
- Providers and insurers have both expressed concern about the establishment of criteria to ensure the qualifications of behavior analysts who practice in Hawaii.

³⁶ See discussion in Chapter 8, notes 2 and 11, and accompanying text.

³⁷ See discussion in Chapter 8, note 12, and accompanying text.

³⁸ See discussion in Chapter 9, note 4, and accompanying text.

³⁹ See discussion in Chapter 9, note 10, and accompanying text.

⁴⁰ See discussion in Chapter 9, note 11, and accompanying text.

⁴¹ See discussion in Chapter 9, note 7, and accompanying text.

SB 2631 requires treatment to be provided by board-certified behavior analysts and qualified psychologists, but the bill does not provide for a state license for these individuals to practice behavior analysis.⁴²

- Currently only 9 of the 33 states that mandate coverage for ABA require behavior analysts to obtain a state license to practice, but all states appear to accept board certification as a prerequisite to provide ABA treatment. Further, of the 9 states requiring licensing, at least 5 of these accept certification as a qualifying credential for licensing.⁴³
- Because SB 2631 provides for certification, it is not clear that also requiring a state license would be necessary, and in fact, a separate licensing procedure for behavior analysts may result in delays and obstacles for patients seeking treatment, as experienced in Virginia.⁴⁴

Added administrative costs for insurers.

Findings and Conclusions

- Mandatory coverage of ASD benefits may be expected to result in added administrative costs for insurers. These may include costs of additional staff, monitoring compliance with state or federal regulations, making adjustments to claims coding, and processing and responding to increased grievances and appeals to coverage challenges.⁴⁵

Expansion of ASD benefits in the courts.

Findings and Conclusions

- Around the country, courts have begun to consider whether insurers should be required to include behavioral therapies, including ABA, as covered treatments for ASD. In *Berge v. U.S.* a federal court ordered the Department of Defense to expand TRICARE's coverage of ABA treatment to dependents of retired military personnel. The Department has indicated that it would appeal the court's decision. In the meantime, Congress has required the Department of Defense to develop a one-year pilot program to provide for the treatment of ASD, including ABA. However, Congress's directive offers no guidance on coverage limits or other details of the program.⁴⁶

⁴² See discussion in Chapter 9, note 17, and accompanying text.

⁴³ See discussion in Chapter 9, note 14, and accompanying text.

⁴⁴ See discussion in Chapter 9, note 20, and accompanying text.

⁴⁵ See discussion in Chapter 9, note 1, and accompanying text.

⁴⁶ See discussion in Chapter 9, note 24, and accompanying text.

- Moreover, a growing number of courts in states where ASD benefits are not mandated (or were not mandated at the time) have certified class action claims on behalf of plaintiffs who have been denied coverage for ABA treatments by their insurers.⁴⁷

Recommendations

- The Bureau has only been able to make general assumptions about the utilization of ASD services and the cost of treatments based upon experiences of other states. If the Legislature wants more certainty with respect to the projected cost of an ASD benefits mandate in Hawaii, the Legislature may consider obtaining an independent actuarial analysis of the costs of such a mandate. An actuarial analysis would take into account Hawaii's actual ASD population, provider networks, and insurance market and apply statistical modeling to create a clearer picture of the costs, risks, and benefits of an ASD mandate in Hawaii. In addition, to provide insight on various policy options that may be available, the Legislature may wish to specify that the analysis take into account several coverage options that have been implemented in other states, such as varying ABA service limits and ages for which ABA is covered.
- If the Legislature does not pursue an actuarial analysis of an ASD benefits mandate, but nevertheless desires more accurate information concerning the costs to the Med-QUEST and EUTF systems, the Legislature may wish to consider requiring the Med-QUEST Division and EUTF to undertake studies of their own to determine the costs of an ASD benefits mandate to their respective programs and steps that may be taken to minimize those costs.⁴⁸
- If coverage for behavioral health treatments for ASD, including ABA, is mandated, the ABA provider network will need to be large enough to ensure that patients continue to have access to services. ASD patients on the Neighbor Islands, in particular, may have limited access to providers, so special attention should be given to access issues in these areas of the State.⁴⁹
- Behavior analysts should be board-certified, consistent with the practices in the 33 states that mandate coverage.⁵⁰
- Given that less than a third of the states that mandate insurance coverage for ASD treatment require licensing for behavior analysts and, of these, the majority accepts BACB certification as a licensing credential, it seems that a state registry of BACB-

⁴⁷ See discussion in Chapter 9, note 36, and accompanying text.

⁴⁸ See discussion in Chapter 9, notes 4 and 10, and accompanying text.

⁴⁹ See discussion in Chapter 9, note 10, and accompanying text.

⁵⁰ See discussion in Chapter 9, note 15, and accompanying text.

certified behavior analysts may be sufficient to document the credentials of behavior analysts who practice in the State.⁵¹

- If the State chooses to require that behavior analysts be licensed by a state authority, the method of qualification should not be so stringent as to make qualification overly burdensome on providers and thus hinder patients' access to ABA providers.⁵²
- A criminal background check should be part of any licensing or registration procedure for behavior analysts in Hawaii to ensure the safety of ASD patients, most of whom will be children.⁵³
- During the course of providing information for this study, the Med-QUEST Division made several recommendations that the Bureau believes are worthy of consideration by the Legislature. These include the following:
 - (1) Under Medicaid's Early Periodic Screening, Diagnosis, and Treatment program, Hawaii's Medicaid program is required to provide medically necessary services to persons up to age 21. Thus, any ASD mandate considered by the Legislature should be consistent with the Division's existing programs.⁵⁴
 - (2) The State may wish to consider nominating the topic of an ASD benefits mandate that includes ABA for a systemic review by federal Agency for Healthcare Research and Quality's Evidenced-based Practice Centers Program. Such an evaluation would provide a rigorous review of available literature in order to better inform the decision of whether to require coverage for ABA and other associated ASD treatments.⁵⁵
 - (3) Consideration should be given to the fairness of limiting any mandate to cover behavioral health treatments or ABA to only ASD patients because individuals with other medical conditions may also benefit from these treatments.⁵⁶

⁵¹ See discussion in Chapter 9, note 23, and accompanying text.

⁵² See discussion in Chapter 9, note 20, and accompanying text.

⁵³ See discussion in Chapter 9, note 19, and accompanying text.

⁵⁴ See discussion in Chapter 8, note 9, and accompanying text. See also Chapter 2, note 83, and accompanying text.

⁵⁵ See discussion in Chapter 8, note 6, and accompanying text.

⁵⁶ See discussion in Chapter 8, note 7, and accompanying text.

Appendix A

HOUSE OF REPRESENTATIVES
TWENTY-SIXTH LEGISLATURE, 2012
STATE OF HAWAII

H.C.R. NO. 177
H.D. 2
S.D. 1

HOUSE CONCURRENT RESOLUTION

REQUESTING THE LEGISLATIVE REFERENCE BUREAU TO CONDUCT A STUDY
ON REQUIRING INSURANCE COVERAGE FOR THE DIAGNOSIS AND
TREATMENT OF AUTISM SPECTRUM DISORDERS.

1 WHEREAS, autism is a complex developmental disability that
2 is considered a spectrum disorder by health care professionals
3 as individuals with autism spectrum disorders may share common
4 symptoms with others similarly diagnosed, but the severity of
5 their conditions can vary widely across the spectrum; and
6

7 WHEREAS, autism spectrum disorders currently include
8 autistic disorder, Asperger syndrome, and pervasive
9 developmental disorder not otherwise specified, which is also
10 known as atypical autism; and
11

12 WHEREAS, those affected by an autism spectrum disorder
13 usually show such symptoms as delays or difficulties with social
14 interaction and interpersonal skills and verbal and non-verbal
15 communication, and repetitive or obsessive behavior; and
16

17 WHEREAS, symptoms of an autism spectrum disorder generally
18 begin before the age of three and can persist through adulthood;
19 and
20

21 WHEREAS, health care professionals advise that early and
22 intensive treatment efforts, especially applied behavior
23 analysis, may greatly assist with developmental disabilities
24 related to autism spectrum disorders and prevent an affected
25 individual from becoming permanently dependent on family members
26 or a lifelong ward of the State; and
27

28 WHEREAS, autism spectrum disorders are becoming
29 increasingly prevalent in Hawaii, and treatment for these
30 disorders places a huge financial burden on Hawaii families as

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1 treatment is not presently covered by Hawaii health insurers;
2 and
3

4 WHEREAS, extending insurance coverage to the diagnosis and
5 treatment of autism spectrum disorders would provide much needed
6 assistance to affected Hawaii families and improve the potential
7 for those with an autism spectrum disorder to live a more
8 productive life; and
9

10 WHEREAS, the potential benefits to individuals with an
11 autism spectrum disorder and their families would equally
12 benefit the State by creating long-term savings as a result of
13 positive treatment outcomes that would seem to outweigh the
14 short-term costs; and
15

16 WHEREAS, Senate Bill No. 2631, S.D. 2, introduced in the
17 Regular Session of 2012, proposes to require insurance coverage
18 for the diagnosis and treatment of autism spectrum disorders by
19 accident and health or sickness insurers, mutual benefit
20 societies, and health maintenance organizations; and
21

22 WHEREAS, twenty-nine states currently require that health
23 insurers provide coverage for the treatment of autism spectrum
24 disorders, and there is now cost data available to study the
25 effect on insurance premiums of providing such treatment; and
26

27 WHEREAS, in 2010, the federal Patient Protection and
28 Affordable Care Act was enacted, which requires that health
29 insurance exchanges offer insurance coverage for essential
30 health benefits, including behavioral health treatment; and
31

32 WHEREAS, in 2009, the Auditor submitted a report to the
33 Governor and the Legislature entitled *Study of the Social and*
34 *Financial Impacts of Mandatory Health Insurance Coverage for the*
35 *Diagnosis and Treatment of Autism Spectrum Disorders*, an issue
36 which the Senate Committee on Ways and Means recently requested
37 the Auditor to revisit in consideration of the services proposed
38 by Senate Bill No. 2631, S.D. 2, Regular Session of 2012, and
39 the changes to insurance coverage required by the Patient
40 Protection and Affordable Care Act; now, therefore,



1 BE IT RESOLVED by the House of Representatives of the
2 Twenty-sixth Legislature of the State of Hawaii, Regular Session
3 of 2012, the Senate concurring, that the Legislative Reference
4 Bureau is requested to:

- 5
6 (1) Assess the impact of the Patient Protection and
7 Affordable Care Act on the proposal in Senate Bill No.
8 2631, S.D. 2, Regular Session of 2012, to require
9 insurance coverage for the diagnosis and treatment of
10 autism spectrum disorders by accident and health or
11 sickness insurers, mutual benefit societies, and
12 health maintenance organizations;
13
14 (2) Assess the impact such an autism spectrum disorder
15 coverage mandate would have on programs financed by
16 the State, including but not limited to the Hawaii
17 Employer-Union Health Benefits Trust Fund and QUEST
18 programs;
19
20 (3) Analyze the cost of providing insurance coverage for
21 autism spectrum disorders in Hawaii, based on actual
22 cost effects experienced in other states that require
23 such coverage, to the extent of available information;
24
25 (4) Report information on the recommended clinical
26 guidelines made by organizations such as the American
27 Academy of Pediatrics, the United States Surgeon
28 General, the National Institute of Mental Health, or
29 the National Research Council for the treatment of
30 autism spectrum disorders; and
31
32 (5) Provide information on autism spectrum disorder
33 treatments for which other states mandate insurance
34 coverage and the extent to which those treatments are
35 required to be covered, including any assessments of
36 the effectiveness of the mandate in identifying and
37 treating patients in those states, to the extent of
38 available information; and
39

40 BE IT FURTHER RESOLVED that the Administrator of the Hawaii
41 Employer-Union Health Benefits Trust Fund and the Administrator
42 of the MedQUEST Division of the Department of Human Services are
43 requested to provide information and assistance to the
44 Legislative Reference Bureau for the purposes of its study;

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1
2 BE IT FURTHER RESOLVED that the Legislative Reference
3 Bureau is requested to report its findings and recommendations,
4 including any proposed legislation, to the Legislature no later
5 than twenty days prior to the convening of the Regular Session
6 of 2013; and

7
8 BE IT FURTHER RESOLVED that certified copies of this
9 Concurrent Resolution be transmitted to the Director of the
10 Legislative Reference Bureau, the Insurance Commissioner, the
11 Director of Health, the Administrator of the Hawaii Employer-
12 Union Health Benefits Trust Fund, and the Administrator of the
13 MedQUEST Division of the Department of Human Services.
14
15



Appendix B

THE SENATE
TWENTY-SIXTH LEGISLATURE, 2012
STATE OF HAWAII

S.B. NO. 2631
S.D. 2

A BILL FOR AN ACT

RELATING TO HEALTH INSURANCE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The purpose of this Act is to ensure the
2 provision of quality health care procedures for all Hawaii
3 residents by requiring coverage of and treatment for autism
4 spectrum disorders by all accident and health or sickness
5 insurers, mutual benefit societies, and health maintenance
6 organizations.

7 SECTION 2. Chapter 431, Hawaii Revised Statutes, is
8 amended by adding a new section to article 10A to be
9 appropriately designated and to read as follows:

10 "§431:10A- Autism spectrum disorders benefits and
11 coverage; notice; definitions. (a) Any other law to the
12 contrary notwithstanding, all accident and health or sickness
13 insurance policies issued or renewed in this State after
14 December 31, 2012, shall provide to the policyholder and
15 individuals under twenty-six years of age covered under the
16 policy, coverage for the well-baby and well-child screening and
17 the diagnosis and treatment of autism spectrum disorders.

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1 (b) Every accident and health or sickness insurer shall
2 provide written notice to its members regarding the coverage
3 required by this section. The notice shall be:

4 (1) In writing and prominently positioned in any
5 literature or correspondence sent to members; and
6 (2) Transmitted to members within calendar year 2013 when
7 annual information is made available to members or in
8 any other mailing to members, but in no case later
9 than December 31, 2013.

10 (c) Minimum benefits for behavioral health treatment
11 provided under this section may be limited to \$50,000 per year,
12 or \$300,000 during the lifetime of the individual, but shall not
13 be subject to any limits on the number of visits an individual
14 may make for treatment of autism spectrum disorder. After
15 December 31, 2015, the insurance commissioner, on an annual
16 basis, shall adjust the maximum benefit for inflation using the
17 medical care component of the United States Department of Labor
18 Consumer Price Index for all urban consumers. The commissioner
19 shall publish the adjusted maximum benefit annually no later
20 than April 1 of each calendar year, which shall apply during the
21 following calendar year to health insurance policies subject to
22 this section. Payments made by an insurer on behalf of a

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1 covered individual for any care, treatment, intervention, or
2 service other than behavioral health treatment shall not be
3 applied toward any minimum benefit established under this
4 subsection.

5 (d) Coverage under this section may be subject to co-
6 payment, deductible, and coinsurance provisions of an accident
7 and health or sickness insurance policy that are no less
8 favorable than the co-payment, deductible, and coinsurance
9 provisions for other medical services covered by the policy.

10 (e) This section shall not be construed as limiting
11 benefits that are otherwise available to an individual under an
12 accident and health or sickness insurance policy.

13 (f) Coverage for treatment under this section shall not be
14 denied on the basis that the treatment is habilitative or non-
15 restorative in nature.

16 (g) Except for inpatient services, if an individual is
17 receiving treatment for autism spectrum disorders, an insurer
18 may request a review of that treatment not more than once every
19 twelve months. The cost of obtaining any review shall be borne
20 by the insurer.

21 (h) Coverage shall be required for applied behavior
22 analysis services only when provided or supervised by a board-



1 certified behavior analyst or by a licensed psychologist, so
2 long as the services performed are commensurate with the
3 psychologist's formal university training and supervised
4 experience. Reimbursement to the board-certified behavior
5 analyst or licensed psychologist for applied behavior analysis
6 services shall include reimbursement for the therapists working
7 under the supervision of the board-certified behavior analyst or
8 licensed psychologist.

9 (i) This section shall not be construed as reducing any
10 obligation to provide services to an individual under an
11 individualized family service plan, an individualized education
12 program, or an individualized service plan.

13 (j) As of January 1, 2014, to the extent that this section
14 requires benefits that exceed the essential health benefits
15 specified under section 1302(b) of the Patient Protection and
16 Affordable Care Act of 2010 (P.L. 111-148), the specific
17 benefits that exceed the specified essential health benefits
18 shall not be required of a qualified health plan when the plan
19 is offered in this State through the Hawaii health connector by
20 a health carrier. Nothing in this subsection shall nullify the
21 application of this section to plans offered outside the Hawaii
22 health connector.

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1 (k) For the purposes of this section, unless the context
2 clearly requires otherwise:

3 "Applied behavior analysis" means the design,
4 implementation, and evaluation of environmental modifications,
5 using behavioral stimuli and consequences, to produce socially
6 significant improvement in human behavior, including the use of
7 direct observation, measurement, and functional analysis of the
8 relationship between environment and behavior.

9 "Autism spectrum disorders" means any of the pervasive
10 developmental disorders as defined by the most recent edition of
11 the Diagnostic and Statistical Manual of Mental Disorders,
12 including autistic disorder, Asperger's disorder, pervasive
13 developmental disorder not otherwise specified, Rett's disorder,
14 and childhood disintegrative disorder.

15 "Behavioral health treatment" means professional counseling
16 and treatment programs, including applied behavior analysis,
17 that are necessary to develop, maintain, or restore, to the
18 maximum extent practicable, the functioning of an individual.

19 "Diagnosis of autism spectrum disorders" means medically
20 necessary assessments, evaluations, or tests conducted to
21 diagnose whether an individual has an autism spectrum disorder.



1 "Pharmacy care" means medications prescribed by a licensed
2 physician or registered nurse practitioner and any health-
3 related services that are deemed medically necessary to
4 determine the need or effectiveness of the medications.

5 "Psychiatric care" means direct or consultative services
6 provided by a licensed psychiatrist.

7 "Psychological care" means direct or consultative services
8 provided by a licensed psychologist.

9 "Therapeutic care" means services provided by a licensed
10 speech pathologist, registered occupational therapist, or
11 licensed physical therapist.

12 "Treatment for autism spectrum disorders" includes the
13 following care and related equipment prescribed or ordered for
14 an individual diagnosed with an autism spectrum disorder by a
15 licensed physician, licensed psychologist, or registered nurse
16 practitioner if the care is determined to be medically
17 necessary:

- 18 (1) Behavioral health treatment;
19 (2) Pharmacy care;
20 (3) Psychiatric care;
21 (4) Psychological care; and
22 (5) Therapeutic care."

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1 SECTION 3. Chapter 432, Hawaii Revised Statutes, is
2 amended by adding a new section to article I to be appropriately
3 designated and to read as follows:

4 "§432:1- Autism spectrum disorders benefits and
5 coverage; notice; definitions. (a) Any other law to the
6 contrary notwithstanding, each individual and group hospital or
7 medical service plan, policy, contract, or agreement issued or
8 renewed in this State after December 31, 2012, shall provide to
9 the member and individuals under twenty-six years of age covered
10 under the service plan, policy, contract, or agreement, coverage
11 for the well-baby and well-child screening and the diagnosis and
12 treatment of autism spectrum disorders.

13 (b) Every individual and group hospital or medical service
14 plan, policy, contract, or agreement shall provide written
15 notice to its members regarding the coverage required by this
16 section. The notice shall be:

- 17 (1) In writing and prominently positioned in any
18 literature or correspondence sent to members; and
19 (2) Transmitted to members within calendar year 2013 when
20 annual information is made available to members or in
21 any other mailing to members, but in no case later
22 than December 31, 2013.



1 (c) Minimum benefits for behavioral health treatment
2 provided under this section may be limited to \$50,000 per year,
3 or \$300,000 during the lifetime of an individual, but shall not
4 be subject to any limits on the number of visits an individual
5 may make for treatment of autism spectrum disorder. After
6 December 31, 2015, the insurance commissioner, on an annual
7 basis, shall adjust the maximum benefit for inflation, using the
8 medical care component of the United States Department of Labor
9 Consumer Price Index for all urban consumers. The commissioner
10 shall publish the adjusted maximum benefit annually no later
11 than April 1 of each calendar year, which shall apply during the
12 following calendar year to health insurance policies subject to
13 this section. Payments made by an individual and group hospital
14 or medical service plan, policy, contract, or agreement on
15 behalf of a covered individual for any care, treatment,
16 intervention, service, or item other than behavioral health
17 treatment shall not be applied toward any minimum benefit
18 established under this subsection.

19 (d) Coverage under this section shall be subject to co-
20 payment, deductible, and coinsurance provisions of an individual
21 or group hospital or medical service plan, policy, contract, or
22 agreement to the extent that other medical services covered by



1 the plan, policy, contract, or agreement are subject to these
2 provisions.

3 (e) This section shall not be construed as limiting
4 benefits that are otherwise available to an individual under an
5 individual or group hospital or medical service plan, policy,
6 contract, or agreement health insurance policy.

7 (f) Coverage for treatment under this section shall not be
8 denied on the basis that the treatment is habilitative or non-
9 restorative in nature.

10 (g) Except for inpatient services, if an individual is
11 receiving treatment for an autism spectrum disorder, an insurer
12 may request a review of that treatment not more than once every
13 twelve months. The cost of obtaining any review shall be borne
14 by the insurer.

15 (h) Coverage shall be required for applied behavior
16 analysis services only when provided or supervised by a board-
17 certified behavior analyst or by a licensed psychologist so long
18 as the services performed are commensurate with the
19 psychologist's formal university training and supervised
20 experience. Reimbursement to the board-certified behavior
21 analyst or licensed psychologist for applied behavior analysis
22 services shall include reimbursement for the therapists working

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1 under the supervision of the board-certified behavior analyst or
2 licensed psychologist.

3 (i) This section shall not be construed as reducing any
4 obligation to provide services to an individual under an
5 individualized family service plan, an individualized education
6 program, or an individualized service plan.

7 (j) For the purposes of this section, unless the context
8 clearly requires otherwise:

9 "Applied behavior analysis" means the design,
10 implementation, and evaluation of environmental modifications,
11 using behavioral stimuli and consequences, to produce socially
12 significant improvement in human behavior, including the use of
13 direct observation, measurement, and functional analysis of the
14 relations between environment and behavior.

15 "Autism spectrum disorders" means any of the pervasive
16 developmental disorders as defined by the most recent edition of
17 the Diagnostic and Statistical Manual of Mental Disorders,
18 including autistic disorder, Asperger's disorder, pervasive
19 developmental disorder not otherwise specified, Rett's disorder,
20 and childhood disintegrative disorder.

21 "Behavioral health treatment" means professional counseling
22 and treatment programs, including applied behavior analysis,



1 that are necessary to develop, maintain, or restore, to the
2 maximum extent practicable, the functioning of an individual.

3 "Diagnosis of autism spectrum disorders" means medically
4 necessary assessments, evaluations, or tests conducted to
5 diagnose whether an individual has an autism spectrum disorder.

6 "Pharmacy care" means medications prescribed by a licensed
7 physician or registered nurse practitioner and any health-
8 related services that are deemed medically necessary to
9 determine the need or effectiveness of the medications.

10 "Psychiatric care" means direct or consultative services
11 provided by a licensed psychiatrist.

12 "Psychological care" means direct or consultative services
13 provided by a licensed psychologist.

14 "Therapeutic care" means services provided by a licensed
15 speech pathologist, registered occupational therapist, or
16 licensed physical therapist.

17 "Treatment for autism spectrum disorders" includes the
18 following care and related equipment prescribed or ordered for
19 an individual diagnosed with an autism spectrum disorder by a
20 licensed physician, licensed psychologist, or registered nurse
21 practitioner if the care is determined to be medically
22 necessary:

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- 1 (1) Behavioral health treatment;
- 2 (2) Pharmacy care;
- 3 (3) Psychiatric care;
- 4 (4) Psychological care; and
- 5 (5) Therapeutic care."

6 SECTION 4. Section 432D-23, Hawaii Revised Statutes, is
7 amended to read as follows:

8 **"§432D-23 Required provisions and benefits.**

9 Notwithstanding any provision of law to the contrary, each
10 policy, contract, plan, or agreement issued in the State after
11 January 1, 1995, by health maintenance organizations pursuant to
12 this chapter, shall include benefits provided in sections
13 431:10-212, 431:10A-115, 431:10A-115.5, 431:10A-116,
14 431:10A-116.5, 431:10A-116.6, 431:10A-119, 431:10A-120,
15 431:10A-121, 431:10A-125, 431:10A-126, [~~and~~] 431:10A-122, and
16 431:10A- , and chapter 431M."

17 SECTION 5. The coverage and benefits to be provided by a
18 health maintenance organization under section 4 of this Act
19 shall begin for all policies, contracts, plans, or agreements
20 issued in this State by a health maintenance organization after
21 December 31, 2012.



1 SECTION 6. Statutory material to be repealed is bracketed
2 and stricken. New statutory material is underscored.

3 SECTION 7. This Act shall take effect on July 1, 2050.



Report Title:

Mandatory Health Coverage; Autism Spectrum Disorders; Behavioral Health

Description:

Requires all accident and health or sickness insurers, mutual benefit societies, and health maintenance organizations to provide health care coverage and benefits for well-baby and well-child screening and diagnosis and treatment of autism spectrum disorders beginning after 07/01/2050. (SD2)

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.



Appendix C

Table 1. Year One Costs

	Year of coverage	Number of Covered Lives	Total Claims	PMPM cost
South Carolina	1	371,384	\$856,369	\$0.19
Illinois	1	171,979	\$187,684	\$0.09
Florida	1	382,083	\$390,724	\$0.09
Arizona	1	130,000	\$473,818	\$0.30
Kentucky	1	240,000	\$278,922	\$0.10
	Average first year cost			\$0.15

Table 2. Year Two Costs

	Year of coverage	Number of Covered Lives	Total Claims	PMPM cost
South Carolina	2	397,757	\$2,042,394	\$0.43
Illinois	2	170,790	\$197,290	\$0.10
Louisiana	2	149,477	\$722,828	\$0.40
Florida	2	386,203	\$1,748,849	\$0.38
Arizona	2	130,000	\$388,662	\$0.25
	Average second year cost			\$0.31

Table 3. Projected versus Actual Costs

	Year of coverage	Total Claims	Fiscal Note from State Legislature	Difference in projected versus actual cost
South Carolina	1	\$856,369	\$10,590,000	1,237%
	2	\$2,042,394	\$10,590,000	519%
Louisiana	2	\$722,828	\$2,118,307	293%
	2	\$722,828	\$2,686,796	372%
Arizona	1	\$473,818	\$2,500,000	528%
	1	\$473,818	\$4,900,000	1,034%
	2	\$388,662	\$2,500,000	643%
	2	\$388,662	\$4,900,000	1,261%

December 6, 2011

Appendix 2. Claims Data

	Date Implemented	Terms of Coverage	Date of Claims Data	Year	Number of Covered Lives	Total Claims	PMPM cost	Source	Fiscal Note from State Legislature
South Carolina	7/1/08	\$50,000* age 0-16	CY 2009	1	371,384	\$856,369	\$0.19	APS Healthcare	\$10,590,000 per year
			CY 2010	2	397,757	\$2,042,394	\$0.43		<u>South Carolina Budget and Control Board</u>
Illinois	12/12/08	\$36,000/yr age 0-21	CY 2009	1	171,979	\$187,684	\$0.09	Illinois Department of Healthcare and Family Services	NA
			CY 2010	2	170,790	\$197,290	\$0.10		
Louisiana	1/1/09	\$36,000/yr age 0-17	CY 2009	1	NA	NA	NA	Louisiana Office of Group Benefits	\$2,118,307 - \$2,686,796 (FY 10-11) <u>Louisiana Legislative Fiscal Office</u>
			CY 2010	2	149,477	\$722,828	\$0.40		
Florida	4/1/09	\$36,000/yr age 0-19	07/01/2009 - 06/30/2010	1	382,083	\$390,724	\$0.09	Florida Department of Management Services	"difficult to assess" <u>The Professional Staff of the Florida Banking and Insurance Committee</u>
			07/01/2010 - 06/30/2011	2	386,203	\$1,748,849	\$0.38		
Arizona	7/1/09	\$50,000/yr* age 0-8 \$25,000/yr* age 9-16	07/01/2009 - 06/30/2010	1	130,000	\$473,818	\$0.30	Arizona Department of Administration	\$2.5 - \$4.9 million (FY 2010) <u>Jorgensen/Zylla for Arizona Legislature</u>
			07/01/2010 - 06/30/2011	2	130,000	\$388,662	\$0.25		
Kentucky	5/14/10	\$50,000/yr age 0-7 \$1,000/mo age 7-21	May 2010 - April 2011	1	240,000	\$278,922	\$0.10	Kentucky Department of Employee Insurance	\$4,000,000 (FY 2012) <u>Kentucky Legislative Research Commission</u>

Appendix D

PROPOSED HAWAII EHB BENCHMARK PLAN

SUMMARY INFORMATION

Plan Type	Plan from largest small group product, Preferred Provider Organization
Issuer Name	Hawaii Medical Service Association
Product Name	Preferred Provider Plan 2010
Plan Name	HMSA Preferred Provider Plan 2010
Supplemented Categories (Supplementary Plan Type)	<ul style="list-style-type: none">• Pediatric Oral (State CHIP)• Pediatric Vision (FEDVIP)
Habilitative Services	No

Source: Centers for Medicare and Medicaid Services, Center for Consumer Information and Insurance Oversight.

BENEFITS AND LIMITS

Row Number	A Benefit	B Covered (Required): Is benefit Covered or Not Covered	C Benefit Description (Required if benefit is Covered): Enter a Description, it may be the same as the Benefit name	D Quantitative Limit on Service? (Required if benefit is Covered): Select "Yes" if Quantitative Limit applies	E Limit Quantity (Required if Quantitative Limit is "Yes"): Enter Limit Quantity	F Limit Units (Required if Quantitative Limit is "Yes"): Select the correct limit units	G Other Limit Units Description (Required if "Other" Limit Unit): If a Limit Unit of "Other" was selected in Limit Units, enter a description	H Minimum Stay (Optional): Enter the Minimum Stay (in hours) as a whole number	I Exclusions (Optional): Enter any Exclusions for this benefit	J Explanation (Optional): Enter an Explanation for anything not listed	K Does this benefit have additional limitations or restrictions? (Required if benefit is Covered): Select "Yes" if there are additional limitations or restrictions that need to be described
1	Primary Care Visit to Treat an Injury or Illness	Covered	Primary Care Visit to Treat an Injury or Illness. Covered, for an illness or injury, when you are inpatient or outpatient.	No						Coverage includes, but not limited to family planning counseling services. A physician visit may be received in the physician's office, your home, or a facility setting (including, but not limited to: Inpatient visits; inpatient and outpatient surgery; Emergency room services, Laboratory services, diagnostic imaging, treat maternity as any other illness.)	No
2	Specialist Visit	Covered	Primary Care Visit to Treat an Injury or Illness. Covered, for an illness or injury, when you are inpatient or outpatient.	No						Coverage includes, but not limited to family planning counseling services. A physician visit may be received in the physician's office, your home, or a facility setting (including, but not limited to: Inpatient visits; inpatient and outpatient surgery; Emergency room services, Laboratory services, diagnostic imaging, treat maternity as any other illness.)	No
3	Other Practitioner Office Visit (Nurse, Physician Assistant)	Covered	Primary Care Visit to Treat an Injury or Illness. Covered, for an illness or injury, when you are inpatient or outpatient.	No						Coverage includes, but not limited to family planning counseling services. A physician visit may be received in the physician's office, your home, or a facility setting (including, but not limited to: Inpatient visits; inpatient and outpatient surgery; Emergency room services, Laboratory services, diagnostic imaging, treat maternity as any other illness.)	No
4	Outpatient Facility Fee (e.g., Ambulatory Surgery Center)	Covered	Outpatient Facility. Covered, including but not limited to Recovery and Treatment Rooms for Surgery and Ambulatory Surgery Center (ASC)	No							No
5	Outpatient Surgery Physician/Surgical Services	Covered	Cutting and Non-Cutting Surgery. Includes, but not limited to anesthesia, cutting surgery including preoperative and postoperative care; and non-cutting surgery.	No						Examples of non-cutting surgical procedures include diagnostic and endoscopic procedures; diagnostic and therapeutic injections including catheters injections into joints, muscles, and tendons. Examples also include orthopedic castings; destruction of localized lesions by chemotherapy (excluding silver nitrate), cryotherapy or electrosurgery; and acne treatment.	No

Row Number	A Benefit	B Covered (Required): Is benefit Covered or Not Covered	C Benefit Description (Required if benefit is Covered): Enter a Description, it may be the same as the Benefit name	D Quantitative Limit on Service? (Required if benefit is Covered): Select "Yes" if Quantitative Limit applies	E Limit Quantity (Required if Quantitative Limit is "Yes"): Enter Limit Quantity	F Limit Units (Required if Quantitative Limit is "Yes"): Select the correct limit units	G Other Limit Units Description (Required if "Other" Limit Unit): If a Limit Unit of "Other" was selected in Limit Units, enter a description	H Minimum Stay (Optional): Enter the Minimum Stay (in hours) as a whole number	I Exclusions (Optional): Enter any Exclusions for this benefit	J Explanation (Optional): Enter an Explanation for anything not listed	K Does this benefit have additional limitations or restrictions? (Required if benefit is Covered): Select "Yes" if there are additional limitations or restrictions that need to be described
6	Hospice Services	Covered	Hospice. We follow Medicare guidelines to determine benefits, level of care and eligibility for hospice services.	No					You are not covered for hospice services provided by a hospice not under contract with us.	Also, we cover: Residential hospice room and board expenses directly related to the hospice care being provided, and Hospice referral visits during which a patient is advised of hospice care options, regardless of whether the referred patient is later admitted to hospice care.	No
7	Non-Emergency Care When Traveling Outside the U.S.	Covered	Non-Emergency Care When Traveling Outside the U.S.	No							No
8	Routine Dental Services (Adult)	Covered	Routine Dental Services covered under rider	No						Includes, but not limited to cleaning, exam, pulp vitality test, x-rays, restorative services, endodontic services, periodontic services, surgical services.	No
9	Infertility Treatment	Covered	In Vitro Fertilization only. Coverage is limited to members who meet the following criteria: The in vitro fertilization is for you or your spouse. In vitro fertilization services are not covered when a surrogate is used; Either of the following two statements is true: You and your spouse have a history of infertility for at least five years; or The infertility is related to one or more of these medical conditions: endometriosis; exposure in utero to diethylstilbestrol (DES); blockage of, or surgical removal of, one or both fallopian tubes (lateral or bilateral salpingectomy); or abnormal male factors contributing to the infertility; You have been unable to attain a successful pregnancy through other covered infertility treatments; The in vitro procedures are performed at a medical facility that conforms to the American College of Obstetricians and Gynecologists guidelines for in vitro fertilization clinics or to the American Society for Reproductive Medicine minimal standards for programs of in vitro fertilization.	Yes	1	Procedures per lifetime			Infertility Treatment. Except as described in Column C, you are not covered for services or supplies related to the treatment of infertility, including, but not limited to: Collection, storage and processing of semen; Cryopreservation of oocytes, semen and embryos; In vitro fertilization benefits when services of a surrogate are used; Cost of donor-related services, including but not limited to collection, storage and processing of donor oocytes and donor semen; Ovum transplants; Gamete intrafallopian transfer (GIFT); Zygote intrafallopian transfer (ZIFT); Services related to conception by artificial means, including prescription drugs and supplies related to such services except as described Column C.	Coverage is limited to a one-time only benefit for one outpatient in vitro fertilization procedure while you are an HMSA member. If you receive benefits for in vitro fertilization benefits under an HMSA plan, you will not be eligible for in vitro fertilization benefits under any other HMSA plan.	No
10	Long-Term/Custodial Nursing Home Care	Not Covered									

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11	Private-Duty Nursing	Not Covered									
12	Routine Eye Exam (Adult)	Covered	Routine Eye Exam (Adult). Covered under vision rider.	Yes	1	Visits per year					No
13	Urgent Care Centers or Facilities	Covered	Urgent Care Centers or Facilities. Covered, for an illness or injury.	No							No
14	Home Health Care Services	Covered	Home Health Care Services	Yes	150	Visits per year					No
15	Emergency Room Services	Covered	Emergency Services.	No							No
16	Emergency Transportation/ Ambulance	Covered	Emergency Transportation/ Ambulance. Covered, for ground and intra-island or inter-island air ambulance services to the nearest; adequate hospital to treat your illness or injury.	No						Air ambulance is limited to intra-island or inter-island transportation within the state of Hawaii.	No
17	Inpatient Hospital Services (e.g., Hospital Stay)	Covered	Hospital Room and Board; and Ancillary Services	No						Includes, but not limited to coverage for acute inpatient rehabilitation services	No
18	Inpatient Physician and Surgical Services	Covered	Cutting and Non-cutting Surgery. Includes, but not limited to cutting surgery including preoperative and postoperative care; and non-cutting surgery.	No						Examples of non-cutting surgical procedures include diagnostic and endoscopic procedures; diagnostic and therapeutic injections including catheters injections into joints, muscles, and tendons. Examples also include orthopedic castings; destruction of localized lesions by chemotherapy (excluding silver nitrate), cryotherapy or electrosurgery; and acne treatment.	No
19	Bariatric Surgery	Covered	Bariatric Surgery	No							No
20	Cosmetic Surgery	Not Covered									
21	Skilled Nursing Facility	Covered	Skilled Nursing Facility. Room and board is covered, but only for semi-private rooms.	Yes	120	Days per year				Services and supplies are covered, including routine surgical supplies, drugs, dressing, oxygen, antibiotics, blood transfusion services, and diagnostic and therapy benefits.	No
22	Prenatal and Postnatal Care	Covered	Maternity Care. Covered for physician services, including prenatal, false labor, delivery, and postnatal services.	No							No
23	Delivery and All Inpatient Services for Maternity Care	Covered	Maternity Care. Covered for maternity related services such as nursery care, labor room, hospital room and board, and ancillary services.	No							No

Row Number	A Benefit	B Covered (Required): Is benefit Covered or Not Covered	C Benefit Description (Required if benefit is Covered): Enter a Description, it may be the same as the Benefit name	D Quantitative Limit on Service? (Required if benefit is Covered): Select "Yes" if Quantitative Limit applies	E Limit Quantity (Required if Quantitative Limit is "Yes"): Enter Limit Quantity	F Limit Units (Required if Quantitative Limit is "Yes"): Select the correct limit units	G Other Limit Units Description (Required if "Other" Limit Unit): If a Limit Unit of "Other" was selected in Limit Units, enter a description	H Minimum Stay (Optional): Enter the Minimum Stay (in hours) as a whole number	I Exclusions (Optional): Enter any Exclusions for this benefit	J Explanation (Optional): Enter an Explanation for anything not listed	K Does this benefit have additional limitations or restrictions? (Required if benefit is Covered): Select "Yes" if there are additional limitations or restrictions that need to be described
24	Mental/Behavioral Health Outpatient Services	Covered	Mental/Behavioral Health Outpatient Services. Covered in accordance with Federal Mental Health Parity for Hospital and Facility, and Physician services.	No						The services are provided by a licensed physician, psychiatrist, psychologist, clinical social worker, marriage and family therapist, licensed mental health counselor, or advanced practice registered nurse.	No
25	Mental/Behavioral Health Inpatient Services	Covered	Mental/Behavioral Health Inpatient Services. Covered in accordance with Federal Mental Health Parity for Hospital and Facility, and Physician services.	No							No
26	Substance Abuse Disorder Outpatient Services	Covered	Substance Abuse Disorder Outpatient Services. Coverage includes Hospital and Facility, and Physician services	No					You are not covered for detoxification services and educational programs to which drinking or drugged drivers are referred by the judicial system solely because you have been referred or services performed by mutual self-help groups.	The services are provided by a licensed physician, psychiatrist, psychologist, clinical social worker, marriage and family therapist, licensed mental health counselor, or advanced practice registered nurse.	No
27	Substance Abuse Disorder Inpatient Services	Covered	Substance Abuse Disorder Inpatient Services. Coverage includes Hospital and Facility, and Physician services	No					You are not covered for detoxification services and educational programs to which drinking or drugged drivers are referred by the judicial system solely because you have been referred or services performed by mutual self-help groups.		No
28	Generic Drugs	Covered	Generic Drugs. Covered for A drug that is prescribed or dispensed under its commonly used generic name rather than a brand name.	No						Includes, but not limited to Smoking and Tobacco Cessation Prescription Drugs	No
29	Preferred Brand Drugs	Covered	Preferred Brand Drugs. Covered for Brand name drug, supply, or insulin identified as preferred on the HMSA Select Prescription Drug Formulary.	No						Includes, but not limited to Smoking and Tobacco Cessation Prescription Drugs	No
30	Non-Preferred Brand Drugs	Covered	Non-Preferred Brand Drugs. Covered for Brand name drug, supply, or insulin that is not identified as preferred on the HMSA Select Prescription Drug Formulary.	No						Includes, but not limited to Smoking and Tobacco Cessation Prescription Drugs	No
31	Specialty Drugs	Covered	Specialty Drugs. Covered for high cost drugs that are used to treat chronic, potentially life threatening diseases and are listed in the HMSA Select Prescription Drug Formulary	No							No

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32	Outpatient Rehabilitation Services	Covered	Physical and Occupational Therapy; and Speech Therapy	No					Maintenance therapy, defined as activities that preserve present functional level and prevent regression, are not covered.		No
33	Habilitation Services	Not Covered									
34	Chiropractic Care	Not Covered									
35	Durable Medical Equipment	Covered	Durable Medical Equipment and Supplies.	No					Supplies and accessories necessary for the effective functioning of the equipment are covered subject to certain limitations and exclusions. Contact HMSA for details.	Durable medical equipment can be rented or purchased; however, certain items are covered only as rentals.	Yes
36	Hearing Aids	Covered	Hearing Aids.	Yes	1	Other other	1 Hearing aid per ear every 60 months		Fitting adjustment, repair and batteries are not covered.		No
37	Diagnostic Test (X-Ray and Lab Work)	Covered	Diagnostic Testing.	No						Includes, but not limited to Allergy Testing, Diagnostic Colonoscopy, routine hearing exam, and Genetic Screening and Testing.	Yes
38	Imaging (CT/PET Scans, MRIs)	Covered	Radiology.	No						Includes, but not limited to Nuclear Medicine	No

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39	Preventive Care/ Screening/ Immunization	Covered	Preventive Care/Screening/Immunizations. Covered in accordance with the Affordable Care Act (ACA) and guidelines set by the Advisory Committee on Immunization Practices (ACIP).	No						Screening Services and Preventive Counseling. Covered, for Grade A and B recommendations of the U.S. Preventive Services Task Force (USPSTF) such as the following: Preventive Counseling Services; Screening Laboratory Services; Screening Radiology Services. Covered for recommended preventive services for women developed by Institute of Medicine (IOM) and supported by the Health Resources and Services Administration (HRSA). Covered, including routine sensory screening, and developmental/behavioral assessments according to the American Academy of Pediatrics periodicity Schedule of the Bright Futures Recommendations for Preventive Pediatric Health Care; Immunizations. Covered, for standard immunizations and immunizations for high risk conditions such as Hepatitis B and other vaccines in accord with the guidelines set by the Advisory committee on Immunization Practices (ACIP).	Yes
40	Routine Foot Care	Not Covered								Routine foot care for diabetics is covered	
41	Acupuncture	Not Covered									
42	Weight Loss Programs	Not Covered									
43	Routine Eye Exam for Children	Covered	Routine Eye Exam for Children. Covered in accordance with Bright Futures Recommendations for Preventive Pediatric Health Care.	No							No
44	Eye Glasses for Children	Covered	Eye glasses for Children. Covered under Vision Rider.	Yes	1	Other other	Lenses limited to one pair per calendar year. Frames limited to one frame every 24 months.				No
45	Dental Check-Up for Children	Covered	Dental Check-up for Children. Covered under Dental Rider	Yes	2	Visits per year				Clinical oral exams	No
46	Other										

OTHER BENEFITS

Row Number	A Benefit	B Covered (Required): Is benefit Covered or Not Covered	C Benefit Description (Required if benefit is Covered): Enter a Description, it may be the same as the Benefit name	D Quantitative Limit on Service? (Required if benefit is Covered): Select "Yes" if Quantitative Limit applies	E Limit Quantity (Required if Quantitative Limit is "Yes"): Enter Limit Quantity	F Limit Units (Required if Quantitative Limit is "Yes"): Select the correct limit units	G Other Limit Units Description (Required if "Other" Limit Unit): If a Limit Unit of "Other" was selected in Limit Units, enter a description	H Minimum Stay (Optional): Enter the Minimum Stay (in hours) as a whole number	I Exclusions (Optional): Enter any Exclusions for this benefit	J Explanation (Optional): Enter an Explanation for anything not listed	K Does this benefit have additional limitations or restrictions? (Required if benefit is Covered): Select "Yes" if there are additional limitations or restrictions that need to be described
1	Other	Covered	Reconstructive Surgery.	No					Complications of a non-covered cosmetic reconstructive surgery are not covered.	Covered, but only for corrective surgery required to restore, reconstruct or correct: Any bodily function that was lost, impaired, or damaged as a result of an illness or injury; Developmental abnormalities when present from birth and that severely impair or impede normal, essential bodily functions; The breast on which a mastectomy was performed, and surgery for the reconstruction of the other breast to produce a symmetrical appearance (including prostheses). Treatment for complications of mastectomy and reconstruction, including lymphedema, is also covered.	No
2	Other	Covered	Cochlear Implants	No							No
3	Other	Covered	Transplants	No						Covered for Corneal, Kidney, Heart, Heart and Lung, Liver, Lung, Pancreas, Simultaneous Kidney/Pancreas, Small Bowel and Multivisceral, and Stem-Cell Transplants (including Bone Marrow transplants).	No

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4	Preventive Care/ Screening/Immunization	Covered	Services required by Affordable Care Act (ACA)	No						All services required by the Affordable Care Act is covered by this plan including, but not limited to: Routine Mammography Screening, HPV/Cervical Cancer Screening, Newborn Screening (other than hearing); Pediatric Hearing Screening; Colorectal Cancer screening; Depression Screening (Adolescents and Adults); Diagnostic Bone Mass Measurement/Density Testing; Screening Colonoscopy; Diabetes Screening; Screening for Sexually Transmitted Infections - HIV; Screening for Sexually Transmitted Infections - Other; Anemia Screening for Pregnant Women; Bacteriuria Urinary Tract Screening for Pregnant Women; Bacteriuria Urinary Tract Screening for Pregnant Women; BRCA Screening and Counseling About Genetic Testing; Folic Acid Supplements for Women Who May Become Pregnant; Hepatitis B Screening for Newly Pregnant Women; Smoking and Tobacco Cessation Counseling; Diabetes Education and Counseling; Diabetes Monitoring; Breastfeeding/Lactation Counseling; Nutritional Counseling; Genetic Counseling	No
5	Preventive Care/ Screening/Immunization	Covered	Prostate Cancer Screening	Yes	1	Procedures per year	Men age 50 or older				No
6	Diagnostic Test (X-Ray and Lab Work)	Covered	Allergy Testing	No							No
7	Other	Covered	Allergy Injections	No							No

Row Number	A Benefit	B Covered (Required): Is benefit Covered or Not Covered	C Benefit Description (Required if benefit is Covered): Enter a Description, it may be the same as the Benefit name	D Quantitative Limit on Service? (Required if benefit is Covered): Select "Yes" if Quantitative Limit applies	E Limit Quantity (Required if Quantitative Limit is "Yes"): Enter Limit Quantity	F Limit Units (Required if Quantitative Limit is "Yes"): Select the correct limit units	G Other Limit Units Description (Required if "Other" Limit Unit): If a Limit Unit of "Other" was selected in Limit Units, enter a description	H Minimum Stay (Optional): Enter the Minimum Stay (in hours) as a whole number	I Exclusions (Optional): Enter any Exclusions for this benefit	J Explanation (Optional): Enter an Explanation for anything not listed	K Does this benefit have additional limitations or restrictions? (Required if benefit is Covered): Select "Yes" if there are additional limitations or restrictions that need to be described
8	Durable Medical Equipment	Covered	Orthotics & External Prosthetics	No						Orthotics are covered when prescribe by your treating provider to provide therapeutic support or restore function such as braces, orthopedic footwear, and shoe inserts. External prosthetics are covered when prescribed by your treating provider to replace absent or non-functioning parts of the human body with an artificial substitute such as artificial limbs and eyes, post-mastectomy or post-lumpectomy breast prostheses, external pacemakers and post-laryngectomy electronic speech aids.	No
9	Other	Covered	Blood & Blood Products	No						Includes, but not limited to plasma.	No
10	Other	Covered	Voluntary Sterilization	No						Includes, but not limited to tubal ligation and male vasectomy.	No
11	Other	Covered	Chemotherapy & Radiation Therapy	No							No
12	Other	Covered	Pulmonary Rehab	No							No
13	Other	Covered	IV/Infusion Therapy & Injectibles	No							No
14	Other	Covered	Hyperbaric Oxygen Therapy	No							No
15	Other	Covered	Dialysis & Supplies	No							No
16	Other	Covered	Oxygen	No							No
17	Other	Covered	HIV/AIDS Treatment	No						Refer to drug rider	No
18	Other	Covered	Diabetes Education & Counseling	No							No
19	Other	Covered	Diagnosis & Treatment of Lymphadema	No							No
20	Other	Covered	Termination of Pregnancy	No							No
21	Other	Covered	Coverage for Certain Clinical Trials -in accordance with Medicare guidelines	No							No

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22	Other	Covered	Medical Foods	No						To treat inborn errors of metabolism in accord with Hawaii Law and HMSA guidelines	No
23	Other	Covered	Vision Benefits covered under Vision Rider	No							No
24	Other	Covered	Dental Benefits covered under Dental Rider	No							No

PREScription DRUG EHB-BENCHMARK PLAN BENEFITS BY CATEGORY AND CLASS

Category	Class	Submission Count
ANALGESICS	NONSTEROIDAL ANTI-INFLAMMATORY DRUGS	20
ANALGESICS	OPIOID ANALGESICS, LONG-ACTING	10
ANALGESICS	OPIOID ANALGESICS, SHORT-ACTING	10
ANESTHETICS	LOCAL ANESTHETICS	2
ANTI-ADDICTION/SUBSTANCE ABUSE TREATMENT AGENTS	ALCOHOL DETERRENTS/ANTI-CRAVING	3
ANTI-ADDICTION/SUBSTANCE ABUSE TREATMENT AGENTS	OPIOID ANTAGONISTS	2
ANTI-ADDICTION/SUBSTANCE ABUSE TREATMENT AGENTS	SMOKING CESSATION AGENTS	3
ANTI-INFLAMMATORY AGENTS	NONSTEROIDAL ANTI-INFLAMMATORY DRUGS	20
ANTIBACTERIALS	AMINOGLYCOSIDES	5
ANTIBACTERIALS	ANTIBACTERIALS, OTHER	16
ANTIBACTERIALS	BETA-LACTAM, CEPHALOSPORINS	10
ANTIBACTERIALS	BETA-LACTAM, OTHER	1
ANTIBACTERIALS	BETA-LACTAM, PENICILLINS	4
ANTIBACTERIALS	MACROLIDES	6
ANTIBACTERIALS	QUINOLONES	8
ANTIBACTERIALS	SULFONAMIDES	4
ANTIBACTERIALS	TETRACYCLINES	4
ANTICONSULSANTS	ANTICONSULSANTS, OTHER	1
ANTICONSULSANTS	BARBITURIC ACID DERIVATIVE	1
ANTICONSULSANTS	BENZODIAZEPINE DERIVATIVE	4
ANTICONSULSANTS	CALCIUM CHANNEL MODIFYING AGENTS	4
ANTICONSULSANTS	GAMMA-AMINOBUTYRIC ACID (GABA) AUGMENTING AGENTS	4
ANTICONSULSANTS	GLUTAMATE REDUCING AGENTS	3
ANTICONSULSANTS	SODIUM CHANNEL AGENTS	6
ANTIDEMENTIA AGENTS	ANTIDEMENTIA AGENTS, OTHER	1
ANTIDEMENTIA AGENTS	CHOLINESTERASE INHIBITORS	3
ANTIDEMENTIA AGENTS	N-METHYL-D-ASPARTATE (NMDA) RECEPTOR ANTAGONIST	1
ANTIDEPRESSANTS	ANTIDEPRESSANTS, OTHER	7
ANTIDEPRESSANTS	MONOAMINE OXIDASE INHIBITORS	4
ANTIDEPRESSANTS	SEROTONIN/NOREPINEPHRINE REUPTAKE INHIBITORS	9
ANTIDEPRESSANTS	TRICYCLICS	9
ANTIEMETICS	ANTIEMETICS, OTHER	9
ANTIEMETICS	EMETOGENIC THERAPY ADJUNCTS	6
ANTIFUNGALS	ANTIFUNGALS	20
ANTIGOUT AGENTS	ANTIGOUT AGENTS	4
ANTIMIGRAINE AGENTS	ERGOT ALKALOIDS	1
ANTIMIGRAINE AGENTS	PROPHYLACTIC	3

Category	Class	Submission Count
ANTIMIGRAINE AGENTS	SEROTONIN (5-HT) 1B/1D RECEPTOR AGONISTS	7
ANTIMYASTHENIC AGENTS	PARASYMPATHOMIMETICS	2
ANTIMYCOBACTERIALS	ANTIMYCOBACTERIALS, OTHER	2
ANTIMYCOBACTERIALS	ANTITUBERCULARS	7
ANTINEOPLASTICS	ALKYLATING AGENTS	6
ANTINEOPLASTICS	ANTIANGIOGENIC AGENTS	2
ANTINEOPLASTICS	ANTIESTROGENS/MODIFIERS	3
ANTINEOPLASTICS	ANTIMETABOLITES	2
ANTINEOPLASTICS	ANTINEOPLASTICS	3
ANTINEOPLASTICS	ANTINEOPLASTICS, OTHER	2
ANTINEOPLASTICS	AROMATASE INHIBITORS, 3RD GENERATION	3
ANTINEOPLASTICS	ENZYME INHIBITORS	1
ANTINEOPLASTICS	MOLECULAR TARGET INHIBITORS	11
ANTINEOPLASTICS	MONOCLONAL ANTIBODIES	0
ANTINEOPLASTICS	RETINOIDS	3
ANTIPARASITICS	ANTHELMINTICS	3
ANTIPARASITICS	ANTIPROTOZOALS	11
ANTIPARASITICS	PEDICULICIDES/SCABICIDES	5
ANTIPARKINSON AGENTS	ANTICHOLINERGICS	3
ANTIPARKINSON AGENTS	ANTIPARKINSON AGENTS, OTHER	4
ANTIPARKINSON AGENTS	DOPAMINE AGONISTS	3
ANTIPARKINSON AGENTS	DOPAMINE PRECURSORS/L-AMINO ACID DECARBOXYLASE INHIBITORS	1
ANTIPARKINSON AGENTS	MONOAMINE OXIDASE B (MAO-B) INHIBITORS	2
ANTIPSYCHOTICS	1ST GENERATION/TYPICAL	10
ANTIPSYCHOTICS	2ND GENERATION/ATYPICAL	9
ANTIPSYCHOTICS	TREATMENT-RESISTANT	1
ANTISPASTICITY AGENTS	ANTISPASTICITY AGENTS	3
ANTIVIRALS	ANTI-CYTOMEGALOVIRUS (CMV) AGENTS	2
ANTIVIRALS	ANTI-HIV AGENTS, NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS	5
ANTIVIRALS	ANTI-HIV AGENTS, NUCLEOSIDE AND NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS	8
ANTIVIRALS	ANTI-HIV AGENTS, OTHER	2
ANTIVIRALS	ANTI-HIV AGENTS, PROTEASE INHIBITORS	9
ANTIVIRALS	ANTI-INFLUENZA AGENTS	4
ANTIVIRALS	ANTIHEPATITIS AGENTS	8
ANTIVIRALS	ANTIHERPETIC AGENTS	5
ANXIOLYTICS	ANXIOLYTICS, OTHER	4
ANXIOLYTICS	SELECTIVE SEROTONIN REUPTAKE INHIBITORS/SEROTONIN AND NOREPINEPHRINE REUPTAKE INHIBITORS	5

Category	Class	Submission Count
BIPOLAR AGENTS	BIPOLAR AGENTS, OTHER	6
BIPOLAR AGENTS	MOOD STABILIZERS	4
BLOOD GLUCOSE REGULATORS	ANTIDIABETIC AGENTS	21
BLOOD GLUCOSE REGULATORS	GLYCEMIC AGENTS	2
BLOOD GLUCOSE REGULATORS	INSULINS	7
BLOOD PRODUCTS/MODIFIERS/VOLUME EXPANDERS	ANTICOAGULANTS	3
BLOOD PRODUCTS/MODIFIERS/VOLUME EXPANDERS	BLOOD FORMATION MODIFIERS	2
BLOOD PRODUCTS/MODIFIERS/VOLUME EXPANDERS	COAGULANTS	0
BLOOD PRODUCTS/MODIFIERS/VOLUME EXPANDERS	PLATELET MODIFYING AGENTS	7
CARDIOVASCULAR AGENTS	ALPHA-ADRENERGIC AGONISTS	4
CARDIOVASCULAR AGENTS	ALPHA-ADRENERGIC BLOCKING AGENTS	4
CARDIOVASCULAR AGENTS	ANGIOTENSIN II RECEPTOR ANTAGONISTS	8
CARDIOVASCULAR AGENTS	ANGIOTENSIN-CONVERTING ENZYME (ACE) INHIBITORS	9
CARDIOVASCULAR AGENTS	ANTIARRHYTHMICS	9
CARDIOVASCULAR AGENTS	BETA-ADRENERGIC BLOCKING AGENTS	13
CARDIOVASCULAR AGENTS	CALCIUM CHANNEL BLOCKING AGENTS	9
CARDIOVASCULAR AGENTS	CARDIOVASCULAR AGENTS, OTHER	6
CARDIOVASCULAR AGENTS	DIURETICS, CARBONIC ANHYDRASE INHIBITORS	2
CARDIOVASCULAR AGENTS	DIURETICS, LOOP	3
CARDIOVASCULAR AGENTS	DIURETICS, POTASSIUM-SPARING	4
CARDIOVASCULAR AGENTS	DIURETICS, THIAZIDE	6
CARDIOVASCULAR AGENTS	DYSLIPIDEMICS, FIBRIC ACID DERIVATIVES	2
CARDIOVASCULAR AGENTS	DYSLIPIDEMICS, HMG COA REDUCTASE INHIBITORS	7
CARDIOVASCULAR AGENTS	DYSLIPIDEMICS, OTHER	6
CARDIOVASCULAR AGENTS	VASODILATORS, DIRECT-ACTING ARTERIAL	2
CARDIOVASCULAR AGENTS	VASODILATORS, DIRECT-ACTING ARTERIAL/VENOUS	2
CENTRAL NERVOUS SYSTEM AGENTS	ATTENTION DEFICIT HYPERACTIVITY DISORDER AGENTS, AMPHETAMINES	4
CENTRAL NERVOUS SYSTEM AGENTS	ATTENTION DEFICIT HYPERACTIVITY DISORDER AGENTS, NON-AMPHETAMINES	5
CENTRAL NERVOUS SYSTEM AGENTS	CENTRAL NERVOUS SYSTEM AGENTS, OTHER	4
CENTRAL NERVOUS SYSTEM AGENTS	FIBROMYALGIA AGENTS	3
CENTRAL NERVOUS SYSTEM AGENTS	MULTIPLE SCLEROSIS AGENTS	2
DENTAL AND ORAL AGENTS	DENTAL AND ORAL AGENTS	6
DERMATOLOGICAL AGENTS	DERMATOLOGICAL AGENTS	25
ENZYME REPLACEMENT/MODIFIERS	ENZYME REPLACEMENT/MODIFIERS	10
GASTROINTESTINAL AGENTS	ANTISPASMODICS, GASTROINTESTINAL	5
GASTROINTESTINAL AGENTS	GASTROINTESTINAL AGENTS, OTHER	6
GASTROINTESTINAL AGENTS	HISTAMINE2 (H2) RECEPTOR ANTAGONISTS	4
GASTROINTESTINAL AGENTS	IRRITABLE BOWEL SYNDROME AGENTS	2

Category	Class	Submission Count
GASTROINTESTINAL AGENTS	LAXATIVES	2
GASTROINTESTINAL AGENTS	PROTECTANTS	2
GASTROINTESTINAL AGENTS	PROTON PUMP INHIBITORS	6
GENITOURINARY AGENTS	ANTISPASMODICS, URINARY	7
GENITOURINARY AGENTS	BENIGN PROSTATIC HYPERTROPHY AGENTS	9
GENITOURINARY AGENTS	GENITOURINARY AGENTS, OTHER	4
GENITOURINARY AGENTS	PHOSPHATE BINDERS	3
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (ADRENAL)	GLUCOCORTICOIDS/MINERALOCORTICOIDS	24
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (PITUITARY)	HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (PITUITARY)	1
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (PROSTAGLANDINS)	HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (PROSTAGLANDINS)	1
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (SEX HORMONES/MODIFIERS)	ANABOLIC STEROIDS	1
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (SEX HORMONES/MODIFIERS)	ANDROGENS	4
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (SEX HORMONES/MODIFIERS)	ESTROGENS	4
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (SEX HORMONES/MODIFIERS)	PROGESTINS	6
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (SEX HORMONES/MODIFIERS)	SELECTIVE ESTROGEN RECEPTOR MODIFYING AGENTS	1
HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (THYROID)	HORMONAL AGENTS, STIMULANT/REPLACEMENT/MODIFYING (THYROID)	3
HORMONAL AGENTS, SUPPRESSANT (ADRENAL)	HORMONAL AGENTS, SUPPRESSANT (ADRENAL)	1
HORMONAL AGENTS, SUPPRESSANT (PARATHYROID)	HORMONAL AGENTS, SUPPRESSANT (PARATHYROID)	1
HORMONAL AGENTS, SUPPRESSANT (PITUITARY)	HORMONAL AGENTS, SUPPRESSANT (PITUITARY)	3
HORMONAL AGENTS, SUPPRESSANT (SEX HORMONES/MODIFIERS)	ANTIANDROGENS	5
HORMONAL AGENTS, SUPPRESSANT (THYROID)	ANTITHYROID AGENTS	2
IMMUNOLOGICAL AGENTS	IMMUNE SUPPRESSANTS	9
IMMUNOLOGICAL AGENTS	IMMUNIZING AGENTS, PASSIVE	0
IMMUNOLOGICAL AGENTS	IMMUNOMODULATORS	3
IMMUNOLOGICAL AGENTS	VACCINES	1
INFLAMMATORY BOWEL DISEASE AGENTS	AMINOSALICYLATES	3
INFLAMMATORY BOWEL DISEASE AGENTS	GLUCOCORTICOIDS	8
INFLAMMATORY BOWEL DISEASE AGENTS	SULFONAMIDES	1
METABOLIC BONE DISEASE AGENTS	METABOLIC BONE DISEASE AGENTS	9
OPHTHALMIC AGENTS	OPHTHALMIC PROSTAGLANDIN AND PROSTAMIDE ANALOGS	3
OPHTHALMIC AGENTS	OPHTHALMIC AGENTS, OTHER	8
OPHTHALMIC AGENTS	OPHTHALMIC ANTI-ALLERGY AGENTS	9

Category	Class	Submission Count
OPHTHALMIC AGENTS	OPHTHALMIC ANTI-INFLAMMATORIES	11
OPHTHALMIC AGENTS	OPHTHALMIC ANTIGLAUCOMA AGENTS	12
OPHTHALMIC ANTI-INFLAMMATORIES	OPHTHALMIC ANTI-INFLAMMATORIES	1
OTIC AGENTS	OTIC AGENTS	4
RESPIRATORY TRACT AGENTS	ANTI-INFLAMMATORIES, INHALED CORTICOSTEROIDS	7
RESPIRATORY TRACT AGENTS	ANTIHISTAMINES	11
RESPIRATORY TRACT AGENTS	ANTILEUKOTRIENES	3
RESPIRATORY TRACT AGENTS	BRONCHODILATORS, ANTICHOLINERGIC	2
RESPIRATORY TRACT AGENTS	BRONCHODILATORS, PHOSPHODIESTERASE INHIBITORS (XANTHINES)	2
RESPIRATORY TRACT AGENTS	BRONCHODILATORS, SYMPATHOMIMETIC	9
RESPIRATORY TRACT AGENTS	MAST CELL STABILIZERS	1
RESPIRATORY TRACT AGENTS	PULMONARY ANTIHYPERTENSIVES	5
RESPIRATORY TRACT AGENTS	RESPIRATORY TRACT AGENTS, OTHER	4
SKELETAL MUSCLE RELAXANTS	SKELETAL MUSCLE RELAXANTS	8
SLEEP DISORDER AGENTS	GABA RECEPTOR MODULATORS	3
SLEEP DISORDER AGENTS	SLEEP DISORDERS, OTHER	5
THERAPEUTIC NUTRIENTS/MINERALS/ELECTROLYTES	ELECTROLYTE/MINERAL MODIFIERS	7
THERAPEUTIC NUTRIENTS/MINERALS/ELECTROLYTES	ELECTROLYTE/MINERAL REPLACEMENT	7
THERAPEUTIC NUTRIENTS/MINERALS/ELECTROLYTES	THERAPEUTIC NUTRIENTS/MINERALS/ELECTROLYTES	1