Applied Behavior Analysis and the TRICARE Autism Care Demonstration: Standards, Policies, and Outcomes

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Contents

Executive Summary

The principal aim of this paper is to describe current standards of applied behavior analysis (ABA) healthcare services for individuals diagnosed with autism and their relevance to the US Department of Defense TRICARE Autism Care Demonstration (ACD). Those standards are situated within the frameworks of generally accepted standards of care (in particular as that concept is embodied in federal and state mental health parity laws), professional standards in the practice of ABA, and public policies affecting the funding and delivery of ABA healthcare services to autistic individuals. Key TRICARE ACD policies are compared against the profession's standards of ABA healthcare for such beneficiaries and associated policies and standards.

In recognition of differing preferences regarding language, identity-first (e.g., "autistic individual") and person-first (e.g,," individual with autism") terminology is used interchangeably. That is also the case for the terms "autism," "autism spectrum disorder," and "ASD."

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Section 1. Standards of Applied Behavior Analysis Healthcare for Individuals with Autism

1.1 Generally accepted standards of care

Definition
In healthcare, the term "generally accepted standards of care (GASC)" is defined broadly as delineation of the best practices for serving patients with a specified condition that are widely accepted by professionals in the relevant clinical specialty. They are developed and revised periodically by subject matter experts in that profession, who typically base the standards on an analysis of the applicable scientific research and the consensus of clinicians who serve the patient population.

***Wit v. United Behavioral Health* legal case**
The role of GASC in the funding and delivery of healthcare services for individuals with substance use disorders and mental health conditions has gained prominence in recent years, in part due to an important legal case. *Wit v. United Behavioral Health* was a class action lawsuit brought in the U.S. District Court for the Northern District of California against insurer United Behavioral Health (UBH) for denying coverage of medically necessary services for patients with mental health and substance use disorders. In his February 2019 decision, the judge found for the Plaintiffs and ruled that UBH breached its fiduciary duty and violated the laws of four states by using its own overly restrictive internal criteria -- influenced by the company's financial interests -- for determining medically necessary services instead of following GASC developed by the relevant healthcare professionals. That decision was appealed by UBH and overturned by a 3-judge panel of the 9th Circuit Court of Appeals in March 2022. Subsequently the same 3-judge panel issued opinions that it was "not unreasonable" for UBH to use coverage criteria that were not consistent with GASC, but remanded the case to the District Court for decisions. Those decisions will determine if some of the Plaintiffs' previously denied claims can be reprocessed. For a summary of the proceedings in the *Wit v. UBH* case to date and links to key documents, see https://www.thekennedyforum.org/wit/.

Mental health parity laws and rules
Some of the Plaintiffs' arguments and some points in the judge's ruling in the original *Wit v. United Behavioral Health* case regarding GASC were grounded in the federal Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA). It is a complex piece of legislation whose overarching purpose is to prohibit most health plans in the US from imposing limitations on services for mental health and substance use disorders (MH/SUDs) that apply only to those disorders or are more restrictive than limitations on medical and surgical (M/S) services. The law is enforced by the US Departments of Health and Human Services, Labor, and Treasury; state health insurance regulators are responsible for seeing that health plans operating in their states comply with its provisions.

Updated rules for implementing MHPAEA were issued on September 9, 2024. Provisions that are relevant to the topics of this paper include requirements for health plans to

- base medical necessity determinations, utilization reviews of MH/SUD services, and comparisons with M/S benefits on "generally accepted independent professional medical or clinical standards of care." Sources of such standards include peer-reviewed scientific studies and medical literature, recommendations of federal agencies, Food and Drug Administration approval, and "recommendations of relevant nonprofit health care provider professional associations and specialty societies;" and
- define mental health conditions as those described in diagnostic manuals (e.g., American Psychiatric Association, 2022), which include autism spectrum disorder (ASD).

An analysis of the complete set of rules can be found at https://www.thekennedyforum.org/blog/analysis-of-the-mental-health-parity-final-rule/ (see especially "Ensures meaningful coverage at all levels" and "Aligns definitions with clinical science").

At least four states (California, Georgia, Illinois, Oregon) have adopted or amended their mental health parity laws to incorporate provisions regarding GASC from MHPAEA and the original *Wit v. UBH* decision. For example, the California Mental Health Parity Act as amended in 2020 by SB 855 specifies:

> Section 1374.721.
> (a) A health care service plan that provides hospital, medical, or surgical coverage shall base any medical necessity determination or the utilization review criteria that the plan, and any entity acting on the plan's behalf, applies to determine the medical necessity of health care services and benefits for the diagnosis, prevention, and treatment of mental health and substance use disorders on current generally accepted standards of mental health and substance use disorder care.
> (b) In conducting utilization review of all covered health care services and benefits for the diagnosis, prevention, and treatment of mental health and substance use disorders in children, adolescents, and adults, a health care service plan shall apply the criteria and guidelines set forth in the most recent versions of treatment criteria developed by the nonprofit professional association for the relevant clinical specialty.
> (f) (1) "Generally accepted standards of mental health and substance use disorder care" means standards of care and clinical practice that are generally recognized by health care providers practicing in relevant clinical specialties such as psychiatry, psychology, clinical sociology, addiction medicine and counseling, and behavioral health treatment pursuant to Section 1374.73. Valid, evidence-based sources establishing generally accepted standards of mental health and substance use disorder care include peer-reviewed scientific studies and medical literature, clinical practice guidelines and recommendations of nonprofit health care provider professional associations, specialty societies and federal government agencies, and drug labeling approved by the United States Food and Drug Administration.

Also see the model state mental health parity legislation that has been proposed by The Kennedy Forum and a number of national organizations.

It is important to note that specifications of valid, reliable sources of GASC in federal and state mental health parity laws and associated rules do **not** include standards or guidelines developed by payers; private companies, whether non-profit (e.g., Catalight) or for-profit (e.g., Milliman); or managed care organizations.

Implications for healthcare beneficiaries with autism

Autism is categorized as a mental health condition by most health insurers and mental health parity laws. Therefore, the ultimate resolution of the *Wit* case and implementation of those laws will have important ramifications for health insurance beneficiaries with autism. For instance, full enforcement of mental health parity rules could prevent many health plans from relying on criteria for determining medically necessary services for autistic individuals that are developed by the health plans themselves or by private companies instead of GASC developed by nonprofit healthcare provider professional associations. In turn, health plans could be prohibited from denying services on the grounds that a beneficiary with autism does not exhibit severe difficulties, has made either insufficient or too much progress, or has been receiving services for a certain amount of time. Although TRICARE is technically

exempt from MHPAEA, it seems likely that advocates for military beneficiaries with autism, other mental health conditions, and substance use disorders will push for that to change.

1.2 Applied behavior analysis practice standards

Practice of ABA

Behavior analysis is a natural science discipline whose subject matter is individual behavior interacting with environmental events, where behavior is defined as any actions of living organisms. The discipline has distinct concepts and research methods (first laid out in the 1930s-'50s); theoretical, experimental, and applied branches; scientific journals and textbooks; scholarly and professional organizations; university training programs; and practitioner credentials (described later). Much of the foundational work for the applied branch of the discipline (ABA) was done in the 1950s and '60s by blending methods and findings of research in the experimental analysis of behavior and human development. In 1968, a flagship doctoral program in ABA was established in the Department of Human Development and Family Life at the University of Kansas, and the *Journal of Applied Behavior Analysis (JABA)* was founded as an outlet for publishing research in the new applied area (Cooper, Heron, & Heward, 2020; Ghezzi, 2010; Johnston, Pennypacker, & Green, 2020; Morris, Altus, & Smith, 2013; Risley, 2005).

The first issue of *JABA* included an article by the founding editors that defined ABA as the use of the principles (natural laws) and methods of behavior analysis to bring about meaningful changes in socially important behaviors. In that article the authors also laid out these defining features ("dimensions") of ABA (Baer, Wolf, & Risley, 1968):

- Applied – addresses behaviors that are important to the client and his/her significant others
- Behavioral – focuses on the client behavior(s) in need of improvement and direct measurement of those behaviors
- Analytical – consistently produces change in a measured aspect of the target behavior(s) when the intervention is in place vs. when it is not
- Technological – described with sufficient detail and clarity that a reader has a reasonable chance of replicating the intervention
- Conceptually systematic – grounded in the conceptualization that behavior is a function of environmental events and described in terms of behavior analytic principles
- Effective – improves target behaviors to a practical degree
- Generalized – produces changes in target behaviors that last over time, occur in situations other than those in which the interventions were implemented initially, and/or spread to behaviors that were not treated directly

Professional credentialing standards

Certification. As studies demonstrating the effectiveness of many ABA procedures proliferated throughout the 1960s, '70s, and '80s, so did interest in using those procedures in a variety of practice settings with a large array of individuals with and without specific diagnoses. That spurred development of programs for certifying professionals in the practice of ABA, distinct from the practice of psychology and other professions. Early certification programs operated by the Minnesota Department of Welfare and the Association for Behavior Analysis were short-lived. A framework for delivering ABA services to individuals with intellectual disabilities in Florida gave rise to an informal, examination-based practitioner certification program in the early 1970s, which was further developed and managed by the Florida Developmental Services Program Office. A psychometrician in the state Department of

Professional Regulation guided development and administration of an initial professional examination in behavior analysis and a job task analysis (JTA) -- a specialized type of study that many professions conduct to identify the knowledge, skills, and abilities involved in practicing the profession as well as the content of credentialing examinations. Results of JTAs often help guide subject matter experts (SMEs) in specifying education (degree, coursework) and experiential training requirements for taking the credentialing exam. The Florida Behavior Analysis Certification Program started in 1983 and operated until 1998, certifying over 2000 behavior analysts in the state at bachelor's- and master's-degree levels. By the mid-'90s, five other states were using the Florida examination to credential ABA practitioners (Carr & Nosik, 2017; Johnston, Carr, & Mellichamp, 2017).

Following publication of the book *Let Me Hear Your Voice* in which a mother recounted the effectiveness of comprehensive ABA intervention for her two young autistic children (Maurice, 1993), parental demand for professionals to design and deliver such intervention skyrocketed. Because there were no uniform, widely recognized requirements for practicing ABA at that time, a kind of "cottage industry" arose. Many parents paid privately for services provided by just about anyone who claimed to be able to "do ABA" (Jacobson, 2000). Those circumstances led Dr. Jerry Shook -- a behavior analyst who had directed the Florida Behavior Analysis Certification Program for several years -- to establish the nonprofit Behavior Analyst Certification Board (BACB) in 1998 to develop national behavior analyst certification programs. The BACB entered into an agreement with the State of Florida to use that state's certification exam and some other materials to certify behavior analysts outside of Florida. By 2005 the certification programs in Florida and the other five states had all been transferred to the BACB. Since 1999 the BACB has conducted four additional JTAs; updated examination contents and eligibility requirements (degrees, coursework, supervised experiential training) accordingly; converted exams from pencil-and-paper to a computer-based format and contracted with Pearson VUE to administer them in its secure test sites; developed and enforced ethical standards; and certified thousands of professional behavior analysts. It has also developed a paraprofessional credentialing program, described below (Carr & Nosik, 2017; Johnston, Carr, & Mellichamp, 2017).

The BACB currently certifies professional practitioners of ABA at two levels:

- Board Certified Behavior Analyst® (BCBA®) -- an independent practitioner who can provide ABA services and supervise delivery of those services by others. Requires at least a master's degree, university coursework in specified topics, supervised experiential training, and passage of the BCBA professional examination in behavior analysis. BCBAs with doctoral degrees can apply for the Board Certified Behavior Analyst - Doctoral (BCBA-D) designation. For details, see https://www.bacb.com/bcba/
- Board Certified Assistant Behavior Analyst® (BCaBA®) -- a practitioner who can provide ABA services under the supervision of a BCBA or BCBA-D. Requires a bachelor's degree, university coursework in specified topics in behavior analysis, supervised experiential training, and passage of the BCaBA professional examination in behavior analysis. See https://www.bacb.com/bcaba/

Both of those certification programs have been accredited by the National Commission for Certifying Agencies (NCCA) of the Institute for Credentialing Excellence since 2007 (Carr & Nosik, 2017; Johnston, Carr, & Mellichamp, 2017). To maintain their certifications, BCBAs and BCaBAs must complete continuing education requirements and adhere to the *Ethics Code for Behavior Analysts*.

For years, many consumers, employers, and funders expressed a desire for uniform training and other standards for paraprofessionals who assist professionals in delivering ABA services to clients. In response to that need, the BACB developed the Registered Behavior Technician® (RBT®) credential in

2017, using JTA procedures and SMEs to identify the knowledge, skills, and abilities involved, didactic and experiential training requirements, and examination contents (Carr, Nosik, & DeLeon, 2017). Current requirements are at least a high school education or equivalent, passage of a criminal background check, completion of a BACB-approved 40-hour training program, passage of an initial competency assessment, and passage of the RBT examination in behavior analysis. *RBTs must work under the direction and close supervision of professional behavior analysts who have met BACB requirements for serving as supervisors* (see https://www.bacb.com/rbt/). To maintain their credential, RBTs and their supervisors must document that they have fulfilled the supervision requirements, and RBTs must adhere to the *RBT Ethics Code.* The RBT program is also accredited by NCCA.

Licensure. Starting in 2009, US states began adopting laws that require individuals to hold a state-issued license in order to use a specified title (e.g., Licensed Behavior Analyst) and in all but two states, to practice ABA professionally (the OR and WI laws are title acts only). At this writing, 38 states have adopted behavior analyst licensure laws. All of those states license behavior analysts with graduate degrees to practice ABA independently. Several also license assistant behavior analysts with bachelor's degrees to practice under the supervision of licensed behavior analysts. The large majority of states exempt behavior technicians and other paraprofessionals from direct regulation by the state as long as they are supervised properly by a licensed behavior analyst or assistant behavior analyst. At present, five states require ABA paraprofessionals to be registered or certified by the state licensing entity in addition to being supervised by a licensed professional behavior analyst.

Behavior analyst licensure programs are administered by governmental entities that vary across states: stand-alone behavior analyst licensing boards, omnibus licensing boards, licensing boards of other professions, and state agencies with no licensing board. In all states, however, *behavior analysts are licensed in their own right, not as members of other professions*. Because the requirements for the BACB's professional certifications parallel requirements for licenses in many professions -- degree(s), university coursework, experiential training, professional exam in the subject matter -- most of the licensure laws and/or the associated rules make current BACB certification a qualification for obtaining the state-issued license. In the remaining states, BACB certifications are written into various laws and rules as qualifications for designing, overseeing, and/or delivering ABA services (e.g., health insurance laws or rules, Medicaid policies, developmental disability services laws or rules, education laws or rules). For a list of states with behavior analyst licensure laws and links to the regulatory entities, see https://www.bacb.com/u-s-licensure-of-behavior-analysts/.

With some variations across states, the practice of applied behavior analysis is defined in licensure laws as it is in the current *Model Behavior Analyst Licensure Act:*

> The design, implementation, and evaluation of instructional and environmental modifications to produce socially significant improvements in human behavior. The practice of applied behavior analysis includes the empirical identification of functional relations between behavior and environmental factors, known as functional assessment and analysis. Applied behavior analysis interventions are based on scientific research and direct and indirect observation and measurement of behavior and environment. They utilize contextual factors, motivating operations, antecedent stimuli, positive reinforcement, and other procedures to help individuals develop new behaviors, increase or decrease existing behaviors, and emit behaviors under specific environmental conditions.

Like parallel components of the licensure laws of many other professions, this definition describes the profession's scope of practice, i.e., the range of activities in which a licensee might engage. Ethical

standards require each licensee to practice within the profession's scope and within the boundaries of their own training and competence. Note that the definition is fairly general; for instance, it does not specify any client populations, settings, funding sources, or the like. That too is true of the licensure laws of many other professions.

Ethical standards

As mentioned previously, the BACB has developed an ethics code for professional practitioners (BCBAs and BCaBAs) and one for RBTs. As a non-governmental credentialing organization, the BACB can enforce the codes only with individuals it certifies and candidates for its certifications. The ethics codes have been incorporated in many state behavior analyst licensure laws and/or associated rules, which are enforced by the licensing entities in those states.

The *Ethics Code for Behavior Analysts* includes

- Introduction
- Glossary
- Ethics Standards
    - Responsibility as a Professional
    - Responsibility in Practice
    - Responsibility to Clients and Stakeholders
    - Responsibility to Supervisees and Trainees
    - Responsibility in Public Statements
    - Responsibility in Research

Content areas of the *RBT Ethics Code* are

- Introduction
- Ethics Standards
    - General Responsibilities
    - Responsibilities in Providing Behavior Technician Services
    - Responsibilities to the BACB and BACB-Required Supervisor

Information about the history of the development of the ethics codes and resources on ethics that have been developed by the BACB can be found at https://www.bacb.com/ethics-information/ethics-resources/

Practice of ABA as behavioral healthcare

From the early days of the development of the applied branch of the discipline, behavior analytic procedures have been developed, evaluated, and applied with a variety of client populations. They include but are not limited to individuals with no diagnosis and individuals diagnosed with autism and other developmental disorders, intellectual disabilities, attention deficit/hyperactivity disorder, learning disorders, brain and spinal cord injuries, movement disorders, behavior disorders, feeding disorders, dementia and other behavioral difficulties associated with aging, substance use disorders, and various other mental and physical health conditions. Background information as well as videos and fact sheets on some of the practice subspecialties can be found on the BACB webpage About Behavior Analysis.

The first documented demonstration of the efficacy of ABA interventions for building skills in children with autism was published by Ferster and DeMyer in 1961. That study was conducted in a learning laboratory. The first evaluation of ABA interventions to build adaptive skills and reduce maladaptive behaviors in a young autistic child in natural environments (preschool, home) was published by Wolf,

Risley, and Mees in 1963. One of the first to evaluate that approach on a larger scale was Ivar Lovaas at UCLA, who published a seminal group-design study of comprehensive, intensive ABA intervention for young children with autism in 1987. Many other behavior analysts have contributed and are contributing to the large body of scientific research on interventions for individuals with autism of all ages.

An article in *Psychology Today* describing the outcomes of the 1987 Lovaas study came to the attention of Catherine Maurice and her husband when they were searching for effective treatment for their young daughter with autism. That led them to procure comprehensive, intensive ABA intervention for their daughter and later a son who was also diagnosed with autism, and to the publication of the book *Let Me Hear Your* Voice (Maurice, 1993). As mentioned previously, parents who learned about ABA from that book spurred the increased demand for qualified ABA practitioners that began in the mid-1990s. At that time, most ABA services were funded by state agencies (e.g., developmental services, rehabilitation, education) or by parents out of pocket; few if any health insurance plans covered any services for individuals with autism.

Health insurance laws, regulations, and policies. In 2007, some parents of children with autism began advocating for state laws requiring certain commercial health plans to cover services for autism. Shortly thereafter that effort picked up steam when Lorri Unumb, a parent and attorney who had succeeded in getting such a law adopted in her home state of South Carolina, became Vice President for State Government Affairs for the advocacy organization Autism Speaks. Due largely to the efforts of her team and Autism Speaks state volunteers (mostly parents), by 2019 all 50 US states had adopted laws or rules requiring many commercial health plans to cover services for autistic individuals. Many of those laws or rules were based on the Autism Speaks model health insurance law, which specified that ABA services must be among those covered by the applicable health plans. Also due to the parent-led autism insurance reform movement, many self-funded health plans, the Federal Employees Health Benefits Program, and private health plans purchased via the Health Insurance Marketplace in 33 states and the District of Columbia eventually came to cover ABA and other services for autistic beneficiaries. All state Medicaid programs have long been required to cover all medically necessary services for all eligible beneficiaries (regardless of diagnosis) under the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) mandate. In 2014 advocates learned that many Medicaid programs were not covering ABA services and pressed the Centers for Medicare and Medicaid Services (CMS) to issue a bulletin to all state Medicaid administrators reminding them that ABA services should be covered. At this writing all state Medicaid programs do so, though coverage varies across states.

Military parents of children with autism also began advocating for TRICARE to cover ABA services in about 2007. That effort was led by Marine spouse and parent Karen Driscoll, who worked for some time for Autism Speaks Federal Government Affairs. Some coverage was initiated in 2008 under several TRICARE programs, which were consolidated under the Autism Care Demonstration (ACD) in 2014.

Healthcare provider taxonomy codes. Adoption of the foregoing public policies made it possible for many ABA practitioners to have their services funded by health insurance for the first time and placed them squarely within the category of behavioral healthcare providers. Several additional actions were required, however, to enable health insurance reimbursement for ABA services. One was establishment of healthcare provider taxonomy codes, which providers must use to apply for the National Provider Identification (NPI) numbers that are required to bill health plans. Healthcare provider taxonomy codes are issued and owned by the American Medical Association (AMA) National Uniform Claims Committee. Codes for ABA providers were issued in 2016 pursuant to an application submitted by the BACB and the

Association of Professional Behavior Analysts. They are in the code set under Behavioral Health & Social Service Providers and are defined as follows:

> 103K00000X Behavior Analyst: A behavior analyst is qualified by at least a master's degree and Behavior Analyst Certification Board certification and/or a state-issued credential (such as a license) to practice behavior analysis independently. Behavior analysts provide the required supervision to assistant behavior analysts and behavior technicians. A behavior analyst delivers services consistent with the dimensions of applied behavior analysis. Common services may include, but are not limited to, conducting behavioral assessments, analyzing data, writing and revising behavior-analytic treatment plans, training others to implement components of treatment plans, and overseeing implementation of treatment plans.
>
> 106E00000X Assistant Behavior Analyst: An assistant behavior analyst is qualified by Behavior Analyst Certification Board certification and/or a state-issued license or credential in behavior analysis to practice under the supervision of an appropriately credentialed professional behavior analyst. An assistant behavior analyst delivers services consistent with the dimensions of applied behavior analysis and supervision requirements defined in state laws or regulations and/or national certification standards. Common services may include, but are not limited to, conducting behavioral assessments, analyzing data, writing behavior-analytic treatment plans, training and supervising others in implementation of components of treatment plans, and direct implementation of treatment plans.
>
> 106S000X Behavior Technician: The behavior technician is a paraprofessional who practices under the close, ongoing supervision of a behavior analyst or assistant behavior analyst certified by the Behavior Analyst Certification Board and/or credentialed by a state (such as through licensure). The behavior technician is primarily responsible for the implementation of components of behavior-analytic treatment plans developed by the supervisor. That may include collecting data on treatment targets and conducting certain types of behavioral assessments (e.g., stimulus preference assessments). The behavior technician does not design treatment or assessment plans or procedures but provides services as assigned by the supervisor responsible for his or her work.

Billing codes. To be reimbursed by public and private health plans in the US, healthcare providers must use billing codes -- brief descriptors of procedures and services with numeric or alphanumeric identifiers. When the first state laws requiring health plans to cover ABA services for autistic beneficiaries were adopted, there were no billing codes specific to those services. Health plans and providers used a hodgepodge of existing codes, selected mainly from the Healthcare Common Procedure Coding System (HCPCS; owned and maintained by CMS), that came reasonably close to describing ABA services (e.g., H2019, "therapeutic behavioral services"). To enable ABA providers to bill health plans, it was necessary to obtain Current Procedural Terminology® (CPT®) codes for ABA services. Those codes are issued, owned, and managed by the AMA CPT Editorial Panel. The Panel currently comprises representatives of 12 national medical specialty societies and other professional associations; two members of the CPT Health Care Professionals Advisory Committee; one representative each from Blue Cross and Blue Shield Association, America's Health Insurance Plans, American Hospital Association, an at-large organization, and an umbrella organization representing private health insurers; and one non-voting liaison each from CMS and the Food and Drug Administration. The Panel is supported by the CPT Advisory Committee, which is made up of representatives of national medical specialty societies.

The Panel meets three times per year to review applications for new or revised CPT codes. Applications may be submitted by anyone; most come from practitioner organizations.

The two categories of CPT codes that are relevant here are Category III and Category I. Category III CPT codes are for "emerging technologies." An application for Category III codes must show that the actual or potential efficacy of each proposed code (service) is supported by peer-reviewed literature, at least one Institutional Review Board-approved study protocol, a description of a current and ongoing US trial, or other evidence of evolving clinical utilization. Category III codes are temporary; there is a 5-year window during which they must either be upgraded to Category I or sunset.

For the Panel to approve codes as Category I, the application must show that the procedure or service represented by each proposed code is performed by many physicians or other qualified healthcare professionals (QHPs) across the US with a frequency that is consistent with current medical practice. Additionally, the clinical efficacy of each service must be documented in 2 - 5 peer-reviewed studies, at least one of which is at Level IIa or higher of this hierarchy of evidence:

- Level Ia: Evidence obtained from systematic review of randomized controlled trials
- Level Ib: Evidence obtained from an individual randomized controlled trial
- Level IIa: Evidence obtained from systematic review of cohort studies
- Level IIb: Evidence obtained from an individual cohort study
- Level IIIa: Evidence obtained from systematic review of case control studies
- Level IIIb: Evidence obtained from a case control study
- Level IV: Evidence obtained from case series
- Level V: Evidence obtained from expert opinion without explicit critical appraisal

In 2014, the AMA CPT Editorial Panel issued 16 Category III (temporary) CPT codes for adaptive behavior/ABA services pursuant to a process initiated by the Association for Behavior Analysis International (ABAI). In 2019, the Panel issued 8 revised codes as Category I with two revised codes remaining Category III pursuant to an application submitted by a work group comprising representatives of the Association of Professional Behavior Analysts (this author), ABAI, the BACB, and Autism Speaks along with two CPT consultants. That is, *the Panel deemed the services clinically efficacious as documented in the research cited in the application*.

The CPT codes issued in 2019 replaced the 2014 Category III code set and remain in effect at this writing. They include three codes for adaptive behavior/ABA assessment services and seven codes for treatment services -- three for services delivered to a single patient, two for services delivered to patients in small groups, and two for guidance to families. Some codes are administered by QHPs, defined by the AMA as individuals who are qualified by licensure or certification to practice the relevant profession independently. For these codes, QHPs are Licensed or Board Certified Behavior Analysts or licensed psychologists who have competence in behavior analysis (American Medical Association, 2018). Other codes in the set are administered by behavior technicians under the direction of QHPs. It is important to note that none of the code descriptors are restricted to -- or even mention -- any specific diagnoses or patient populations. For further information, see Billing Codes, Resources, and FAQs at www.abacodes.org.

Model coverage policy. Following issuance of the 2019 CPT codes, the ABA Coding Coalition was formed to support implementation of that code set. The Coalition comprises representatives of three of the nonprofit organizations that developed the application that resulted in the 2019 codes (Association of

Professional Behavior Analysts, Autism Speaks, Behavior Analyst Certification Board), a representative of the nonprofit Council of Autism Service Providers, and two consultants who participated in the development of that application (including this author). Among other activities, the ABA Coding Coalition develops resources to help providers, payers, and policymakers implement the CPT codes. One key resource is the *Model Coverage Policy for Adaptive Behavior Services*, published in 2022. The Model Coverage Policy is designed to help providers of ABA services communicate with payers about coverage determinations, including indications, limitations, billing codes, and provider competence. It incorporates professional standards of care for *any* patient for whom ABA services may be medically necessary.

1.3 Standards of ABA healthcare for individuals with autism

As discussed previously, the federal MHPAEA and some state mental health parity laws and rules require health plans to base determinations of medically necessary services for beneficiaries with mental health and substance use disorders on GASC. The laws and rules define valid sources of such standards as peer-reviewed scientific studies, clinical practice guidelines and recommendations of nonprofit health care provider associations in the relevant clinical specialty, specialty societies, and federal government agencies. No federal government agency or medical specialty society has issued standards for ABA healthcare services to date. The relevant clinical specialty is ABA, so clinical practice guidelines and recommendations of nonprofit ABA provider organizations that have been derived from peer-reviewed scientific studies constitute GASC for ABA services per MHPAEA.

History and development

The first standards of ABA healthcare for autistic individuals were laid out in *Guidelines: Health Plan Coverage of Applied Behavior Analysis Treatment for Autism Spectrum Disorder* published by the nonprofit BACB in 2012. The BACB Board of Directors appointed a doctoral-level behavior analyst and licensed psychologist who was an autism practitioner and researcher to coordinate development of the Guidelines. The coordinator created an oversight committee, which recruited additional individuals from a national pool of expert behavior analytic researchers and practitioners to produce a first draft. The project coordinator, oversight committee, and BACB staff produced a second draft, which was reviewed by dozens of experts in behavior analysis and public policy as well as consumers. Based on their feedback, the project coordinator and BACB staff produced the final document.

The BACB guidelines were updated in 2014 and retitled *Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers.* For that revision, the original project coordinator and BACB leadership recruited a team of doctoral-level behavior analysts with expertise in ABA treatment of autism. That team reviewed the first (2012) edition and proposed revisions using a consensus process. BACB staff drafted a revised version of the first edition, which was reviewed by the project coordinator, revision team, and public policy experts. Based on their feedback, the project coordinator and BACB staff produced the final document.

In 2020 the BACB transferred the 2nd (2014) edition of the guidelines to the Council of Autism Service Providers (CASP), a nonprofit trade association for organizations that provide ABA services to people with autism. CASP established two committees to oversee development of a 3rd edition: a Guidelines & Standards Executive Steering Committee, comprising subject matter experts in behavior analysis, psychology, medicine, healthcare laws, and public policies and consumers of ABA services (this author is a member); and a Practice Guidelines Steering Committee consisting of the project coordinator for the

1st and 2nd editions, doctoral-level behavior analysts with expertise in ABA treatment of ASD, and subject matter experts in healthcare laws and public policies. The Practice Guidelines Steering Committee developed an initial outline of the 3rd edition, recruited subject matter experts to write specific sections, integrated those into a draft document, and recruited additional subject matter experts as reviewers. Members of the Practice Guidelines Steering Committee incorporated feedback from reviewers into a second draft, which was reviewed by the Guidelines & Standards Executive Steering Committee. Based on that input, the Practice Guidelines Steering Committee produced the final document, *Applied Behavior Analysis Practice Guidelines for the Treatment of Autism Spectrum Disorders: Guidance for Healthcare Funders, Regulatory Bodies, Service Providers, and Consumers (3rd ed.),* published by CASP in 2024. In total, more than 80 professionals and consumers contributed to that document.

Current standards

The 2024 CASP *Guidelines* comprise the current generally accepted standards of ABA healthcare for individuals diagnosed with autism. In regulations for implementing the provision in the California Mental Health Parity Act that requires health plans to use clinical criteria developed by nonprofit professional associations in conducting medical necessity and utilization reviews of services for patients with mental health and substance use disorders, CASP is explicitly listed as an accepted source of such criteria.

The CASP Guidelines provide evidence-based information and guidance on a wide array of topics organized in six parts:

- Overview
- Training, Certification, Licensure, Staffing, and Service Models
- Medical Necessity
- Individualizing ABA Care
- Development of the Guidelines
- Appendices.

Per requests from the National Academies TRICARE ACD committee and staff, standards in a few key areas are highlighted next.

Service delivery models. Section 2.3 of the Guidelines describes two types of tiered models for the delivery of ABA services by treatment teams. In the two-tiered model, one or more behavior technicians deliver services to patients under the direction and supervision of professional behavior analysts. The latter are responsible for managing or supervising all aspects of each patient's case: designing assessment and treatment plans and procedures, training the technicians and caregivers (where applicable) to implement the procedures, analyzing patient data frequently, modifying treatment plans and protocols as needed, collaborating with other providers, and communicating with patients, caregivers, and funders. Technicians are responsible for implementing assessment and treatment protocols as assigned by and under the close oversight of the supervising behavior analyst. The three-tiered model adds a mid-level team member -- a BCaBA or someone with other training, if allowed by law or funder policies -- who assists the behavior analyst with training and supervising technicians. That individual may perform other duties under the supervision of the behavior analyst, such as case supervision, assessing and treating patients, reviewing data, developing protocols, and training caregivers.

Standards for both models require the behavior analyst to be familiar with the patient's characteristics and treatment plan, ensure that all team members are competent to perform responsibilities assigned

to them, and observe them implementing the treatment plan regularly. The standards also require all practitioners to operate within the profession's scope of practice and their individual scope of competence, and to comply with standards (e.g., ethics, supervision requirements) specified by the profession as well as applicable laws and regulations. In the three-tiered model, the proportion of case supervision services the behavior analyst assigns to the mid-level supervisor is to be individualized to each patient's case, based on factors like the complexity of their needs and treatment plan, presence of any co-morbid conditions, and their rate of progress, in addition to the competence and experience of that team member. The standards also call for provider organizations that utilize the three-tier model to provide adequate support for the behavior analyst and mid-level supervisor, to systematically monitor the fidelity with which each patient's assessment and treatment protocols are delivered as well as data on the patient's progress, and to make any adjustments needed to ensure patient progress, including redistributing case supervision responsibilities between the behavior analyst and the mid-level supervisor.

Medical necessity. Definitions of medical necessity from the AMA, American Academy of Pediatrics, state insurance laws, Medicaid, and commercial health plans are reviewed in Section 3 of the CASP Guidelines. Definitions vary; some stress treatment to ameliorate the core symptoms of a condition while others include treatment of associated difficulties so as to ensure a patient's health and safety and prevent regression or deterioration. Despite variations, the CASP Guidelines note that "…the definitions typically incorporate a foundational requirement that healthcare services must be provided 'in accordance with generally accepted standards of care' for the relevant medical specialty in order to qualify for coverage" (p. 18). The CASP standards call for ABA providers to know how each payer defines medically necessary services for patients with autism, and to understand the relationship between GASC and medical necessity in order to collaborate with prescribing professionals to determine the patient's needs. Providers must also be able to convey to the funder why the services specified in the patient's proposed ABA treatment plan are medically necessary. The standards also call for funders to have internal reviews of the medical necessity of ABA services for patients with autism conducted by behavior analysts with experience in that area.

Treatment planning and management. Section 4.2 of the Guidelines covers many aspects of developing and delivering ABA treatments plans. As requested, high-level summaries of some of the standards are provided next.

> **Scope of treatment**. This term is defined in terms of the relative depth and breadth of behaviors that are targeted for treatment. The scope of treatment may be comprehensive (targeting multiple behaviors in multiple domains; see pp. 31-32 of the Guidelines) or focused (targeting a limited number of behaviors). Comprehensive ABA treatment typically seeks to enable the patient to develop and/or maintain many adaptive behaviors, and may also address any maladaptive behaviors that jeopardize the patient's health or safety. Focused ABA treatment may address only a small number of adaptive behaviors from one or two domains, such as specific self-care skills. If one or more maladaptive behaviors are targeted, the profession's ethical standards -- and therefore these Guidelines -- require the practitioner to also target one or more adaptive behaviors that compete with or are alternatives to the maladaptive behavior(s).
>
> Other standards pertaining to scope of treatment are:
>
> - Decisions about the scope of treatment should be based on information from multiple sources about the characteristics, strengths, needs, preferences, and life circumstances of the patient and their family.

- The scope of treatment should not be restricted by patient age, functioning level, diagnosis, or co-occurring conditions. If comprehensive ABA treatment is determined to be medically necessary for a young autistic child, however, it should begin as early as possible.
- For a patient receiving comprehensive ABA treatment, the proportion of treatment time that is devoted to each target behavior must be individualized to the patient and family and adjusted over the course of treatment based on data on the patient's progress on each target behavior.

Treatment intensity. Intensity is defined as the number of hours of direct treatment delivered to a patient per week, which is a proxy for the number of therapeutic interactions or learning opportunities afforded the patient. It does not include hours spent by the behavior analyst in case supervision, training caregivers, or other indirect services, or hours the patient spends in educational settings receiving special education services. The guidelines note that "The best available evidence demonstrates that intensity of treatment dosage is the best predictor of achieving meaningful treatment outcomes." Key standards include:

- Treatment intensity must be individualized based on what is medically necessary for the patient and sufficient to enable them to achieve goals in their treatment plan, given the scope of treatment and "the complexity, breadth, and depth of treatment targets as well as the environment, treatment protocols, and significance of patient needs."
- "When there is uncertainty regarding the appropriate level of service intensity, the practitioner should err on the side of caution by providing a higher level of service intensity. Evidence of failure at a lower level of service intensity should not be required to access a higher intensity of care."
- For comprehensive ABA treatment, many hours of direct services should be provided each week for an extended period of time. "Multiple studies have shown that 30 - 40 hours of direct treatment per week produces better outcomes than treatment at lower dosages…for young children with autism. Similar intensities would typically be medically necessary in comprehensive programs for adolescents and adults to meet treatment objectives." Lower intensity comprehensive treatment is generally appropriate "only to maintain well-established behavior changes."
- Because focused ABA treatment addresses a limited number of behaviors, treatment intensity is often 10 - 25 hours per week, but it may need to be higher when treatment targets are challenging behaviors or deficits in adaptive skills that jeopardize the patient's health, safety, or progress.
- Decisions to adjust treatment intensity should be individualized and based on the patient's response to treatment, not the length of time they have been in treatment or their age. "Moving to a lower level of intensity is appropriate only when it is deemed safe to do so and when the lower level is equally effective as treatment at the higher level of service intensity."

Goals and protocols. "Goals" refers to the aim(s) of treatment, i.e., the behaviors that are targeted for treatment and the nature and amount of improvement that is sought. "Protocols" are written procedures for interventionists to follow in assessing and treating each target behavior on the treatment plan. Key standards include:

- Treatment plans should include long-term as well as short-term goals.
- Goals must be individualized and medically necessary for the patient.

- "The number and complexity of goals should determine scope of treatment, the intensity (dosage) level, and the settings in which it is delivered."
- Patient progress toward each goal "should be measured using procedures that yield objective, valid, accurate evidence as to whether and how much it [the target behavior] changes." The behavior analyst must review those data frequently to determine if target behaviors, protocols, or other aspects of the treatment plan need to be adjusted.
- Goals should be prioritized based on patient and family input, assessment results, and "implications for the patient's health and well-being."
- Protocols should be derived from research and individualized to patient needs and preferences.

Treatment settings. Research shows that for most autistic individuals, ABA treatment must be delivered in multiple settings to enable behavior changes to generalize (carry over) from the primary treatment conditions to other places, times, people, and stimuli. Like all other aspects of ABA services, the settings (environments, locations) in which services are delivered must be individualized to the patient's treatment plan, strengths, needs, preferences, and circumstances. The characteristics of each potential setting must also be considered, because "not all settings will facilitate the desired outcomes and specific settings may be necessary to achieve treatment objectives." Standards include

- "Care must be deliverable in any setting that is relevant for the patient to achieve treatment goals." For a list of potential settings, see pp. 39-40 of the Guidelines.
- Treatment may begin in a structured setting and extend to less structured "natural" settings based on patient progress, but for some patients it may begin in "natural" or multiple settings.
- Settings should be selected so as to maximize the patient's participation in treatment and their outcomes. They should not be restricted arbitrarily.
- "Treatment should not be denied or withheld solely because a caregiver can or cannot be present at the treatment location."

Staffing. These standards pertain mainly to interventionist:patient ratios. They specify that

- Higher ratios -- i.e., greater than 1:1 -- may be necessary to implement assessment and/or treatment protocols for behaviors that are dangerous to the patient or others.
- Lower ratios may be appropriate or necessary to address some treatment targets, such as developing certain social or communication skills.
- Staffing ratios and adjustments in them over the course of treatment must be individualized to the patient's goals, progress, and treatment settings.

Treatment modality. This term refers to delivery of services in person, remotely via telehealth, or a combination of the two. Although ABA services are typically delivered in person, certain conditions may make telehealth delivery necessary or advantageous (e.g., for patients residing in areas with no qualified providers nearby, during infectious disease outbreaks or natural disasters, for military families who need to retain services while transitioning to a new duty station). The standards specify that decisions about treatment modality must be driven by clinical efficacy for the patient and factors such as patient characteristics; their treatment targets; the availability of resources in the patient's setting(s) that are required for the telehealth modality being considered, such as availability and competencies of behavior technicians and/or caregivers to assist the patient, technology, internet access, etc.: evidence on

the safety and efficacy of telehealth delivery of ABA services for similar patients; applicable laws and regulations; and payer policies.

Family members and caregivers. This subsection of the Guidelines describes ways in which a patient's family members and other caregivers may be involved in assessment, treatment planning, and treatment delivery; some of the challenges to their involvement; and how behavior analysts may engage, train, and support caregivers. Specific standards include:

- Caregiver participation may contribute to the efficacy of treatment but is not a substitute or replacement for services directed and implemented by professionals and should not be a condition or requirement for patients to access ABA services.
- "A parent or caregiver should not serve in the official role of a behavior technician or behavior analyst for their child."
- "It is common, though not required, for treatment plans to include several objective and measurable goals for parents and other caregivers."
- Family involvement in delivering services to a patient should be based on how well the goals and protocols match the family dynamics, well-being, culture, value, needs, priorities, abilities, and resources.
- Providers should support caregivers by demonstrating compassion for the stresses they experience, providing effective training, connecting them with others who have had similar experiences, and building an effective working relationship with them.
- "Should the clinical needs of the family exceed the scope of competence of the behavior analyst, a referral to an appropriate mental health professional should be considered."

Case supervision. The behavior analyst is responsible for supervising (managing) all aspects of a patient's case. That encompasses both delivering direct services to the patient and/or caregivers and indirect services. Examples of common case supervision activities may be found on pp. 55-56 of the Guidelines. They are elaborated on pp. 57-58. Key standards include:

- Ongoing case supervision is necessary and requires a substantial amount of time each day.
- Case supervision is generally proportional to treatment dosage but is a distinct and separate category of service. Indirect case supervision hours are not included in the patient's direct treatment hours.
- The behavior analyst should monitor assessment and treatment sessions and analyze data on the patient's target behaviors directly and frequently. They should modify treatment goals and/or protocols as indicated by the data and train interventionists to implement modified protocols. "As a general rule, if visual analysis of data indicates that inadequate progress was made over three sessions, the behavior analyst must try to identify the cause(s)."
- The behavior analyst must also ""monitor prescribed, authorized, and delivered treatment hours…If authorized or utilized services do not align with what the treating behavior analyst has determined is medically necessary, the behavior analyst should identify and document the barriers and attempt to resolve the discrepancy with the funders, patient, and caregivers…unanticipated utilization shortfalls below 80% of authorized services over a sustained period (e.g., two weeks or more) require attention by the behavior analyst and provider organization to determine whether the barriers are related to understaffing or families cancelling treatment sessions and whether these barriers are temporary…or are likely to persist."

- Case supervision dosage should be based on the number of hours of direct treatment as well as the need for the behavior analyst to adjust the treatment plan and protocols frequently and oversee the delivery of services by behavior technicians. The general standard of care is 1-2 hours of case supervision for every 10 hours of direct treatment, but funders should not restrict case supervision to that minimum; rather, the ratio should be individualized to each patient's treatment plan. It may need to be adjusted over the course of treatment depending on the patient's rate of progress, safety needs, treatment intensity, living circumstances, and other factors.

Transition and discharge planning. "Transition" refers to activities designed to move a patient through treatment toward "discharge," which is defined as the termination of services delivered to a patient by a provider. General standards are

- Planning for transition and discharge should begin when services are initiated with a vision of patient outcomes that would lead to successful discharge, in collaboration with the patient, family, and other service providers.
- "Discharge and transition criteria should be measurable, realistic, and individualized…and refined and modified throughout the treatment process based on ongoing evaluations of skills and needs."
- Transition and discharge plans should be written and should address topics outlined on pp. 63-64 of the Guidelines.
- "The transition plan should outline multiple stages of transition, from more support to less support and a more independent level of care," individualized to the patient.
- "Discharge should be initiated by the behavior analyst" under conditions described on p. 65 of the Guidelines.
- When a decision to discharge a patient is made, the provider should coordinate the patient's care with future providers, as appropriate and consented.

1.4 Timeline: Adoption of key standards and public policies

Year(s)	Action or product
1968	Dimensions of ABA defined by Baer, Wolf, & Risley
1983	1st formal behavior analysis certification program established by State of Florida Developmental Services Office
1998	Behavior Analyst Certification Board (BACB) established to develop national standards (education, experiential training, exam, continuing education, ethics) and programs for credentialing professional behavior analysts
1999	BACB began issuing Board Certified Behavior Analyst (BCBA) and Board Certified Assistant Behavior Analyst (BCaBA) credentials
2007	Law requiring certain commercial health plans to cover ABA services for people with autism adopted in South Carolina
2007-2019	Remaining states adopted laws or rules requiring certain commercial health plans to cover ABA services for people with autism
2009	1st behavior analyst licensure laws adopted in Nevada and Oklahoma
2010-2024	Additional 36 states and District of Columbia adopted behavior analyst licensure laws
2012	*Guidelines: Health Plan Coverage of Applied Behavior Analysis Treatment for Autism Spectrum Disorder* published by BACB
2014	*Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers* published by BACB
2014	Category III (temporary) health insurance billing codes for ABA services issued by American Medical Association CPT® Editorial Panel
2014	BACB developed national standards and program for credentialing behavior technicians (paraprofessionals)
2015	BACB began issuing Registered Behavior Technician (RBT) credential
2016	Healthcare provider taxonomy codes for Behavior Analyst, Assistant Behavior Analyst, and Behavior Technician issued by American Medical Association National Uniform Claims Committee
2019	Category I CPT® codes for ABA services issued by American Medical Association CPT® Editorial Panel
2024	*Applied Behavior Analysis Practice Guidelines for the Treatment of Autism Spectrum Disorders: Guidance for Healthcare Funders, Regulatory Bodies, Service Providers, and Consumers (3rd ed.)* published by Council of Autism Service Providers

Section 2. Health Outcomes of ABA Interventions for Individuals with Autism

At present, autism spectrum disorder (ASD) is categorized as a mental health disorder. It is defined and diagnosed behaviorally, i.e., based on observed deficits in social communication and social interaction behaviors and the presence of restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2022). ABA interventions – both comprehensive and focused -- have proven effective for ameliorating those core symptoms as well as difficulties in many areas of functioning that are often associated with ASD in individuals of all ages. Those areas include deficits in adaptive behaviors in multiple domains in addition to those that are diagnostic for the condition, such as intellectual, self-care, play and leisure, academic, vocational, self-management, and self-advocacy skills; and excesses in maladaptive behaviors, such as self-injury, aggression, property destruction, elopement (wandering), and pica (ingesting inedible items).

Many behaviors commonly targeted in ABA treatment plans affect the health and safety of autistic individuals, either directly or indirectly. For instance, treatment goals in intellectual and/or communication domains may include development of skills in identifying pain or other discomfort and communicating that information to parents and other caregivers. Self-care and self-management targets often include personal hygiene skills (e.g., toileting, handwashing, bathing, toothbrushing), personal safety (e.g., remaining close to caregivers instead of bolting or wandering away, identifying and avoiding hazards, seeking help, navigating street crossings), and cooperating with medical and dental health routines. Some common daily living skill targets are preparing and consuming foods safely, maintaining clean and safe living spaces, eating a healthy diet, and exercising, among others. Reducing maladaptive behaviors often results in fewer injuries and health problems for the autistic individual, which in turn can reduce their use of other healthcare services like medical office and emergency room visits and hospitalizations. ABA interventions have also proved effective for some other physical and mental health conditions that may co-occur with autism, such as anxiety, sleep disorders, phobias, and feeding disorders. If, however, a behavior analyst has an autistic client who is diagnosed with or may have a co-occurring medical or mental health condition that the behavior analyst is not qualified to treat, professional ethical standards and the CASP Guidelines require the behavior analyst to refer the client to a professional who does have the necessary qualifications.

For references to the extensive body of research on the efficacy of ABA interventions for improving behaviors like those described above, please see the bibliography of the ABA Coding Coalition *Model Coverage Policy* and references at the end of this paper.

To date, it appears that only two groups of researchers have published long-term followup studies of adolescents and adults whose diagnoses and participation in ABA intervention when they were young was verified and documented, using validated assessments of autism symptoms and functioning (Perry et al., 2019; Smith et al., 2019). Those investigators found the following:

- Improvements in autism symptoms, intellectual skills, communication skills, other adaptive behaviors, and maladaptive behaviors that were documented at the end of early ABA intervention were largely maintained several years to more than a decade after the participants had exited ABA intervention, with some variability across individuals.
- None of the individuals had received additional psychiatric diagnoses, had below-normal scores on assessments of social-emotional functioning, or were taking psychotropic medications.

Section 3. Comparison of TRICARE Autism Care Demonstration Policies and Professional Standards

The following table lists TRICARE ACD policies that contradict or are inconsistent with professional standards of ABA healthcare services for autistic beneficiaries and/or other applicable standards, laws, or regulations. It is not exhaustive. The source of the TRICARE ACD policies is the TRICARE Operations Manual (TOM) 6010.-59-M, Chapter 18. The principal source of standards is the CASP *Guidelines;* other sources are as indicated in the table.

TRICARE ACD Policy - TOM section(s)	Standard(s)
6.0 Autism Services Coordination - 6.2 Comprehensive Care Plan • Requires all beneficiaries to be assigned an Autism Services Navigator (ASN), who is required to inform families about services available under TRICARE, conduct an initial care management assessment, and create a comprehensive care plan (CCP) for the child. The CCP is to identify all services for the autistic beneficiary (see 11.20) and incorporate results of outcome assessments, and is to be updated every 6 months. The ASN is to share the CCP and coordinate all medical and other services received by the child. • ASNs are employed or contracted by the companies that are contracted with TRICARE to manage the ACD. They cannot be behavior analysts and are not required to have training and competence in assessing people with ASD for ABA treatment planning and progress monitoring (see 11.11 Autism Services Navigator). There are no requirements for ASNs to base decisions about the services they recommend and incorporate in the CCP on relevant scientific evidence or standards of care.	Development of ABA treatment plans and outcome measures as well as coordination with families other service providers are to be done by the professional behavior analyst who is responsible for a patient's ABA services (CASP Guidelines, Sections 4.2, 4.3, 4.4)
8.4 Provider Requirements 8.4.1 Authorized ABA Supervisors (BCBA, BCBA-D, or Clinical Psychologist)	Does not require that clinical psychologists have demonstrated training and competence in ABA, contrary to ethical standards requiring psychologists to practice within their scope of competence (American Psychological Association *Ethical Principles of Psychologists and Code of Conduct*, Section 2) and the American Medical Association's guidance on qualified healthcare professionals who can render the CPT codes for

	adaptive behavior/ABA services (American Medical Association, 2018).
8.4.2 Assistant Behavior Analysts • Allows individuals who hold a certification issued by the Qualified Applied Behavior Analysis (QABA) certification board to serve in this role.	The vast majority of entities that certify healthcare professionals in the US are nonprofit organizations. The QABA Board is owned and operated by a private, for-profit corporation (https://qababoard.com/wp-content/uploads/QABA-CB-Bylaws-v3-May-2021.pdf) Its certification requirements are lower than those of the BACB and comparable national certifying entities in other healthcare professions (e.g., speech-language pathology, occupational therapy). Compare requirements for the BACB BCaBA and QABA QASP-S credentials.
• Requires assistant behavior analysts to be supervised "in compliance with their certification board."	In the states with behavior analyst licensure laws, supervision requirements are set by the state licensing entity rather than certification boards (though some laws incorporate the BACB's supervision requirements).
8.6.2 Authorization for ABA Services and 8.6.3 Subsequent Referrals and Authorizations • Requires the TRICARE contractor to conduct a clinical necessity review of all treatment goals, targets, progress, and hours of service requested by the behavior analyst for initial authorizations and 6-month re-authorizations.	"When there are questions about the appropriateness or efficacy of services in an individual case, including pursuant to any internal or external appeal relating to insurance benefits, the reviewing body should include a behavior analyst with experience in ABA treatment of ASD." (CASP Guidelines, Section 3.5)
• 8.6.3.1.4 allows the contractor to determine if a patient is making "clinically sufficient progress as shown on the outcome measures."	"Progress and outcome measures should be determined by the treating behavior analyst to ensure their appropriateness for the individual patient." (CASP Guidelines, Section 4.4)
8.6.4 Outcome Measures • All required measures are standardized, norm-referenced assessment instruments. All are indirect assessments completed by third parties; there are no direct measures of patient functioning or progress.	Assessment for ABA treatment planning, progress monitoring, and outcomes evaluations must include information obtained via multiple methods and sources, including a mixture of standardized and non-standardized assessment instruments (norm- and/or criterion-referenced) administered directly to patients and completed by third parties (interventionists, caregivers), as well as direct observation and measurement of each target behavior on the patient's treatment plan. (CASP Guidelines, Section 4.1)

• One outcome measure is the Vineland Adaptive Behavior Scales - 3rd edition.	The Vineland-3 has not been shown to have acceptable validity and reliability for assessing individuals with autism (Wilkinson et al., 2024).
• The same battery of assessment instruments is used for all beneficiaries regardless of their characteristics (age, functioning level, autism severity level, etc.).	All assessment instruments and procedures must be customized to the characteristics of the individual patient. "Scores on standardized measures are not appropriate as the sole determiner of an individual's appropriateness for ABA treatment. Similarly, results from such an instrument should not be used as the primary basis for making conclusions about response to treatment. Instead, progress toward goals should be evaluated using multiple measures, including direct observation and assessment and caregiver report measures, when appropriate." (CASP Guidelines, Section 4.1.). "…autism's heterogeneity makes it unlikely that a single set of metrics will be sensitive to treatment outcomes across the entire patient population. Progress and outcome measures should be determined by the treating behavior analyst to ensure their appropriateness to the individual patient…outcome measures chosen should be valid, reliable, and appropriate for individual patient characteristics…[and] align with the focus and purpose of treatment" (CASP Guidelines, Section 4.4)
• Informed consent to participate in outcome assessment procedures is not sought from parents or patients.	"As part of the planning process, the provider should incorporate patient and caregiver preferences, informed consent, assent, priorities, values, and language spoken, as well as cultural, religious, racial, gender, and ethnic identities…The behavior analyst should obtain consent from the parent or guardian and should obtain patient assent to participate in services whenever possible." (CASP Guidelines, Section 4.3). Also see *Ethics Code for Behavior Analysts,* standards 2.11 - Obtaining Informed Consent and 6.04 - Informed Consent in Research.

8.7.1.5 TP (Treatment Plan) Goals are limited to the core symptoms of ASD.	Behavior analysts select goals that are medically necessary for the individual patient, based on professional standards of care. (CASP Guidelines, Section 3) "Behavior analysts target critical domains, including but not limited to adaptive skills, behavioral concerns, and communication, across all relevant settings to optimize the patient's independence, autonomy, and quality of life." (CASP Guidelines, Section 4.2) The American Medical Association-issued CPT codes for ABA services include services to build adaptive skills and reduce maladaptive behaviors, not just services to address core symptoms.
8.7.1.6. TP ABA Services Recommendations Parent participation is required for the patient to access continuing ABA services unless the behavior analyst provides extensive documentation as to why that is not possible.	Caregiver participation may contribute to the efficacy of treatment but is not a substitute or replacement for services directed and implemented by professionals and should not be a condition or requirement for patients to access ABA services. Family involvement in delivering services to a patient should be based on how well the goals and protocols match the family dynamics, well-being, culture, value, needs, priorities, abilities, and resources. (CASP Guidelines, Section 4.2)
8.7.2 Progress Note Documentation (content of notes to be written after every session) 8.7.2.9 A notation of the patient's current clinical status evidenced by the patient's signs and symptoms 8.7.2.13 A narrative statement summarizing the patient's degree of progress towards the treatment goals	This policy applies to session notes written by all interventionists who conduct sessions. The clinical judgments required are far beyond the training, competence, and role of behavior technicians as specified in the AMA National Uniform Claims Committee Healthcare Provider Taxonomy Code and most behavior analyst licensure laws or rules. For those who are credentialed by the BACB as Registered Behavior Technicians, this policy also contradicts the relevant ethical standards (see RBT Ethics Code). Evaluations of a patient's clinical status and progress must be done by professional behavior analysts (CASP Guidelines, Sections 1.3 and 4.5). Those evaluations must be based on visual analysis of graphed data from direct observation and measurement of the patient's target behaviors over time, not just narrative notes

	(CASP Guidelines, Sections 1.3 and 4.1; also see *Ethics Code for Behavior Analysts*, Standard 2.17 - Collecting and Using Data)
8.8 Discharge Planning Allows contractor or family to determine if discharge is appropriate and whether ABA services are no longer clinically necessary	Discharge planning should be conducted by the behavior analyst; begin when services are initiated; and involve the patient, family, and other service providers. The behavior analyst should develop a written discharge plan with measurable, realistic, and individualized criteria. Discharge should be initiated by the behavior analyst. When a decision to discharge a patient is made, the ABA provider should coordinate the patient's care with future providers, as appropriate and consented (CASP Guidelines, Section 4.7).
8.10 Exclusions Services cannot target anything other than core symptoms of ASD. ABA practitioners are explicitly prohibited from targeting daily living skills. 8.10.11 prohibits delivery of services in community settings or "outside of the physical space of the home, clinic, office, school, or telehealth" 8.10.15 prohibits delivery of services in schools by anyone except professional behavior analysts, limits duration of those services, and requires specific authorization	Behavior analysts select goals that are medically necessary for the individual patient, based on professional standards of care (CASP Guidelines, Section 3). "Behavior analysts target critical domains, including but not limited to adaptive skills, behavioral concerns, and communication, across all relevant settings to optimize the patient's independence, autonomy, and quality of life." (CASP Guidelines, Section 4.2) The American Medical Association-issued CPT codes for ABA services include services to build adaptive skills. "Care must be deliverable in any setting that is relevant for the patient to achieve treatment goals." Settings should be selected so as to maximize the patient's participation in treatment and their outcomes. They should not be restricted arbitrarily. (CASP Guidelines, Section 4.2).
8.11.6 ABS Approved CPT Codes	Only some of the CPT codes for ABA services issued by the AMA are authorized. Excluded are 97152 (behavior identification supporting assessment by technician), 97154 (group

	adaptive behavior treatment by technician), 0362T (behavior identification supporting assessment of destructive behavior), and 0373T (adaptive behavior treatment of destructive behavior). Code 97155 (adaptive behavior treatment by qualified health care professional, which may include simultaneous direction of technician) is allowed only for one of its intended uses (treatment of patient by behavior analyst). The second use -- behavior analyst direction of a technician who implements a treatment protocol with a patient -- is not allowed, nor is concurrent use of code 97153 (adaptive behavior treatment by technician). Frequent direction of technicians by the behavior analyst is essential per professional standards of care (CASP Guidelines, Sections 2.3, 4.2, and 4.5). Additionally, the AMA CPT Editorial Panel and the code authors clearly intended code 97155 to be used in that way and for the 97155 and 97153 services to be billed concurrently (see American Medical Association, 2018; *Supplemental Guidance on Interpreting the 2019 CPT Codes for Adaptive Behavior Services*; and FAQs about codes 97155 and 97153 at www.abacodes.org). Several of the codes that are approved are defined and used in ways other than those intended by the code authors and issued by the AMA. This policy means that TRICARE ACD ABA providers cannot be reimbursed for delivering ABA services in accordance with professional standards (CASP Guidelines, *Ethics Code for Behavior Analysts*) and AMA policies.

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Appendix A. Guidelines, Position Statements, and Policies of Other Professional Bodies

American Medical Association

- No practice guidelines for physicians serving individuals diagnosed with ASD were found In search.

- Relevant policies:
  - Caring for Neurodivergent Patients -- https://policysearch.ama-assn.org/policyfinder/detail/autism?uri=%2FAMADoc%2FHOD.xml-H-90.962.xml "Our American Medical Association supports research toward the evaluation and the development of interventions and programs for autistic individuals" and "…will work with relevant stakeholders to advocate for a comprehensive spectrum of primary and specialty care that recognizes the diversity and personhood of individuals who are neurodivergent, including people with autism."
  - Standardizing Coverage of Evidence-Based Treatments for Neurodivergent Individuals -- https://policysearch.ama-assn.org/policyfinder/detail/autism?uri=%2FAMADoc%2FHOD.xml-H-185.921.xml "Our American Medical Association supports coverage and reimbursement for evidence-based treatments and services for neurodivergent individuals, including Autism Spectrum Disorder."
  - Early Intervention for Individuals with Developmental Delay -- https://policysearch.ama-assn.org/policyfinder/detail/autism?uri=%2FAMADoc%2FHOD.xml-0-5284.xml "Our AMA will continue to work with appropriate medical specialty societies to educate and enable physicians to identify children with developmental delay, autism, and other developmental disabilities, and to urge physicians to assist parents in obtaining access to appropriate individualized early intervention services" and "…supports a simplified process across appropriate government agencies to designate individuals with intellectual disabilities as a medically underserved population."

American Academy of Pediatrics

- Hyman, S.L., Levy, S.E., Myers, S.M., and the AAP Council on Children with Disabilities, Section on Developmental and Behavioral Pediatrics (2020). Identification, evaluation, and management of children with autism spectrum disorder. *Pediatrics, 145(1):e20193447*. https://doi.org/10.1542/peds.2019-3447
  - Section 5. Interventions (starting on p. 20):
    - Describes general goals of intervention, general characteristics of evidence-based interventions, categories (educational, developmental, behavioral), regulatory and delivery systems, funding sources
    - Summarizes evidence on comprehensive and focused models, including ABA, starting on p. 21
    - ABA discussed under "Approaches to Intervention" starting at bottom of p. 21
      - "Most evidence-based treatment models are based on principles of ABA."
      - General descriptions of ABA interventions on pp. 22-23

- American Academy of Pediatrics Committee on Child Health Financing (2013). Essential contractual language for medical necessity in children. *Pediatrics, 132,* 398-401 https://doi.org/10.1542/peds.2013-1637
  - Proposed pediatric definition of medical necessity: "…health care interventions that are evidence based, evidence informed, or based on consensus advisory opinion and that are recommended by recognized health care professionals, such as the AAP, to promote optimal growth and development in a child and to prevent, detect, diagnose, treat, ameliorate, or palliate the effects of physical, genetic, congenital, developmental, behavioral, or mental conditions, injuries, or disabilities."

American Academy of Child and Adolescent Psychiatry

- Volkmar, F., Siegel, M., Woodbury-Smith, M., King, B., McCracken, J., State, M., and the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI) (2014). Practice parameter for the assessment and treatment of children and adolescents with autism spectrum disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 53(2)*, 237-257. https://doi.org/10.1016/j.jaac.2013.10.013 [NOTE: published 2014. No updated version found in search]
  - Treatment section (starting on p. 244):
    - "Recommendation 4. The clinician should help the family obtain appropriate, evidence-based, and structured educational and behavioral interventions for children with ASD."
    - ABA discussed briefly under "Behavioral" heading, p. 245
      - "Behavioral interventions such as Applied Behavioral [sic] Analysis (ABA) are informed by basic and empirically supported learning principles."
      - "ABA techniques have been repeatedly shown to have efficacy for specific problem behaviors, and ABA has been found to be effective as applied to academic tasks, adaptive living skills, communication, social skills, and vocational skills."

- Siegel, M., McGuire, K., Veenstra-VanderWeele, J., Stratigos, K., King, B., and the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI) (2019). Practice parameter for the assessment and treatment of psychiatric disorders in children and adolescents with intellectual disability (intellectual developmental disorder). *Journal of the American Academy of Child and Adolescent Psychiatry, 59(4)*, 468-496. https://doi.org/10.1016/j.jaac.2019.11.018
  - Treatment section (starting on p. 484):
    - "Statement 1: Psychosocial interventions can be considered to target comorbid psychiatric disorders or specific psychiatric symptoms in children and adolescents with ID/IDD."
    - ABA discussed briefly on p. 485:
      - Per analysis of 101 behavioral intervention studies, "…studies using Applied Behavioral [sic] Analysis (ABA) were generally effective for behavioral problems in youths 6 to 18 years old with ID/IDD."
      - "There is far less research support for non-ABA-based interventions for problem behaviors in youth with ID/IDD."

American Psychiatric Association

- No guidelines or practice parameters on assessment or treatment of ASD by psychiatrists found at https://www.psychiatry.org/psychiatrists/practice/clinical-practice-guidelines#section_7

- Statement on that webpage: "APA guidelines generally describe treatment of adult patients. For the treatment of children and adolescents with psychiatric disorders, practice guidelines, updates, and parameters are available from the American Academy of Child and Adolescent Psychiatry." See above.

American Academy of Family Physicians

- Sanchack, K.E., & Thomas, C.A. (2016). Autism spectrum disorder: Primary care principles. *American Family Physician, 94(12),* 972-979. https://www.aafp.org/pubs/afp/issues/2016/1215/p972.pdf
  - Early intensive ABA intervention discussed briefly on p. 976 under Behavioral Treatments:
    - "Applied behavior analysis is a cornerstone of most early intensive behavioral intervention approaches."
    - "…a growing body of evidence that an applied behavior analysis-based early intensive behavioral intervention delivered over an extended time frame leads to improvement in cognitive ability, language, and adaptive skills."
    - Under Prognosis, p. 977: "When compared with a high-functioning ASD cohort, children with optimal outcomes had earlier referrals and more intensive interventions with more applied behavior analysis therapy and fewer pharmacologic interventions."

- Sanchack, K.E. (November 15, 2020) Autism spectrum disorder: Updated guidelines from the American Academy of Pediatrics. *American Family Physician, 102(9),* 629-631. https://www.aafp.org/pubs/afp/issues/2020/1115/p629.pdf
  - Caveat on p. 629: "Coverage of guidelines from other organizations does not imply endorsement by AFP or the AAFP."
  - Early intensive ABA intervention discussed very briefly:
    - Key Points for Practice, p. 629: "Applied behavior analysis is an intensive behavioral therapy for ASD that can improve outcomes, especially at younger ages."
    - Interventions, p. 630: "Early intervention that includes applied behavior analysis improves cognitive functioning and language skills, with better results from more intense therapy."

American Psychological Association

- No practice guidelines or policies specific to assessment or treatment of ASD by psychologists were found at https://www.apa.org/practice/guidelines or https://www.apa.org/about/policy/professional-practice

- *APA Guidelines for Assessment and Intervention with Persons with Disabilities* -- https://www.apa.org/about/policy/guidelines-assessment-intervention-disabilities.pdf
  - General guidance on providing psychological services to individuals with a broad range of disabilities; autism mentioned in a few examples, but no guidelines specific to autism are provided
  - No mention of ABA

- Policy on Applied Behavior Analysis -- https://www.apa.org/about/policy/applied-behavior-analysis
  - Adopted by APA Council February 2017
  - Asserts that "…the practice and supervision of applied behavior analysis is appropriately established within the scope of the discipline of psychology."
    - Note that
      - "Behavior analysis" or similar term appears in scope of practice sections of some, but not all, state psychology licensure laws.
      - Overlaps in scopes of practice are common. For instance, psychotherapy appears in scope of practice sections of many state licensure laws for psychologists as well as other professions (e.g., social workers, counselors, marriage and family therapists, psychiatrists).
      - Relatively few university programs that prepare psychologists for state licensure include substantial coursework or practical training in behavior analysis.
      - Behavior analysis is recognized as a discipline and profession distinct from psychology and other professions per
        - National standards for certifying behavior analysis practitioners, in place since 1998
        - Behavior analyst licensure laws in 39 states. Most of those laws
          - Define the scope of practice of behavior analysts as different from that of psychologists and other professionals
          - Exempt licensed psychologists from behavior analyst licensure if behavior analysis is in the scope of practice definition in the state psychology licensure law and the psychologist has training and competence in behavior analysis.
        - AMA-issued healthcare provider taxonomy codes described in this paper. Codes for Behavior Analyst, Assistant Behavior Analyst, and Behavior Technician are listed in that code set under Behavioral Health & Social Service Providers, separate from Psychologist.

Appendix B. Author Background and Disclosures

Gina Green, PhD, BCBA-D

Education

- 1973 B.A. Psychology, Michigan State University
- 1975 M. A. Educational Psychology, Michigan State University
- 1986 PhD Psychology - Analysis of Behavior, Utah State University

Certification

- 1999 - present Board Certified Behavior Analyst - Doctoral, Behavior Analyst Certification Board

Publications

- 59 articles in professional journals
- 13 chapters in edited books
- 2 co-edited books
- 2 co-authored books

Previous professional positions

- Employment:
    - 1986 - 89 Assistant Professor, Behavior Analysis & Therapy, Rehabilitation Institute, Southern Illinois University
    - 1989 - 2001 Assistant/Associate Scientist, Behavioral Sciences Division, E.K. Shriver Center for Mental Retardation and Research Associate Professor of Psychiatry and Pediatrics, University of Massachusetts Medical School
    - 1991 - 2001 Director of Research, The New England Center for Children
    - 2001 - 2003 Director of Professional Training and Research, The Institute for Effective Education
    - 2004 - 2008 Lecturer, Graduate School of Public Health, San Diego State University
    - 2004 - 2012 Lecturer, Department of Special Education, San Diego State University
    - 2009 - 2022 Co-founder and Executive Director/Chief Executive Officer, Association of Professional Behavior Analysts (retired 2022)
- Selected unpaid positions:
    - 1986 - present Board of Editors, Guest Reviewer, and/or Guest Associate Editor for 17 professional journals
    - 1993 - 2019 Board of Trustees and Autism Advisory Group, Cambridge Center for Behavioral Studies
    - 1996 - 2001 Executive Council, Association for Behavior Analysis (President 1999-2000)
    - 1998 - 2002 Board of Directors, Association for Science in Autism Treatment
    - 2000 - 2008 Board of Directors, Behavior Analyst Certification Board
    - 2002 - 2007 Board of Directors, California Association for Behavior Analysis (President 2005-2006)
    - 2005 - 2009 Advisor, National Autism Center National Standards Project
    - 2015 - 2019 APBA representative, ABA Services Steering Committee on CPT Codes

Current professional positions

- Consultant, private practice
    - California Association for Behavior Analysis, Partners Behavioral Health
- Unpaid positions:
    - ABA Consultant, ABA Coding Coalition
    - Guidelines & Standards Executive Steering Committee, Council of Autism Service Providers
    - Standards Committee and Outcomes Work Group, Autism Commission on Quality
    - Board of Directors, Mission Alpha Advocacy
    - Professional Advisory Board, Association for Science in Autism Treatment
    - Advisory Board, B.F. Skinner Foundation

Royalties

Johnston, J.M., Pennypacker, H.S., & Green, G. (2020) *Strategies and tactics of behavioral research and practice (4th ed).* New York: Routledge.

Maurice, C. (Ed.), Green, G., & Luce, S. (Co-Eds.) (1996). *Behavioral intervention for young children with autism: A manual for parents and professionals.* Austin, TX: PRO-ED.

Maurice, C., Green, G., & Foxx, R.M. (Eds.) (2001). *Making a difference: Behavioral intervention for autism*. Austin, TX: PRO-ED.