The Council of Autism Service Providers

Applied Behavior Analysis Practice Guidelines for the Treatment of Autism Spectrum Disorder

Guidance for Healthcare Funders, Regulatory Bodies, Service Providers, and Consumers

THIRD EDITION

These standards are provided for informational purposes only and do not represent professional or legal advice. Many variables influence and direct the professional delivery of applied behavior analysis (ABA) services for persons with autism, and these guidelines may not address the specific needs of all patients in all circumstances. These guidelines are not intended to be a substitute for the independent clinical judgment of the individual patient's treating provider(s) based on all the facts and circumstances presented. Neither the Council of Autism Service Providers (CASP) nor the authors of these standards assume any liability or responsibility for the application of these standards in the delivery of ABA services. These standards do not reflect or create any affiliation among those who participated in their development. CASP does not warrant or guarantee that these standards will apply or should be applied in all settings.

Prefatory Notes

We acknowledge diverse preferences in describing autism. We use identity-first (e.g., autistic person) and person-first (e.g., person with autism) language interchangeably to respect individual choices. In addition, terms such as "disorder," "condition," and "deficits" are used in accordance with their healthcare definitions as used by funders.

The term "behavior analyst" is used throughout this document to refer to professionals who carry at least a master's degree and who are qualified by education, training, state licensure, and/or national certification to practice behavior analysis independently. This term includes Board Certified Behavior Analysts® (BCBAs®) certified by the Behavior Analyst Certification Board® (BACB®) and those licensed by states as behavior analysts.

The term "assistant behavior analyst" refers to mid-tier supervisors who are professionals qualified by education, training, and/or state licensure or national certification to assist behavior analysts. This term includes Board Certified Assistant Behavior Analysts® (BCaBAs®) certified by the BACB and those licensed by states as assistant behavior analysts.

The term "behavior technician" (BT) is used throughout this document to refer to paraprofessionals who are qualified by education, training, and/or national certification to provide direct behavior-analytic services under the supervision of a behavior analyst. The term "Registered Behavior Technician®" (RBT®) is used to refer to those who are certified by the BACB. States and funders vary in their requirements regarding whether direct service providers must be certified by the BACB and other bodies.

The terms "practice guidelines," "treatment guidelines," and "generally accepted standards of care" are used interchangeably throughout this document.

The term "case supervision" is used to refer to activities that the professional behavior analyst engages in to support treatment (including but not limited to assessment, development and modification of the treatment plan, monitoring and reporting progress, summarizing and analyzing data, and developing and overseeing a discharge plan), whereas the term "supervision" is reserved for activities that are relevant to training staff, certification, or recertification purposes.

Copyright © 2024 by The Council of Autism Service Providers (CASP). Ver. 3.0

Electronic and/or paper copies of part or all this work may be made for personal, educational, or policymaking purposes, provided such copies are not made or distributed for profit or commercial advantage. All copies, regardless of medium, must include this note on the first page. Abstracting with proper credit is permitted, so long as the credit reads "Copyright © 2024 by The Council of Autism Service Providers (CASP), all rights reserved." All other uses and/or distributions in any medium require advance permission of The Council of Autism Service Providers (CASP), available from info@casproviders.org.

CONTENTS

Prefatory Notes ii

CONTENTS iv

PART 1 OVERVIEW 1

Introduction 1

Section 1.1 Executive Summary 1

Section 1.2 General Principles and Considerations 1

Section 1.3 Core Concepts 2

What Is Autism Spectrum Disorder (ASD)? 2

What Is Applied Behavior Analysis (ABA)? 3

Identifying Applied Behavior Analysis 3

Essential Practice Elements of Applied Behavior Analysis 4

PART 2 TRAINING, CERTIFICATION, LICENSURE, STAFFING, AND SERVICE MODELS 6

Introduction 6

Section 2.1 Training and Certification 6

Board Certified Behavior Analysts® (BCBAs®) 7

Board Certified Assistant Behavior Analysts® (BCaBAs®) 8

Registered Behavior Technicians® (RBTs®) 8

Section 2.2 Licensure of Behavior Analysts 9

Section 2.3 Staffing and Tiered Service-Delivery Models 10

Two-Tiered Service-Delivery Model 10

Three-Tiered Service-Delivery Model 12

Case Supervision by Behavior Analysts and Assistant Behavior Analysts 13

Rationale for Tiered Models 14

PART 3 MEDICAL NECESSITY 15

Introduction 15

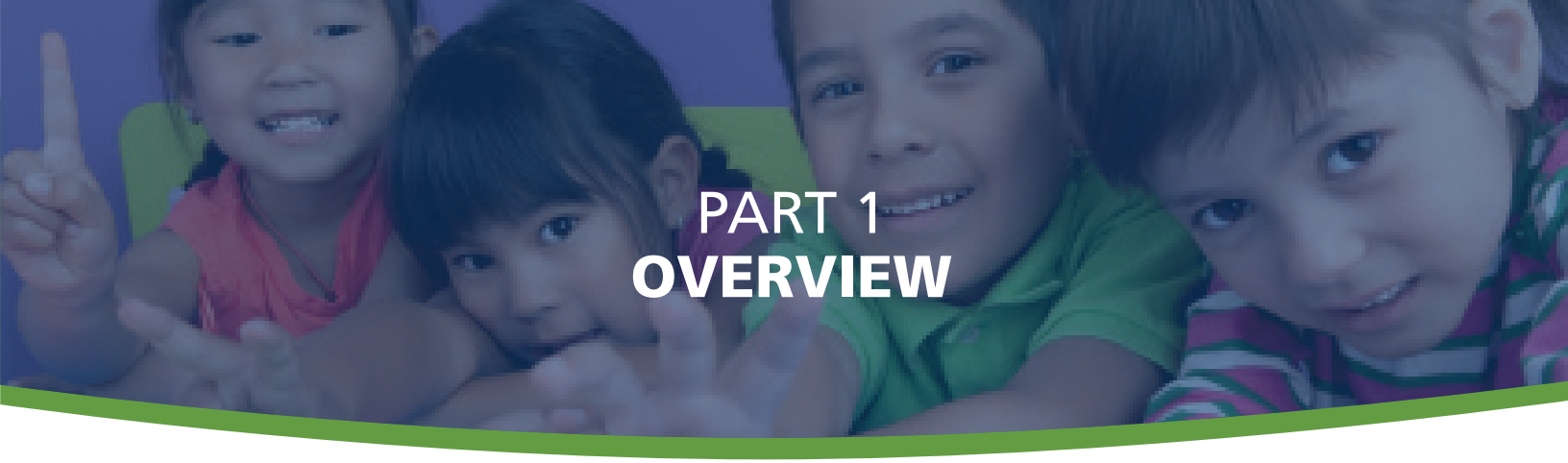
Section 3.1 Professional Associations' Definitions 15

Section 3.2 Definitions Under State Laws 16
Section 3.3 Medicaid Definitions 17
Section 3.4 Commercial Insurance Definitions 17
Section 3.5 Funder Review of Medical Necessity 18

PART 4 INDIVIDUALIZING ABA CARE 19
Introduction 19
Section 4.1 Assessment 19
Record Review 20
Interview 20
Direct Observation and Measurement of Behavior 20
Functional Behavior Assessments 22
Skills-Based Assessments 23
Standardized Assessments 24
Cautions 25
Risk Assessment 26
Assessments from Other Professionals 27
Section 4.2 Treatment Planning: Considerations and Models 28
Client Age 29
Scope of Treatment 29
Focused ABA 30
Comprehensive ABA 31
Treatment Intensity 33
Case Conceptualization 35
Treatment Match 37
Culture and Language 37
Goal and Protocol Development 37
Treatment Settings 39
Safety 40
Staffing 41
Critical Environmental Variables 41
Treatment Modality 42
In Person 42

Telehealth 42
Synchronous 43
Asynchronous 43
Hybrid 44
Generalization, Maintenance, and Prevention of Deterioration 44
Preventing or Minimizing Future Disability 45
Treatment Duration 45
Family Members and Caregivers 46
Contributions and Challenges 46
Engagement and Support 47
Involvement 48
Well-Being 48
Section 4.3 Collaboration in Care: Patient Priorities, Values, and Shared Decision-Making 49
Section 4.4 Progress and Outcome Measures 51
The Proximal–Distal Continuum 52
Measures for the Individual Patient 52
Cautions 53
Percentage Goals Mastered 53
Prescribed Batteries of Tests 53
Interpreting Outcomes 54
Section 4.5 Treatment Implementation 54
Case Supervision Considerations 54
The Importance of Short- and Long-Term Perspectives 54
Monitoring the Delivery of Medically Necessary Care 57
Monitoring and Reporting Progress 57
Adapting Treatment Plans and Modifying Protocols 58
Leading Support and Training 59
Case Supervision Dosage 59
Staff Supervision as a Component of Case Supervision 59
Ratio to Direct Treatment 59
Proportion of Case Supervision Provided by Behavior Analyst vs. Assistant Behavior Analyst 61
Factors Impacting Caseload 61

Section 4.6 Collaboration and Coordination of Care 63
Section 4.7 Transition and Discharge Planning 63
Transition Planning 64
Discharge Planning 65
PART 5 DEVELOPMENT OF THE GUIDELINES 66
PART 6 APPENDICES 68
Appendix A 69
Bibliography 69
Appendix B 74
Eligibility Requirements from Behavior Analyst Certification Board 74
ENDNOTES 78



PART 1
OVERVIEW

INTRODUCTION

Part 1 provides an overview of this document, "Applied Behavior Analysis Practice Guidelines for the Treatment of Autism Spectrum Disorder: Guidance for Healthcare Funders, Regulatory Bodies, Service Providers, and Consumers: Third Edition." This overview includes an executive summary, general principles and considerations, and basic information about applied behavior analysis (ABA) treatment for autism spectrum disorder (ASD).

Section 1.1 Executive Summary

The purpose of these practice guidelines is to inform decision making regarding the use of ABA as a medically necessary, efficacious, and cost-effective treatment to develop, maintain, or restore, to the maximum practicable extent, the functioning of individuals with ASD.

These practice guidelines are based on the best available scientific evidence and expert clinical opinion regarding the use of ABA as a behavioral health treatment for people diagnosed with ASD. The guidelines are intended to provide a concise, user-friendly introduction to the delivery of ABA services for ASD and to reflect consensus standards for the effective practice of these services. They are written for healthcare funders, agents of government health programs and private health insurance plans, regulatory bodies, consumers, and ABA practitioners and employers.

These practice guidelines provide information about standards of care in ABA that should be used in planning, implementing, and evaluating assessment and treatment services. As a behavioral health treatment, ABA includes many distinctive clinical and delivery components. It is important for all stakeholders, including those receiving and providing services, coordinating care, administering funding, or building provider networks, to understand the essential elements of ABA.

Section 1.2 General Principles and Considerations

- This document provides guidance regarding ABA services only; other behavioral health treatments are not addressed.
- This document contains guidelines and recommendations that reflect established research findings and best clinical practices. Application of the guidelines and recommendations must be individualized

to each patient. Individualized treatment is a defining feature of ABA. Individualization of treatment is one reason ABA is successful in treating ASD.

- People diagnosed with ASD have the same rights to services, in accordance with generally accepted standards of care, as people with any other mental or physical health condition.
- Many people diagnosed with ASD have co-occurring behavioral health and medical conditions, including but not limited to intellectual disabilities, seizure disorders, psychiatric and psychological disorders, mobility difficulties, sensory impairments, chromosomal abnormalities, feeding disorders, sleep disorders, elimination disorders, challenging behaviors (e.g., self-injury, property destruction), and a variety of other conditions that require additional medical or behavioral health treatment. These guidelines also apply to individuals diagnosed with ASD with these co-occurring conditions, as research has established ABA as effective for these patient populations as well. The presence of co-occurring conditions is not a valid reason to deny or limit access to ABA treatment, nor should an ASD diagnosis result in coverage limitations relating to the co-occurring conditions.
- Coverage of ABA treatment should not be restricted to specific settings; it should be covered in any location where therapeutic benefits can be achieved.
- Coverage of ABA treatment should not be excluded, denied, or limited based on the degree of caregiver participation.
- Coverage of ABA treatment should not be limited based on age; nature, scope, or degree of ASD or cognitive impairment; or previous ABA treatment.

Section 1.3 Core Concepts

What Is Autism Spectrum Disorder (ASD)?

Throughout this document, the term "autism spectrum disorder" is used to refer to the neurodevelopmental disorder defined in the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders. ASD is characterized by varying degrees of difficulty in social communication and interaction, evidenced by various limitations in social-emotional reciprocity, nonverbal communication, and relationships as well as the presence of repetitive behavior and/or restricted interests. ASD is typically a lifelong diagnosis[1] and therefore may require medically necessary treatment at any point during the patient's lifespan. Individuals may be discharged from and reenter treatment as needed.

Due to the variability of symptom presentation, no two people with an ASD diagnosis are the same in terms of how the disorder manifests throughout the lifespan. Similarly, caregivers' capacities and levels of stress

may change over time. Thus, treatment for ASD should be based on an individualized treatment plan using scientifically validated procedures developed by qualified clinicians who regularly interact with the patient and, when appropriate, their caregivers.

What Is Applied Behavior Analysis (ABA)?

ABA is a well-developed scientific discipline that focuses on analyzing, designing, implementing, and evaluating social and other environmental modifications to produce meaningful changes in human behavior.[2] This treatment approach has proven effective across the lifespan and for a variety of disorders and conditions. ABA's success remediating deficits associated with a diagnosis of ASD, as well as developing, restoring, and maintaining skills, has been documented in hundreds of peer-reviewed studies over the past 50 years (see Appendix A). ABA is the leading evidence-based, validated treatment for ASD. The success of this treatment approach has made ABA the standard of care for treating ASD. It is widely recognized by several authorities, including the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the National Institute of Mental Health.

ABA is based on the understanding that behavior is determined by previous experiences and current environments in combination with genetic and physiological variables. The interaction between a person and their environment is critical to behavior and learning. Therefore, one focus of ABA is on changing the environment in ways that will lead to practical and progressive changes in behavior. ABA providers identify behaviors that negatively impact functioning, address these behaviors by setting achievable goals for new behavior, change the environment to allow the patient to practice these new behaviors, and successively reinforce each instance of progress until the person can consistently display them across environments.

ABA interventions are not limited to addressing challenging behaviors; they also apply to skill acquisition and skill maintenance. Whenever possible, interventions are tailored to the individual's specific needs and designed in collaboration with that individual, their caregivers, and their care team. They focus on a range of essential learning, social, language, and independence skills. Depending on the person's needs, treatment can span several months to several years, or even across the lifespan.

Identifying Applied Behavior Analysis

The core characteristics of ABA are as follows:

- Objective assessment and analysis of the person's condition by observing how the environment affects their behavior, as evidenced through appropriate measurement.

- Understanding the context of the behavior and the behavior's value to the person, their caregivers, their family, and the community.
- Promotion of the person's dignity.
- Utilization of the principles and procedures of behavior analysis to improve the person's health, skills, independence, quality of life, and autonomy.
- Consistent, ongoing, objective data analysis to inform clinical decision making.

Essential Practice Elements of Applied Behavior Analysis

The five characteristics listed above should be apparent throughout all phases of assessment and treatment in the form of these essential practice elements:

- A comprehensive assessment that describes specific levels of behavior(s) at baseline and informs the subsequent establishment of meaningful treatment goals.
- An emphasis on understanding the current and future value or social importance of behavior(s) targeted for treatment.
- Reasonable efforts toward collaboration with the person receiving treatment, their guardians if applicable, and those who support them (e.g., caregivers, care team) in developing meaningful treatment goals.
- A practical focus on establishing small units of behavior that build toward larger, more significant changes in abilities related to improved health, safety, skill acquisition, and/or levels of independence and autonomy.
- Collection, quantification, and analysis of direct observational data on behavioral targets during treatment and follow-up to maximize and maintain progress toward treatment goals.
- Design and management of social and learning environment(s) to minimize challenging behavior(s) and maximize the rate of progress toward all goals.
- An approach to the treatment of challenging behavior that links the function(s) of, or the reason(s) for, the behavior with programmed intervention strategies.
- Use of a carefully constructed, individualized, and detailed behavior-analytic treatment plan that utilizes reinforcement and other behavioral principles and excludes methods or techniques not based on established behavioral principles and theory.
- Use of treatment protocols that are implemented repeatedly, frequently, and consistently across environments until discharge criteria are met.

- An emphasis on frequent, ongoing analysis and adjustments to the treatment plan based on patient progress.
- Direct training of caregivers and other involved laypersons and professionals, as appropriate, to support increased abilities and generalization and maintenance of behavioral improvements.
- A comprehensive infrastructure for case supervision by a behavior analyst of all assessments and treatment.

PART 2
TRAINING, CERTIFICATION, LICENSURE, STAFFING, AND SERVICE MODELS

INTRODUCTION

Part 2 provides an overview of certification and licensure requirements and delivery models that maintain the professionalism of ABA services. Professional practitioners of ABA are called behavior analysts. Behavior analysts are professionals with a master's or doctoral degree who are qualified by education, training, state licensure, and/or national certification to practice behavior analysis independently. For behavior analysts, specialized training occurs in graduate programs focused on ABA. Most graduate and postgraduate university programs in psychology, counseling, social work, or other areas of clinical practice do not provide in-depth training in ABA. Training, certification, and licensure requirements facilitate accountability and excellence by establishing ethical and professional standards as well as education, competency, and supervision requirements.

Like other medical and behavioral health providers, behavior analysts rely on strategies and procedures documented in peer-reviewed literature, established treatment protocols, and clinical decision-making frameworks. They continually evaluate patient needs and customize treatment options based on direct observation and data from a range of other assessments. Behavior analysts also solicit and integrate information from the patient and their representatives and caregivers and coordinate care with other professionals. Behavior analysts guide the course of treatment and supervise treatment delivery through models of tiered service delivery (see section 2.3). Tiered service-delivery models are the primary mechanism utilized by behavior analysts in comprehensive treatment programs to achieve significant improvements in cognitive, language, social, behavioral, and adaptive domains that have been documented in the peer-reviewed literature.

Section 2.1 Training and Certification

The oldest and largest national certification organization in ABA is the Behavior Analyst Certification Board®[3] (BACB®). The BACB is a nonprofit organization established in 1998 to certify ABA practitioners. BACB certification helps health plans and their subscribers identify providers who meet entry-level competencies to practice ABA. The online BACB Certificant Registry[4] is the primary resource for quickly and easily verifying a person's certification status and determining if they have reportable disciplinary actions associated with their certification. Guidance on finding a person's certification status can be found on the Verifying BACB Certification[5] webpage.

The ethics requirements for BACB certificants[6] serve to promote standards of professional conduct in the practice of ABA and protect the public from practitioners who do not meet those standards. The BACB operates a robust system for evaluating and processing notices of alleged ethics violations against its certificants and applicants. Guidance for submitting notices of alleged ethics violations can be found on the BACB's Ethics[7] web page.

The BACB's certification programs are accredited by the National Commission for Certifying Agencies (NCCA). NCCA's Standards for the Accreditation of Certification Programs[8] were the first standards developed for professional certification programs to help ensure the health, welfare, and safety of the public. NCCA standards articulate the essential elements of a high-quality certification program. Consistent with these standards, the BACB's certification requirements, examination content, and procedures undergo regular review by subject matter experts in the profession. Other certifying bodies exist, and details can be obtained on their websites. A comprehensive list is not provided because new entities can be established at any point. In this document, we use the BACB certificant levels to exemplify how tiered models can operate in ABA service delivery.

The BACB certifies ABA practitioners at three levels:

ABA treatment services are typically delivered using a tiered service-delivery model involving various combinations of certified providers, such as BCBAs® and RBTs® (see below).

Board Certified Behavior Analysts® (BCBAs®)

The BCBA®[9] is a graduate-level certification in behavior analysis. Professionals certified at this level are independent practitioners who provide ABA services. Applicants for behavior analyst certification must meet eligibility requirements (see Appendix B), including a master's degree or higher, defined graduate coursework in behavior analysis (e.g., concepts and principles, methods, ethics, assessment, intervention, supervision), and supervised fieldwork before they are approved to take a professionally developed and scored examination.[10] In addition, behavior analysts must obtain ongoing continuing education and adhere to their ethics code to maintain certification.

Behavior analysts who have explicit doctoral training in behavior analysis can apply for a doctoral-level designation: the Board Certified Behavior Analyst-Doctoral®[11] (BCBA-D®). The Behavior Analyst-Doctoral designation is not a separate certification, and it does not grant any privileges above or beyond behavior analyst certification. BCBA-Ds® function in the same capacity as BCBAs® (i.e., as independent practitioners who provide behavior-analytic services) and are required to meet all behavior analyst maintenance requirements.

BCBAs® supervise the work of Board Certified Assistant Behavior Analysts® (BCaBAs®) or other recognized mid-tier providers, Registered Behavior Technicians® (RBTs®), and other professionals who implement behavior-analytic services. BCBAs may also provide services directly to patients.

Board Certified Assistant Behavior Analysts® (BCaBAs®)

The Board Certified Assistant Behavior Analyst[12] is an undergraduate-level certification in behavior analysis. Professionals certified at the BCaBA® level provide ABA services under the supervision of a behavior analyst. Applicants for Board Certified Assistant Behavior analyst certification must meet eligibility requirements (see Appendix B) including an undergraduate degree, defined undergraduate coursework in behavior analysis (e.g., concepts and principles, methods, ethics, assessment, intervention, supervision), and supervised fieldwork before they are approved to take a professionally developed and scored examination. The required number of hours of coursework and supervised fieldwork are fewer than those required for certification as a BCBA®. BCaBAs® are required to obtain ongoing continuing education, adhere to the ethics code, and obtain the required supervision to maintain their certification.

Professionals certified at the assistant behavior analyst level may practice ABA, including supervising the work of RBTs®, only under the supervision of a BCBA® or BCBA-D®.

Registered Behavior Technicians® (RBTs®)

The Registered Behavior Technician® (RBT®)[13] is a paraprofessional certification in behavior analysis. RBTs® do not exercise independent professional judgment, including describing clinical phenomena, analyzing, or prescribing. They deliver ABA services and practice under the direction and close supervision of a BCBA® or a BCaBA®. Applicants for RBT® certification must be at least 18 years of age and meet eligibility requirements (see Appendix B), including a high-school diploma (or equivalent), a background check, defined training in ABA, and a competency assessment before they are approved to take a professionally developed and scored examination. In addition, RBTs® must meet ongoing maintenance requirements that include demonstrating competence in critical practice skills, adhering to their ethics code, and following the supervision requirements for their ongoing practice.

In a tiered model, the RBT® role should not be occupied by the parent of the patient, who already serves in the different, critically important role of advocate and collaborator with the BCBA®. A parent serving in the official role of RBT® would be in violation of industry ethics codes related to having multiple, conflicting relationships. In addition, BCBAs® acting in a supervisory role over a parent serving as an RBT® for their own child would also be acting in violation of their ethics code and would have a duty to self-report and to report the RBT®[14].

Section 2.2 Licensure of Behavior Analysts

In most U.S. states, individual practitioners of ABA are regulated through licensure. Licensure is established by statute and accompanying rules or regulations adopted in each state. Most behavior analyst licensure laws require a state-issued license to practice ABA professionally in that state and to use a title like "Licensed Behavior Analyst," though a few laws include only the title restriction. Licensure laws also protect consumers, funders, and employers by ensuring that all practitioners have met uniform education and training standards, and by establishing a regulatory body within the state (e.g., a licensing board or state agency) that is responsible for enforcing the licensing statute and the rules or regulations implementing it. The regulatory body typically investigates allegations that licensed individuals have violated the statute or rules or that individuals may be practicing ABA without a license. If allegations against a licensed behavior analyst are substantiated, most state licensing entities can take disciplinary actions that may range from requiring the individual to obtain additional training or supervision to imposing a fine and even revoking the license.

In states that do not license behavior analysts, certification is used to determine qualifications for providers of ABA, with BACB certification being predominant. Professional certifications and licenses have similar eligibility requirements: degrees, coursework, supervised practical training, and passage of a professional examination in the subject matter. But certification and licensure differ in several important ways. Certification is typically voluntary, and certification programs are managed by non-governmental entities. Certifying entities can generally enforce their requirements and other standards only with individuals who hold or are candidates for their credentials; they cannot require anyone to obtain those credentials or regulate the practice of non-certified individuals. In contrast, state licensing boards are typically authorized to enforce the state licensure law as to all who are or claim to be practicing within the scope of the profession whether they are licensed or not (unless they are specifically exempted by the licensure law).

In most states with behavior analyst licensure laws, current BACB certification is a qualification for obtaining the state-issued license, but there may be other or different requirements such as provisions on criminal background checks, examinations on state laws and regulations, and required trainings on topics like mandatory abuse reporting or human trafficking. Although some licensure laws or the accompanying rules or regulations incorporate the BACB Ethics Code for Behavior Analysts, some have additional or different conduct standards to which licensees are held. There may be rules governing telepractice by licensees, remote delivery of ABA services by individuals outside the state, short-term or temporary practice, etc. The state entity that manages

the licensure program is the best source of accurate, current information about requirements for obtaining a license and practicing legally in that state. A list of states that have adopted behavior analyst licensure laws and links to the state regulatory entities can be found at https://www.bacb.com/u-s-licensure-of-behavior-analysts.

Section 2.3 Staffing and Tiered Service-Delivery Models

Tiered service-delivery models utilize treatment teams working under the direction of behavior analysts. These models have been the primary mechanism for achieving significant improvements in cognitive, language, social, behavioral, and adaptive skills documented in peer-reviewed literature.

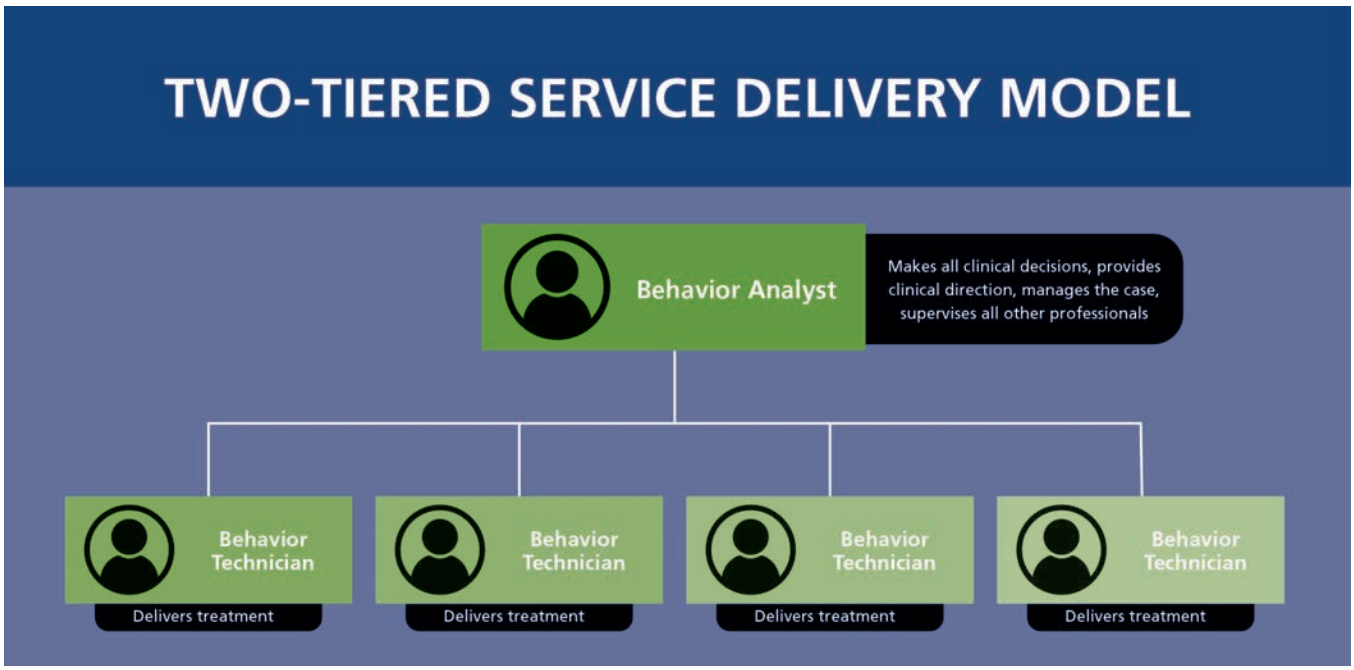
For a tiered service-delivery model to be effective:

- The behavior analyst must know the ability of each member of the treatment team to effectively carry out various treatment activities before assigning them.
- The behavior analyst must be familiar with the patient's needs and treatment plan and regularly observe the team implementing the plan.
- Providers in each tier must operate within the profession's scope of practice, supervision requirements, and conduct standards specified by the BACB or state licensing entity (where applicable) and within the scope of their training and competence, and receive or provide the amount and type of supervision specified for their role by the BACB or state licensing entity.

Most ABA treatment services are delivered using a tiered service-delivery model, although there may be instances in which a behavior analyst provides all services, including direct treatment for a patient based on their individual needs. The service-delivery model and corresponding treatment team can be two-tiered or three-tiered as described below.

Two-Tiered Service-Delivery Model

A two-tiered service-delivery model consists of one or more behavior technicians (BTs) responsible for direct delivery of ABA treatment services for a given patient under the direction and supervision of a behavior analyst. The two-tiered service-delivery model is the most commonly used, with the behavior analyst supervising the BT.



The primary responsibilities of the behavior analyst may include but are not limited to the following:

- Designing all assessment and intervention activities.
- Training and supervising all team members, including mid-tier supervisors and direct service providers.
- Analyzing data and modifying treatment plans.
- Collaborating with and supporting caregivers.
- Supporting a continuum of care.
- Collaborating with other treatment providers.
- Communicating patient needs and progress with funders.
- Continually reviewing treatment goals and progress toward improving the patient's quality of life, independence, and autonomy.

The primary role of the BT is to deliver treatment according to the individualized protocols developed by the behavior analyst and to assist with administering assessments.

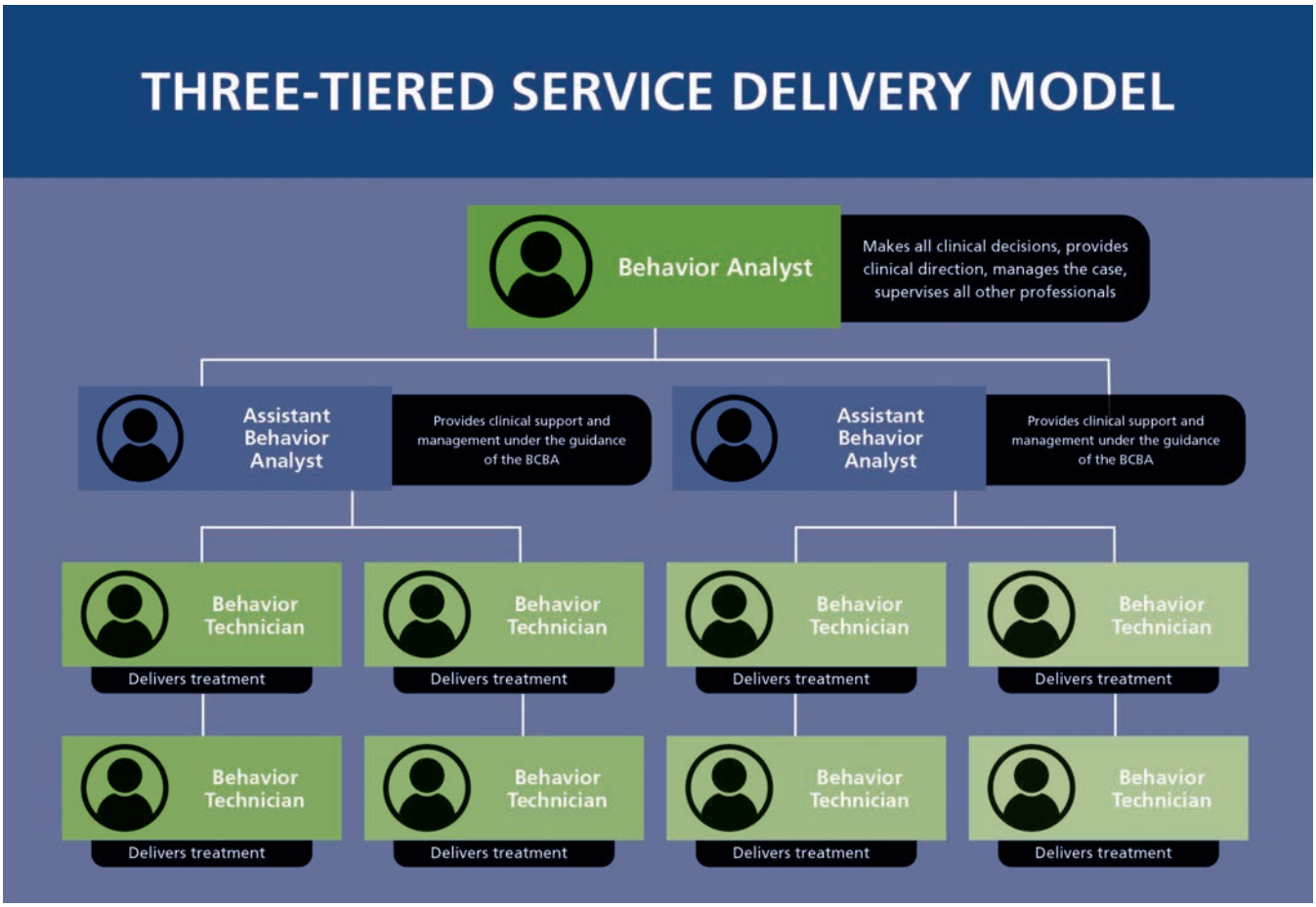
Engagement in these activities assumes:

- The behavior analyst provides close oversight of treatment activities via direct observation and record review.

- The behavior analyst trains the BT to a high level of competency for specific treatment procedures and general training for the position.

Three-Tiered Service-Delivery Model

A three-tiered service-delivery model consists of a treatment team of BTs who deliver ABA services under the supervision of both a behavior analyst and an additional supervisor at the mid-tier level, who may be a BCaBA or have other qualifying education and experience (e.g., is in training for certification) as recognized by state or federal law. These two levels of supervisors work together to provide direction and oversight to the team to ensure that services are delivered as designed by the behavior analyst.



As with a two-tiered model, the behavior analyst is responsible for all aspects of treatment, programming, and case supervision.

The mid-tier supervisor (i.e., Board Certified Assistant Behavior Analyst or other qualified clinician authorized by law or funder) works in collaboration with and under the supervision of the behavior analyst to assist with activities that support treatment delivery, including but not limited to:

- Providing case supervision.
- Providing training and feedback on program implementation.
- Performing direct assessment of the patient's skills.
- Monitoring patient data.
- Assisting with communication across the clinical team.
- Developing and implementing assessment and treatment procedures.
- Providing caregiver training and support.

In the three-tiered model, the primary role of the BT is to deliver treatment to the patient according to the protocols and intervention plan designed by the behavior analyst.

Engagement in the three-tiered delivery model assumes that all decisions occur under the guidance of the behavior analyst, including:

- Creation and implementation of the treatment plan.
- Regular review of data, refinements to the treatment plan, or intervention procedures.
- Delivery of the intervention by the treatment team.

The three-tiered delivery model also assumes that the behavior analyst has regular contact with and directly supervises the BTs and the mid-tier supervisor.

Case Supervision by Behavior Analysts and Assistant Behavior Analysts

Provider organizations, funders, regulators, and consumers are concerned with access to quality care. A service model that includes mid-tier supervisors can improve access to care. Still, to ensure quality care, the percentage of services provided by the mid-tier supervisor must be individualized according to patient needs. This individualization means that the provider organization should typically not allocate the same percentage of case supervision by the behavior analyst and assistant behavior analyst for each patient.

When determining how to allocate case supervision, many variables must be considered. These include but are not limited to:

- Complexity of patient needs and the treatment program.
- Aspects of case conceptualization, including comorbidity.
- Competence and experience of mid-tier supervisors.
- Patient progress.

Organizations should provide training, resources, and support for the behavior analyst and the mid-tier supervisor to increase the likelihood of success of the three-tier model. Organizations should establish clinical monitoring systems to ensure that programs are designed and delivered with fidelity and that the patient is making satisfactory progress. If the patient is not making adequate progress, the organization should evaluate the appropriateness of the model and reassign and potentially redistribute the responsibilities of the mid-tier supervisor (as one possible avenue for improving progress). In addition to case supervision, the professional oversight of the mid-tier supervisor should align with credentialing guidelines. See also Section 4.5 *Proportion of Case Supervision Provided by Behavior Analyst vs. Assistant Behavior Analyst*.

Rationale for Tiered Models

Services provided in a tiered model and overseen by a qualified behavior analyst may offer several benefits for providers, caregivers, and funders, including:

- Improved cost-effectiveness.
- Enhanced ability to serve a greater number of patients compared to a smaller pool limited to only behavior analysts as treatment providers.
- Increased service delivery to people who live in rural and underserved locations.
- Increased appropriate service delivery to patients with high support needs, particularly when telehealth case supervision services are authorized.
- Flexibility in the amount of behavior analyst expertise allocated to each patient.

A carefully crafted tiered system that involves consistent communication, thoughtful oversight, and effective case supervision can enable many people to receive ABA services, which can produce a meaningful impact on their lives.

MEDICAL NECESSITY

INTRODUCTION

These practice guidelines exist to set forth the standards of care that are generally accepted by ABA practitioners in the field of autism treatment. Generally accepted standards of care dictate what services will be deemed medically necessary by funders and providers.

The concept of "medical necessity" has become a widely used tool for managing the allocation of healthcare resources, not only by funders such as insurance companies and government programs but also by healthcare providers, who must fairly allocate their time and expertise among their patients. For funders, medical necessity is often a threshold requirement for initial and continued funding of treatment services. Failure to establish medical necessity can result in denial of payment.

For providers, medical necessity considerations can assist in developing an appropriate treatment plan that meets the patient's needs in a safe, efficient, and effective manner. For ABA practitioners, it is crucial to understand the relationship between "generally accepted standards of care" and "medical necessity." Understanding this relationship allows ABA providers, in collaboration with the prescribing physician or psychologist when possible, to:

- Determine patient need based on professional standards of care.
- Clearly communicate to the funder the reasons a given treatment plan is medically necessary for the individual patient.

This section will provide an overview of "medical necessity" definitions according to regulatory and funding sources.

Section 3.1 Professional Associations' Definitions

The American Medical Association (AMA) has adopted a definition of "medically necessary services" that has been widely accepted in a variety of contexts, as discussed below. According to the AMA, medically necessary services are:

> Health care services … that a prudent physician would provide to a patient for the purpose of preventing, diagnosing or treating an illness, injury, disease or its symptoms in a manner that is: (a) in accordance with generally accepted standards of medical practice; (b) clinically appropriate in

> terms of type, frequency, extent, site, and duration; and (c) not primarily for the economic benefit of the health plans and purchasers or for the convenience of the patient, treating physician, or other health care provider.[15]

In 2022, the American Academy of Pediatrics (AAP) recommended a new pediatric definition of medical necessity. Building on prior policy statements[16]—and stressing the "unique characteristics of infants, children, adolescents, and young adults and the medical conditions that affect them"—the definition is as follows:

> health care interventions that are evidence-based, evidence-informed, or based on consensus advisory opinion and that are recommended by recognized health care professionals or organizations, such as the AAP, EPSDT services, and Bright Futures, to promote optimal growth and development in children and youth and to prevent, detect, diagnose, treat, ameliorate, or palliate the effects of physical, genetic, congenital, developmental, behavioral, or mental conditions, injuries, or disabilities. p.2.[17]

Section 3.2 Definitions Under State Laws

Medical necessity requirements appear in state laws in at least two different contexts.

First, the insurance laws of some states impose standard definitions of "medical necessity" that apply to health insurance plans issued in the state and governed by state law. In effect, these statutory definitions become implied terms of such insurance policies.

For example, in 2020, California amended its Health and Safety Code and its Insurance Code to expand its mental health parity requirements. Under the amended law, health and disability insurance plans "must … provide coverage for medically necessary treatment of mental health and substance use disorders, under the same terms and conditions applied to other medical conditions…."[18] As amended, both statutes now also include a standardized definition of "medically necessary treatment" for behavioral health conditions that closely follows the AMA definition.[19]

Second, some states have imposed standard medical necessity definitions that apply specifically to mandated insurance coverage for autism treatment. For example, Illinois and Delaware, in mandating coverage of certain medically necessary treatments for ASD (including ABA), have adopted a specific broad definition of "medically necessary" to be applied to such coverage:

> … any care, treatment, intervention, service, or item which will or is reasonably expected to do any of the following: (i) prevent the onset of an illness, condition, injury, disease, or disability; (ii) reduce or ameliorate the physical, mental, or developmental effects of an illness, condition,

injury, disease or disability; or (iii) assist to achieve or maintain maximum functional activity in performing daily activities.[20]

State insurance laws do not apply to employer-sponsored health plans that are "self-funded" by the sponsoring employer. Self-funded plans are governed only by federal law, which does not mandate any definition of "medical necessity." As discussed below, however, self-funded plans often include explicit medical necessity requirements—which may or may not mirror state statutory definitions—making it critically important to understand the relevant terms of each patient's health plan document. Additionally, it is necessary to understand how such definitions are applied to ABA coverage for ASD. Employer-sponsored health plans, including most self-funded plans, are generally prohibited by the federal Mental Health Parity and Addiction Equity Act of 2008 from using medical necessity definitions that, either as written or as applied, are more restrictive with respect to mental health coverage (including treatment for ASD) than medical/surgical coverage.[21]

Section 3.3 Medicaid Definitions

State Medicaid agencies are responsible for determining what services are medically necessary for eligible people. As of March 2021, all states have defined "medical necessity" for their Medicaid programs.[22] Two-thirds of states have incorporated specific language into the definition requiring that services align with generally accepted standards of care.[23]

In addition to the general state Medicaid medical necessity definitions, Medicaid has special rules for children under 21 years of age. Federal law governing Medicaid requires states to provide Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) services to children and adolescents under age 21. EPSDT is broadly defined as including a comprehensive array of services "necessary … to correct or ameliorate defects and physical and mental illnesses and conditions discovered by the screening services, whether or not such services are covered under the State plan."[24] State Medicaid agencies cannot impose any definition of medical necessity on treatment for children that would limit the EPSDT standard.

Section 3.4 Commercial Insurance Definitions

Commercial insurance plans—including employer-sponsored healthcare plans and individual insurance plans—commonly specify that services are covered only if the plan's administrators determine that the services are medically necessary to treat a covered condition, along with all other coverage requirements. For these health plans, the medical necessity requirement is defined by the terms of the plan.

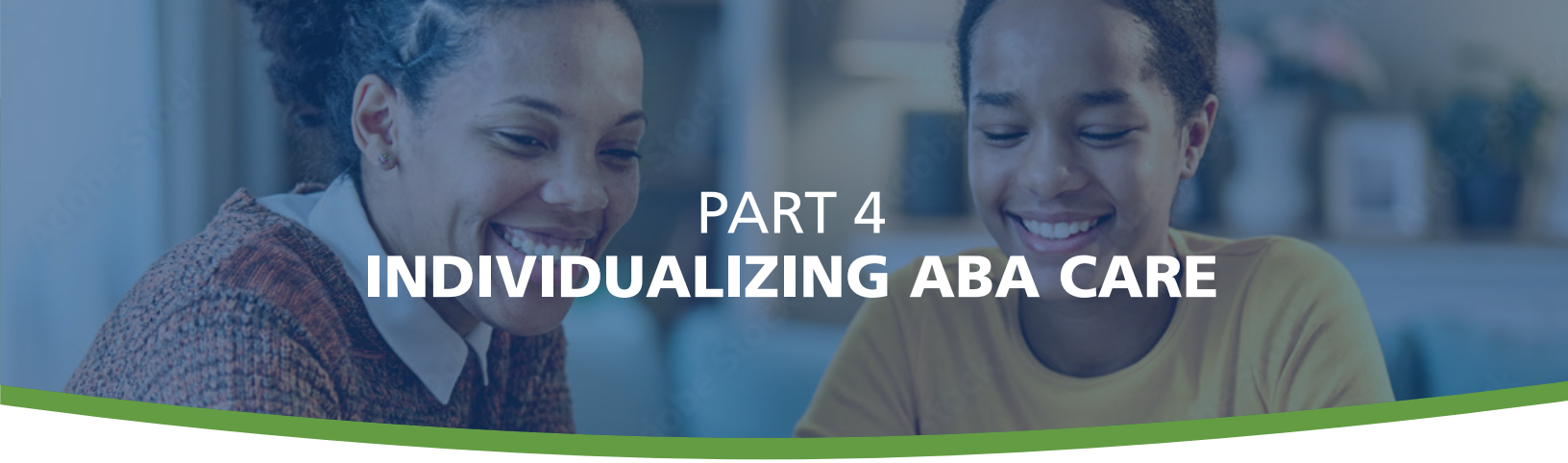
As discussed above, any "medical necessity" definition in a commercial insurance plan must comply with applicable federal and state law. However, within these legal guidelines, definitions of "medically necessary" or "medical necessity" can vary somewhat among different funders. Even so, the definitions 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.[25]

Other considerations, such as the clinical appropriateness of the type, frequency, and duration of services, or the cost-effectiveness of the services compared to equally effective available alternatives, are also common. The medical necessity definition will typically be found in the policy documents and must be disclosed to the plan member. Regardless of the source of the definition selected, funders must adhere to this definition in their administration of the policy—both generally and in any specific policies and procedures that apply to ABA treatment for ASD.

In addition to the generally applicable medical necessity requirement, some insurers have adopted specialized medical necessity policies tailored to specific conditions or treatments, such as ABA treatment for ASD.[26] These separate policies must comply not only with the written terms of the patient's health plan (including any medical necessity requirement and definition) but also with applicable state and federal laws, such as state mandates and federal nondiscrimination and mental health parity laws.

Section 3.5 Funder Review of Medical Necessity

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.



PART 4
INDIVIDUALIZING ABA CARE

INTRODUCTION

Individualizing ABA care is critical to achieving optimal patient outcomes. Behavior-analytic services are designed to support the development of skills to enhance patient well-being, autonomy, and independence and to expand opportunities throughout the lifespan. The course of treatment is guided by assessment and a treatment plan tailored to support the needs of the patient. Treatment planning and implementation should be collaborative, involving family and caregivers, and should include discharge planning from the outset of treatment. Planning for the generalization and maintenance of skills and providing case supervision throughout active treatment are critical to successful patient outcomes. This part of the document reviews accepted practices for aspects of assessment, treatment planning, delivery, and evaluation of outcomes for the individual patient throughout the span of ABA services.

Section 4.1 Assessment

This section describes the initial assessment process. It also includes information relevant to measurement of treatment outcomes. The standard of care requires the use of multi-method, multi-informant data sources to provide a comprehensive view of patient functioning at intake and throughout treatment.

Behavior analysts, after undertaking the appropriate training and supervision, may implement a variety of assessment activities. The goal of these assessment activities is to:

- Determine patient baseline skills.
- Develop the treatment plan and goals.
- Identify measures to report progress in treatment.

These assessment activities typically include direct observation and measurement of behavior in conjunction with other activities such as file review, interviews, and the administration of standardized instruments (i.e., a rigorously developed tool that measures a concept in an objective, standardized manner).

Due to the comprehensive nature of the assessment process, it may require 20 hours or more to complete the evaluation. The assessment should be conducted at regular intervals (e.g., on an annual or semiannual basis). There should be no restriction on the number of assessment hours on any given day, though long assessments (e.g., 20 hours) should be spread out across multiple days.

Record Review

Understanding the patient's needs and developing a treatment plan that meets these needs requires a thorough understanding of the patient's profile and history. A record review should include:

- information about the patient's developmental and medical history
- response to prior interventions
- current treatment plan, including medication and other interventions
- cultural and familial considerations
- language spoken
- prior assessment results

Interview

Patients, caregivers, and other relevant stakeholders should be included in the data collection process to the extent feasible. They have valuable and unique information that can help the behavior analyst understand the patient's needs, the desired outcomes of treatment, and the most effective goals and treatment plan to attain these outcomes. Interviews play a crucial role in this process.

Direct Observation and Measurement of Behavior

Measurement of behavior by direct observation and recording is a hallmark of ABA. Behavior analysts should define each target behavior in observable, measurable terms and conduct repeated and frequent direct observation and recording of each target behavior in a patient's treatment plan from baseline through all phases of intervention. In many cases, the resulting data should be graphed. Frequent analyses of graphed data by the behavior analyst are necessary to determine baseline levels of each target behavior, whether and how each behavior changes over time, and whether treatment procedures or the treatment plan need to be modified to promote patient progress. Choices about the procedures used to measure and track behavior by direct observation are critical, as the resulting data affect other important decisions. For example, results of sound measures of the functions (environmental causes) of challenging behaviors inform decisions about when to implement or change interventions for those behaviors as well as alternative adaptive behaviors.

Several seminal ABA texts describe direct observation and recording procedures and offer guidance on matching procedures to the specific characteristics of target behaviors and circumstances under which they

occur. Behavior analysts might use a clinical decision-making model to select optimal measurement procedures and times given features of a behavior of interest (e.g., whether the behavior occurs publicly, how often it occurs and in what settings) and any practical constraints (e.g., how often it is feasible for interventionists to observe and record the behavior). A decision must be made as to how often, when, and where to observe and record data on each target behavior. Ideally, that would occur throughout every planned baseline and treatment session and during many naturally occurring, non-structured times as well. That may not be practical for all behaviors, however, so arrangements must be made to obtain enough data samples to provide a reasonably clear picture of what happens to each behavior so that appropriate clinical decisions can be made. For example, if a behavior tends to occur about equally often at all times and in all settings, data samples could be obtained once or twice a week in the morning and afternoon in each setting during designated periods (e.g., for a portion of each scheduled treatment session or naturally occurring situation). If a behavior tends to occur only or mostly in specific settings or at specific times, observation and recording should be scheduled accordingly. For some behaviors, representative samples can be obtained in fairly short observation periods (e.g., 10-15 minutes), while for others, observation periods may need to be longer (1-2 hours).

Decisions must also be made about which observation and recording procedures to use during designated observation periods. They should be based on the characteristics of the target behavior that are of clinical relevance (how often it occurs, how long each occurrence lasts, when it occurs in relation to environmental events, etc.) Another consideration is who will do the observation and recording (i.e., whether it is an interventionist who will be delivering services to the patient at the same time or a dedicated observer who has no concurrent responsibilities).

Direct observation and recording procedures fall into two general categories: continuous and discontinuous. Continuous observation and recording procedures require the observer to try to record every occurrence of a target behavior during each of a series of designated observation periods (say, 10 minutes). Examples of measures resulting from continuous observation and recording procedures are frequency (number of occurrences of the behavior), frequency per trial or opportunity, duration (amount of time each occurrence or bout of occurrences of the behavior lasts), and latency (elapsed time from an event such as a request from a peer to the onset of the target behavior). Discontinuous interval-based observation and recording involves dividing each designated observation period into a series brief intervals. For instance, an observation period of 10 minutes might be divided into 20 intervals of 30 seconds each. For partial-interval recording, the observer records an occurrence if they see the behavior at least once during an interval and a non-occurrence if they do not see it at least once. For whole-

If a behavior tends to occur about equally often at all times and in all settings, data samples could be obtained once or twice a week in the morning and afternoon in each setting during designated periods. If a behavior tends to occur only or mostly in specific settings or at specific times, observation and recording should be scheduled accordingly.

interval recording, an occurrence is recorded only if the behavior persists throughout an interval; otherwise a non-occurrence is recorded for that interval. In momentary time sampling, the observer looks at the patient briefly at the end of each interval. If they see the behavior at that moment, they record an occurrence; otherwise they record a non-occurrence. All of those procedures require a system for signaling the observer when each interval starts and ends. Partial- and whole-interval procedures require the observer's undivided attention throughout the observation period; they cannot do anything else at the same time. Momentary time sampling may allow the observer to do something else during intervals, though that can be difficult with brief intervals. Data are typically summarized and graphed in terms of the numbers or proportions of occurrences and non-occurrences recorded during each observation period.

Research shows that interval-based observation and recording methods produce only estimates of actual frequencies or durations of behavior because they virtually guarantee that some occurrences will be missed by the observer. Whether those are under- or over-estimates and the degree of error depends on the characteristics of the behavior and the length of the intervals, but estimates tend to be better when intervals are brief (30 seconds or shorter). These procedures should not be used when it is essential to get complete pictures of occurrences and characteristics of target behaviors rather than estimates and observers must deliver services to patients simultaneously. Other discontinuous observation and recording procedures involve sampling only one or a few opportunities within an observation period, such as the first or last trial of a block of trials (often referred to as "probes.") Although they can be appropriate under some circumstances, those discontinuous procedures should be used judiciously, given that they may yield an incomplete picture of the behavior.

There are different purposes for conducting direct observation and measurement of behavior, including understanding the function of severe or challenging behavior or assessing a patient's skills in specific areas.

Functional Behavior Assessments

Functional assessment is a special type of direct observation and measurement of behavior that focuses on the functional determinants and environmental contributors to behavior. Functional assessment specifically addresses aspects of the environment that contribute to the continuation of challenging behavior impacting the growth and quality of life of the patient and caregivers.

This method involves direct observation of patient behavior under the environmental conditions that are suspected to relate to the behavior (e.g., low attention times, personal care tasks). This type of assessment serves as a prescriptive tool, allowing the behavior analyst to tailor intervention directly to the function of the behavior, which increases the likelihood and magnitude of treatment success. Functional analyses can be complex and may require higher staffing ratios, more direction from the behavior analyst, and specialized training. Although descriptive, indirect, or less rigorous functional assessments can sometimes be effective, more comprehensive and rigorous methods represent the standard of care for behavior that threatens health

and safety. Comprehensive and rigorous methods should be utilized and pursued if the results of less rigorous assessments for any challenging behavior are ambiguous, contradictory, or do not result in a function-based treatment that produces adequate improvements.

Functional assessment approaches vary. Some rely on indirect sources of information like caregiver reports, while others are based on direct observation of the behavior. In the continuum of functional assessment approaches, analog functional analysis is regarded as the most rigorous.

Regardless of the type of functional assessment, the process should include multiple sources of information, such as interviews with caregivers, structured rating scales, and consideration of medical conditions that may impact behavior. Whenever possible, functional assessments should include the collection of patient data based on direct observation. These direct observations may consist of documenting whether the behavior is correlated with certain naturally occurring events or the presence of certain stimuli in the natural environment. If the patient presents with behavior that is beyond the scope of the behavior analyst's training, the best course of action is to consult with another provider who has the requisite experience.

Functional assessment is an important and necessary step that guides the development of interventions for challenging behavior. Once the behavior analyst identifies the most likely reasons for the behavior, they directly incorporate this information into the treatment plan in the form of a function-based intervention. In a function-based intervention, the situation that maintains the behavior is restructured to promote the development of alternative adaptive behavior.

Behavioral interventions based on the identified function should include data collection, visual analysis of collected data, and thorough direct observation of the patient's behavior whenever possible. To assess the impact of an intervention, it is necessary to compare the behavior that results from an intervention with the behavior noted prior to the intervention. These data guide treatment development, and so collecting and evaluating them more frequently enhances the behavior analyst's ability to respond to changes or adapt the intervention. For extremely serious forms of challenging behavior, it may be necessary to collect many observations per day.

Skills-Based Assessments

Skills-based assessments include the observation and recording of specific behaviors in the natural environment, or a clinic setting and may involve unstructured or structured formats. An example of a naturalistic, unstructured skills-based assessment is observing and recording a caregiver and patient while they engage in routine activities such as brushing teeth. A naturalistic structured observation might involve going to the home and asking the caregiver to provide a series of specific instructions and recording the patient's response to those instructions. In a clinic-based setting, the behavior analyst might present the patient with arrays of common household items or toys and ask the patient to identify specific items. In each of these cases, the behavior analyst may readminister some items or repeat some assessments to select targets or establish baseline levels.

Standardized Assessments

Well-researched, valid, and reliable standardized assessment instruments that are carefully selected for each patient can provide important information about the strengths and needs of individuals diagnosed with ASD for the purposes of establishing baselines, treatment planning, and evaluating progress. Standardized assessment instruments are those that are administered, scored, and interpreted in uniform ways as specified in the test protocol and/or examiner's manual. Most are documented to be valid and reliable when administered according to the protocol, which allows results to be compared across examiners, participants, locations, and times.

Many standardized assessment instruments (tests, scales, inventories, etc.) have been developed in accordance with the Standards for Educational and Psychological Testing that are published by the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. Some are published and sold by the developers, but many are sold by commercial publishers. Examples include instruments that evaluate individual performances or functioning levels in domains that are often addressed by ABA interventions, such as intellectual, communication, social, self-care, and other adaptive skills and challenging behaviors.

Standardized instruments are generally categorized as norm-referenced or criterion-referenced, although a few provide both types of information.

Norm-referenced assessments compare an individual's responses to those of samples of other individuals with similar characteristics, such as chronological age or diagnosis.

Criterion-referenced assessments compare an individual's performance to a pre-determined standard or criterion (e.g., of proficiency or mastery of a set of skills).

In addition to assessments administered directly to patients, other standardized instruments collect information about how parents or other caregivers view the patient's strengths and needs. Still others have patients, parents, or other caregivers report on how they perceive ABA services and their impacts on various aspects of their lives. Such instruments may assess impressions of the acceptability of treatment or the likelihood of its continuation, overall satisfaction with services and progress toward treatment goals, quality of life, stress, or overall well-being of the patient and/or their family. Those kinds of indirect, third-party or self-reports can provide valuable information for treatment planning and progress reporting, but should not be the sole or main sources of information for determining the medical necessity of ABA services, treatment dosages, continuation or termination of services, or other critical decisions about the patient. Rather, they should be combined with information from direct standardized assessments and data from direct observation and recording of target behaviors over the course of treatment.

Often patients have undergone evaluations that included administration of standardized assessments before they enter ABA services (e.g., to obtain a diagnosis or determine their eligibility for certain services.) If so, behavior analysts can use records of those evaluations to get an overview of the patient's functioning levels and ideas for potential targets to include in ABA treatment plans and/or to measure treatment outcomes. It may be necessary or helpful, however, to have additional or different standardized assessments conducted. In either case, the behavior analyst may need to consult with other professionals who have training and experience with the instrument, information on the publisher's website or in the examiner's manual, and published research to determine if an instrument is appropriate for a particular patient.

Some factors to be considered in the selection of standardized assessments:

- likelihood that the domains and items included on the assessment will inform treatment goals and may potentially align with the focus of treatment
- whether the samples of individuals who participated in development of norms, scoring procedures, criteria, and standardization of the instrument included people with ASD of the same or similar chronological age and functioning level
- whether there is evidence of acceptable levels of several types of validity and reliability (psychometric properties)
- what types of metrics or scores are produced (e.g., raw scores, standard scores, age equivalents, skill profiles, growth indices)
- how sensitive the instrument is to changes in behaviors that may occur and over what periods of time (i.e., the appropriate test-retest interval). For instance, some standardized assessment instruments are not sensitive to changes resulting from comprehensive ABA interventions of less than a year, or changes resulting from focused ABA interventions, even over longer periods
- qualifications for administering, scoring, and interpreting results of the assessment instrument. Most commercial publishers specify qualifications on their website. For some instruments, advanced degrees and certifications or state-issued licenses in particular professions may be necessary. Some may require specific training on the instrument in addition to degrees, credentials, and general training in individual testing. Administration of some standardized assessment instruments and related activities (e.g., assessments intended to make differential diagnoses or assessments restricted to use by other professions) may fall outside the scope of competence of behavior analysts.

Cautions

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.

Results from cognitive assessments need to be interpreted appropriately. To meet diagnostic criteria for autism, individuals must show significant impairment in communication and social and adaptive skills and demonstrate restricted, repetitive patterns of behavior, interests, and activities. Autistic individuals may or may not also demonstrate intellectual impairment. Many individuals diagnosed with autism may score in the average to high range of cognitive functioning but demonstrate needs in areas related to autism that impact their adaptation to their environment (e.g., school, housing, employment). Moreover, autistic individuals may show substantial progress in important areas (e.g., communication, socialization, repetitive behavior, adaptive behavior, safety and wellness, and co-occurring mental health conditions) without a substantial change in cognitive abilities.

However, it should also be noted that multiple studies, including several meta-analyses, show that comprehensive, intensive early intervention can significantly improve the likelihood of scoring in the normal range of cognitive functioning compared to children who receive lower-intensity ABA treatment or treatment based on mixed methods. In this case, measurement of cognitive functioning at baseline and comprehensive, intensive treatment of meaningful duration can be informative and used in care planning.

In summary, results from standardized assessments, including those which measure cognitive functioning, must be interpreted with other contextual information to determine how the individual functions within their everyday environments (e.g., community, school, vocational, or higher education settings). Scores on any single assessment do not solely negate medical necessity and should not be used to deny or discontinue ABA treatment.

Risk Assessment

Many individuals with ASD display behavior that can negatively impact them, their caregivers, or the world around them. These behaviors may include self-injury (e.g., biting themselves, head-banging), physical acting out (e.g., hitting/kicking others, disruption and meltdowns, throwing objects, screaming), and dangerous acts (e.g., climbing, elopement), among others. Collectively, these behaviors are generally subsumed under the broad category of challenging behavior. Their occurrence has been associated with harmful outcomes including physical deterioration, lack of socialization, isolation, placement in restrictive settings, emergency room visits, further disability, and even death.

Although there are no systematic guidelines for risk assessment of challenging behavior in ASD, ongoing patient monitoring and early intervention are effective measures to prevent challenging behavior from worsening. Therefore, a risk assessment for challenging behavior should involve regular screening for the emergence and acuity of challenging behavior once a patient has been diagnosed with ASD. This type of ongoing screening is similar to medical models of risk assessment, in which known risks are associated with closer symptom monitoring. With this type of screening, the patient is monitored at set intervals (e.g., every 6–18 weeks) to assess for the emergence of potential behavior concerns.

If challenging behavior or behaviors are identified, the patient must receive a level of care in which functional assessment and function-based treatment are implemented to decrease the occurrence of the behavior and prevent it from worsening. Appropriate safety protocols should be in place during the assessment. Although the patient's physician may be the primary professional involved in the screening, behavior analysts who are involved in the ongoing care of a patient with ASD are well-positioned to conduct direct observations of patient behavior and conduct ongoing data collection to assess for the emergence or worsening of challenging behavior. Other forms of routine assessment can include informal or structured interviews, questionnaires, or rating scales.

If a patient is known to engage in challenging behavior, the assessment process shifts slightly. Ongoing monitoring should continue to ensure the behavior is not worsening and, with function-based treatment, is improving with time. However, there are several risk assessment considerations for a patient who is known to exhibit challenging behavior. Examples of risk assessment considerations include:

- physical harm to the patient, their caregivers, or the environment
- wandering or other behavior that necessitates interaction with first responders
- emergency room visits
- destruction of property
- negative impact on the development of prosocial, communication, and adaptive skills
- ability to function independently
- significant emotional distress for the patient or their caregivers

In addition, some patients with ASD may have comorbid disorders such as anxiety, depression, or other conditions that increase the risk of them harming themselves or others. In these instances, mental health risk assessments (e.g., screening for suicidal ideation or suicidal plan) should be conducted by a qualified provider. This mental health risk assessment may require collaboration with a qualified mental health professional, depending on the training and scope of competence of the behavior analyst.

Assessments from Other Professionals

Periodic assessments from other professionals may help guide treatment or assess progress. Examples of assessments from other professionals include assessment of general cognitive functioning, speech and language skills, academic performance, specific learning disabilities, dental health, and medical status (including co-occurring conditions). Behavior analysts can use this information to understand a patient's strengths and challenges, identify potential treatment targets, and guide initial treatment plan development.

Consultation with medical and mental health providers on the effects of known co-occurring conditions (e.g., obsessive–compulsive disorder, diabetes, epilepsy, attention-deficit/ hyperactivity disorder, anxiety disorders, depressive disorders) may be appropriate when developing treatment goals and behavioral intervention procedures. In addition, the behavior analyst should collaborate with any prescribing providers when an individual takes medications that are likely to affect their behavior. The purpose of this collaboration should be to understand the rationale for the use of the medication, how it might impact learning new skills or recalling previously learned skills, and any other possible side effects. Generally, collaboration between behavior analysts and physicians can result in reduced reliance on pharmaceutical intervention or polypharmacy. For example, medical staff for a patient with a seizure disorder can provide information regarding seizure antecedents, patient care and safety during events, and timelines for the cognitive and behavioral aftereffects of seizures. As another example, a patient taking a psychotropic medication may require regular monitoring by behavioral staff for known side effects of that medication, with data provided to the prescribing medical professional.

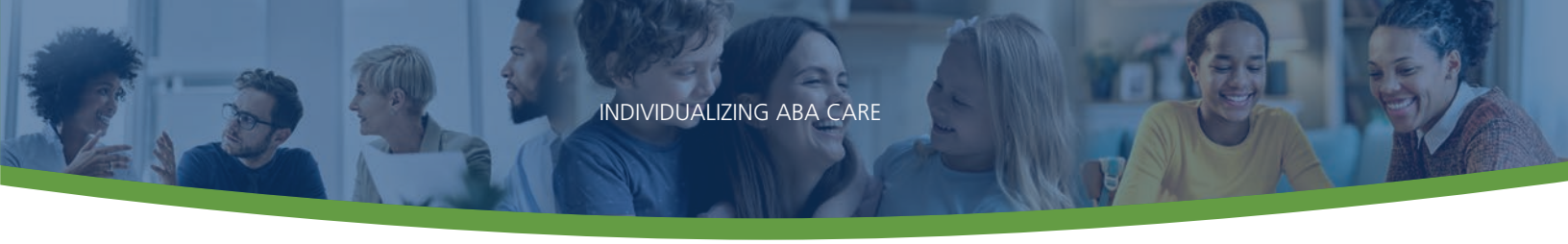
Behavior analysts refer to professionals from other disciplines in cases where patient conditions are beyond their training and competence or where coordination of care with such professionals is appropriate. Examples include but are not limited to suspected medical conditions or psychological concerns, such as seizure disorders, anxiety disorders, or mood disorders. In these situations, it is typically necessary to continue to use ABA to ameliorate the ASD symptoms.

Section 4.2 Treatment Planning: Considerations and Models

The delivery of quality ABA services requires careful planning by the behavior analyst. The treatment plan is based on information gathered during assessment, ongoing data review, and best practices.

This section provides an overview of some of the activities that should be directed and coordinated by the behavior analyst. The behavior analyst and all stakeholders must have a clear understanding of the primary goal of treatment. The goal of treatment organizes treatment variables including but not limited to scope, intensity, staffing, settings, and outcome measures. In an appropriate treatment plan, these variables align with one another and reflect the generally accepted standards of care.

Some ABA services are recognized as distinct models and specialties by the professional community. Models are described in terms of the variables previously mentioned, the patient population served, the specialized clinical expertise required, and the use of specific assessment practices and intervention protocols. Examples of models include but are not limited to social skills training, treatment of challenging behavior, and treatment for feeding disorders. Clearly defined assessment and treatment models promote a more consistent level of care and help establish the required benchmarks to determine, evaluate, and recognize the quality of care.



To individualize care, ABA treatments will differ in scope, intensity, staffing, and duration of treatment. The extent to which peers or caregivers are involved in the delivery of treatment will also vary. Decisions on how to integrate these and other elements into individual treatment plans should consider the research evidence, the patient's age and functioning, characteristics of target behaviors, the patient's rate of progress, caregiver circumstances and skills, and the resources required to implement the treatment plan across various settings.

Client Age

Treatment should be based on the clinical needs of the individual and not constrained by age. ABA is effective across the lifespan. Research has not established an age limit beyond which ABA is ineffective. However, the client's chronological age should be considered in developing an appropriate individualized treatment plan.

Consistent ABA treatment should be provided as soon as possible after diagnosis, and in some cases services are warranted prior to diagnosis. There is evidence that the earlier treatment begins, the greater the likelihood of positive long-term outcomes.

Scope of Treatment

Scope of treatment should be aligned with the breadth and depth of behaviors targeted to address the needs of each patient. Scope of treatment is operationalized in the overall goal of treatment as well as in specific objectives and behavioral targets. Appropriate scope is determined by multiple data sources, including but not limited to direct and indirect assessments and the patient's response to treatment. Scope of treatment can be conceptualized as existing on a continuum, with "comprehensive" representing one end and "focused" representing the other.

When a treatment plan is in-depth and broad in scope (i.e., comprehensive), it typically encompasses multiple simultaneous goals within and across multiple domains, such as language, behavior, activities of daily living, social skills, and cognition. The desired therapeutic effects can be achieved only through multiple associated behavior changes. In general, comprehensive programs also require sufficient intensity of services (i.e., sufficient dosage) to ensure that progress is made toward all treatment goals. For example, effective functioning within social communities necessitates achieving objectives for multiple, complex behaviors across many domains (e.g., language, perspective-taking, leisure skills). In contrast, a treatment plan that is narrow in scope (i.e., focused) generally targets one or two domains or areas of concern. For example, treatment might focus exclusively on tolerating and cooperating with medical procedures (e.g., taking oral medication, having vitals taken, receiving injections to manage diabetes). Even though the scope is narrower, this type of programming can be complex and time-intensive, as it may require multiple prerequisite behaviors and numerous phases before the therapeutic goal is met.

Focused ABA

Focused ABA refers to treatment, provided directly to the patient, to improve or maintain behaviors in a limited number of domains or skill areas. Access to focused intervention should not be restricted by age, cognitive level, diagnosis, or co-occurring conditions.

Focused ABA treatment is appropriate for patients who:

> (a) need to acquire a limited number of skills fundamental to health, safety, inclusion, and independence. Such behaviors may include but are not limited to safety skills, following instructions, social skills, self-care, communication, feeding, toileting, cooperating with medical and dental routines, and participating in independent leisure activities.

or

> (b) demonstrate challenging high-risk behaviors that must be prioritized due to health and safety concerns. In many cases, addressing these behaviors in a timely fashion is critical as they can also interfere with treating other medical needs. Examples of challenging behaviors that may be the focus of intervention include but are not limited to self-injury, property destruction, aggression toward others, inappropriate sexual behavior, threats, pica, elopement, stereotypic motor or vocal behavior, challenges with routines related to safety or adaptive functioning, disruptive behavior, and dysfunctional social behavior.

Focused ABA treatment may be delivered solely to increase adaptive behaviors (e.g., oral care, independent toileting). However, when the focus of treatment is the reduction of challenging behavior (e.g., pica, property destruction), establishing alternative adaptive behavior should be included in the treatment plan. The absence of adaptive behavior such as functional communication or leisure skills often sets the stage for the emergence of serious behavior disorders and leaves patients with limited opportunities to access meaningful reinforcers.

When the main purpose of treatment is the reduction of challenging behavior, the behavior analyst identifies situations in which the behavior occurs to determine its purpose or function for that patient. Understanding the function may necessitate a specific type of assessment, known as a functional analysis, that involves systematically varying environmental events to measure the effects on the behavior of interest. When the function of the challenging behavior has been identified, the behavior analyst designs a treatment plan that alters the environment to reduce the motivation for the challenging behavior and/or establish an alternative adaptive behavior.

Some patients display significant challenging behaviors that require treatment in specialized settings (e.g., intensive outpatient, day treatment, residential, or inpatient programs). Such treatment typically requires high staff-to-patient ratios (e.g., 2–3 staff members for each patient) and close on-site direction by the behavior

analyst. These programs often utilize specialized equipment and treatment environments, such as observation rooms and room adaptations, which aid in maintaining the safety of both patients and staff.

When the primary purpose of focused treatment is to increase socially appropriate behavior, services are often delivered in dyads or small groups. In this setting, patients with similar or varying disorders, and/or typically developing peers, are often included. The treatment team supports the practice of behavioral targets in the treatment session but also programs for the generalization of skills outside those sessions. Some patients may require 1:1 treatment sessions either prior to or concurrently with group sessions for the group format to be an appropriate treatment modality.

Comprehensive ABA

Comprehensive ABA refers to treatment provided directly to the patient to improve or maintain behaviors in many skill areas across multiple domains (e.g., cognitive, communicative, social, behavioral, adaptive). Treatment often emphasizes establishing new skills but may also focus on reducing challenging behaviors, such as elopement, and stereotypy, among others. Access to comprehensive ABA should not be restricted by age, cognitive level, diagnosis, or co-occurring conditions.

Treatment targets are generally drawn from the following domains:

- adaptive and self-care
- attending and social referencing
- cognitive functioning
- community participation
- coping and tolerance
- emotional development
- family relationships
- language and communication
- play and leisure
- pre-academic skills
- reduction of challenging behavior
- safety skills

- self-advocacy, independence, and autonomy
- self-management
- social relationships
- vocational skills

One example of comprehensive treatment is intensive ABA treatment for young children with ASD. In this example, the primary goal of treatment is to close or narrow the gap in development compared with peers.

Intervention must be implemented as early as possible to improve the developmental trajectory of children diagnosed with autism. Effective early intervention focuses on establishing foundational skills, such as environmental awareness, imitation, functional communication, self-management, daily living skills, and the building blocks for social interaction. These foundational skills reduce the pervasive impact of ASD and minimize the likelihood of additional disability in the form of intellectual impairment. In addition to building skills, early development is the optimal period to reduce and mitigate challenging behaviors.

The proportion of treatment time spent on any given domain is subject to the individual needs of the patient and family. For example, when establishing foundational "learning to learn" skills (e.g., imitation, observational learning, discrimination), treatment time devoted to other skills may be reduced to allow a greater focus on the skills that will transform learning and progress in subsequent areas (i.e., pivotal skills). In addition, slow rates of progress may signal the need to increase the amount of treatment to establish critical skills.

While the gaps in development between the young, newly diagnosed child with autism and same-age peers may initially be small, the separation between their developmental trajectories grows quite rapidly. Comprehensive ABA provided to young children significantly narrows these gaps in the near term and protects against the future development of irreversible, lifelong disabling conditions.

In general, early detection and treatment across the lifespan of a person diagnosed with autism are needed to obtain favorable outcomes; a "wait and see" approach rarely defines appropriate care.

As noted above, comprehensive treatment should not be limited by age, as this type of program can be appropriate for adolescent and adult patient populations. For example, persons who engage in harmful and risky behaviors and/or have substantial deficits in skills that jeopardize their health, safety, and independence may require such programs.

Comprehensive treatment may be 1:1 initially, with gradual transitions to small-group formats as appropriate. Treatment may be provided in structured sessions or using naturalistic methods depending on the individual needs of the patient. As the patient progresses and meets criteria to receive treatment in other places, services may be provided in multiple settings.

Treatment Intensity

Multiple considerations are relevant to determining appropriate treatment intensity. Patients should be able to receive treatment at the intensity that is most effective to achieve treatment goals. 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.

Decisions to adjust treatment intensity should be individualized and based on the patient's response to treatment (i.e., data supporting the need to increase or decrease). Decisions should not be based on the length of time receiving treatment and/or the age of the individual receiving care. 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 or service intensity. Clinicians who have directly observed and treated the patient are best positioned to recommend the appropriate number of treatment hours per week.

The recommended intensity of treatment should be based on what is medically necessary for the patient independent of the patient's schedule of activities outside of treatment or previous utilization of services. Practical variables may be considered, but when there is conflict that may impact treatment outcomes, medical necessary considerations should be paramount.

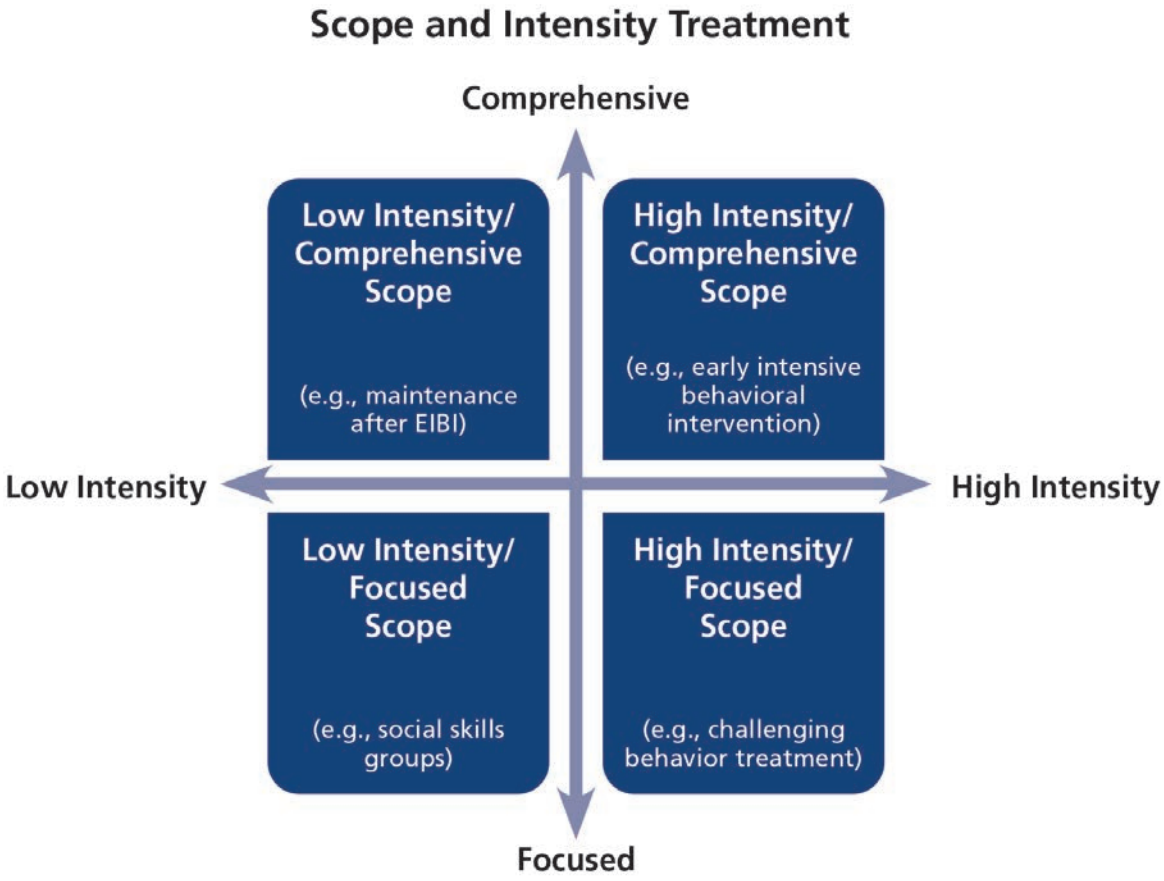
Treatment intensity is specified in the treatment plan and defined as the number of direct ABA treatment hours per week, not including case supervision by the behavior analyst, caregiver training, and other services. Additionally, hours spent in educational settings and receiving IEP services should not be included in the calculation of treatment hours. The number of service hours is a proxy for the total number of therapeutic interactions, such as learning opportunities, taking into account their complexity. Treatment intensity should reflect the complexity, breadth, and depth of treatment targets, as well as the environment, treatment protocols, and significance of patient needs. The best available evidence demonstrates that intensity of treatment dosage is the best predictor of achieving meaningful treatment outcomes.[27]

Given that comprehensive ABA treatment addresses numerous target skills across multiple domains, many hours of direct services each week should be provided for an extended duration to ensure that the patient has sufficient opportunities to learn and practice. Multiple studies have shown that 30-40 hours of direct treatment per week produce better outcomes than treatment at lower dosages in comprehensive programs for young children with autism. Similar intensities would typically be medically necessary in comprehensive programs for adolescents and adults to meet treatment objectives.

Focused ABA typically involves fewer domains than comprehensive treatment models, with services often comprising 10–25 hours of direct treatment per week. However, there are exceptions. For example, treating challenging behaviors or severe feeding concerns that threaten the patient's health and safety or significantly

interfere with their progress may be so complex that it requires substantial intensity to achieve an acceptable outcome (i.e., greater than 10-25 hours of direct treatment per week).

Scope of treatment and treatment intensity are generally positively correlated, as shown in the diagram below. This diagram depicts scope as one continuum, with comprehensive and focused as the endpoints and a second, intersecting continuum of intensity with low and high as the endpoints. Examples are provided for each combination of scope and intensity. For example, an individual may start out in a program like those depicted in the upper right quadrant (e.g., comprehensive/high intensity) and later transition into a program represented in the upper left quadrant (e.g., comprehensive/low intensity) to focus on maintaining previously acquired skills. That patient might even be completely discharged from services but later re-enter services for a focused program consistent with either of the lower quadrants when a new concern emerges (e.g., difficulty with dating). For other individuals, a comprehensive treatment plan may remain the most appropriate treatment plan. These examples should not be interpreted as an exhaustive list of potential ABA services.



In general, low-intensity, broad-scope treatment plans are appropriate only to maintain well-established behavior changes. Treatment plans that address a limited number of behavioral targets across limited domains may allow for adequate progress at relatively lower intensities. However, as the number and complexity of targets increase along with the number of domains addressed, a higher intensity of treatment becomes necessary. Without this correspondence, the constraints on the number of learning opportunities will limit the progress that can be achieved.

Regardless of whether the treatment is focused or comprehensive, the specific number of hours of services should be individually determined based on data collected during evaluations, assessments, and clinical impressions. Providers assess treatment needs and required dosage based on a multidimensional assessment that considers a wide variety of information about the patient.

Case Conceptualization

Case conceptualization is the process of gathering and analyzing complex information about the patient's history, presenting symptoms, behavioral excesses, and deficits. Case conceptualization involves identifying environmental variables to inform the selection, focus, and sequence of interventions, and to identify potential barriers to treatment. Information necessary for case conceptualization is gathered by:

- Assessing the patient's skills and needs
- Interviewing caregivers and other treatment providers
- Reviewing prior documentation
- Identifying potential barriers to treatment

This information is synthesized to develop a comprehensive picture of the patient and the patient's needs. The results guide treatment and promote coordination of care. A patient's needs and support systems will change over time. Thus, case conceptualization is a dynamic and ongoing process. New information should inform current treatment.

Factors that should be considered when conceptualizing a case may include but are not limited to:

- developmental and chronological age
- co-occurring medical and mental health conditions
- frequency, intensity, and social significance of challenging behaviors
- previous and concurrent treatment assessments, approaches, services, and evaluations

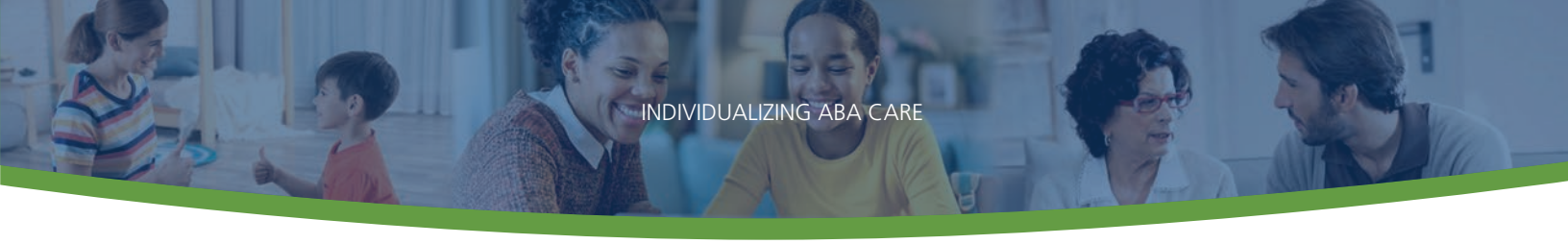
- response to current and prior treatments
- family constellation (e.g., siblings, dual-caregiver household, single caregiver)
- presenting concerns of the patient and family
- the family's social support systems
- cultural, racial, and ethnic backgrounds as well as religious practices
- environmental factors including neighborhood and community resources

Case conceptualization should consider how these variables interact and how they may impact treatment recommendations. For example, a co-occurring secondary diagnosis of a seizure disorder that requires medication with certain side effects (e.g., increased lethargy) may affect the provider's recommendations for treatment occurring at specific times of the day or the types of skills targeted during treatment (e.g., goals may avoid high motor activity due to the side effects of the medication).

Case conceptualization includes consideration of the patient's and caregivers' strengths. The task is the same in both situations; that is, strengths should be leveraged to produce desired treatment outcomes. For example, suppose a patient has well-developed language skills but limited social engagement with siblings. In that case, the clinician may maximize this strength to identify socially directed goals (e.g., teaching conversation skills with siblings). In thorough case conceptualization, the clinician promotes engagement with caregivers, maximizes strengths, and provides the best opportunity for behavior change.

Case conceptualization also includes identifying potential barriers to full participation in treatment and corresponding solutions. For example, suppose a patient lives in a single-caregiver household and the caregiver works full-time and has limited social support from extended family members. In that case, the clinician may adapt caregiver training goals and prioritize patient goals related to increasing independence in play and self-care.

The case conceptualization process can build therapeutic rapport with the patient and caregiver, normalize the challenges the patient and family may experience, and serve as a foundation to describe the purpose of treatment and expected outcomes. The treatment plan should consistently be reviewed with the patient and family to ensure that they agree with the course of treatment. Such alignment is likely to facilitate treatment progress. Finally, case conceptualization can aid in quality assurance and oversight of ABA treatment to ensure the patient's treatment plan is appropriate. This type of review can help core goals remain the focus of treatment and manage the myriad variables that can impact a patient's response to and engagement in treatment.



Treatment Match

Best-practice ABA procedures commonly used in treatment settings require careful modifications to fit the home setting and associated limitations on caregivers' time, space, and resources. Considering these contextual factors will help inform treatment so that family members can effectively and consistently support it. When developing a treatment plan with caregiver involvement, providers should consider the nature and number of caregivers in the household; any additional childcare, household, or employment responsibilities; their views on common behavioral procedures; household rituals and routines; and family resources, such as finances.

Culture and Language

Culture, values, and beliefs about ASD will differ significantly across families and will impact goals for treatment. Providers' sensitivity to the effects of culture and family background on the development of meaningful therapeutic goals may facilitate family engagement in treatment. Language barriers can be a significant impediment to effective collaboration with families. Where possible, matching providers to families based on the language spoken will increase the support families receive. If a provider who speaks the family's native language is unavailable, providing translation services may be necessary to maximize the effects of caregiver training and ABA treatment.

Goal and Protocol Development

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. Behavior analysts are well equipped to address goals in areas such as, but not limited to, activities of daily living (ADLs), adaptive skills, social development, and cognitive functioning within ABA service delivery.

Behavior analysts must consider the long-term goals for each patient and not focus solely on the short-term goals which may be written for one or more authorization periods.

Each goal should be medically necessary and able to be addressed through behavior analytic practices. It should be noted that some practices may overlap with other disciplines (e.g., psychology, education), but overlap of other disciplines should not be a reason to deny a goal or procedure in the context of methodology. In cases of ambiguity, funders should seek clarification from the behavior analyst regarding research support.

The number and complexity of goals should determine scope of treatment, the intensity (dosage) level, and the settings in which it is delivered. The appropriateness of existing and new goals should be continually considered. The measurement system for tracking progress toward goals should be individualized to the patient, the treatment context, the critical features of the behavior, and the available resources of the treatment

environment. Each goal (target behavior) should be measured using procedures that yield objective, valid, accurate evidence as to whether and how much it changes, i.e., whether treatment is producing progress toward the patient's treatment goals.

Goals are prioritized based on their implications for the patient's health and well-being. ABA treatment goals are identified based on patient and family input as well as the outcomes of previously completed assessments. The individualized treatment goals and plan should consider all forms of diversity, such as the patient's age, ethnicity, language, race, gender expression/identity, sexual orientation, geographical location, national origin, religion, immigration status, and socioeconomic status.

Protocols should be informed by research and reflect individual patient needs. Protocol banks can help ensure that information about best practices is appropriately incorporated, but care must be taken to ensure that each protocol is individualized for the patient.

Patient and family priorities should be incorporated to increase patient assent, caregiver consent, and treatment adherence and outcomes. Patient preferences on goal and protocol selection and intervention procedures should be evaluated and integrated into the formulation of the treatment plan within the boundaries of medically necessary and developmentally appropriate standards.

Treatment Settings

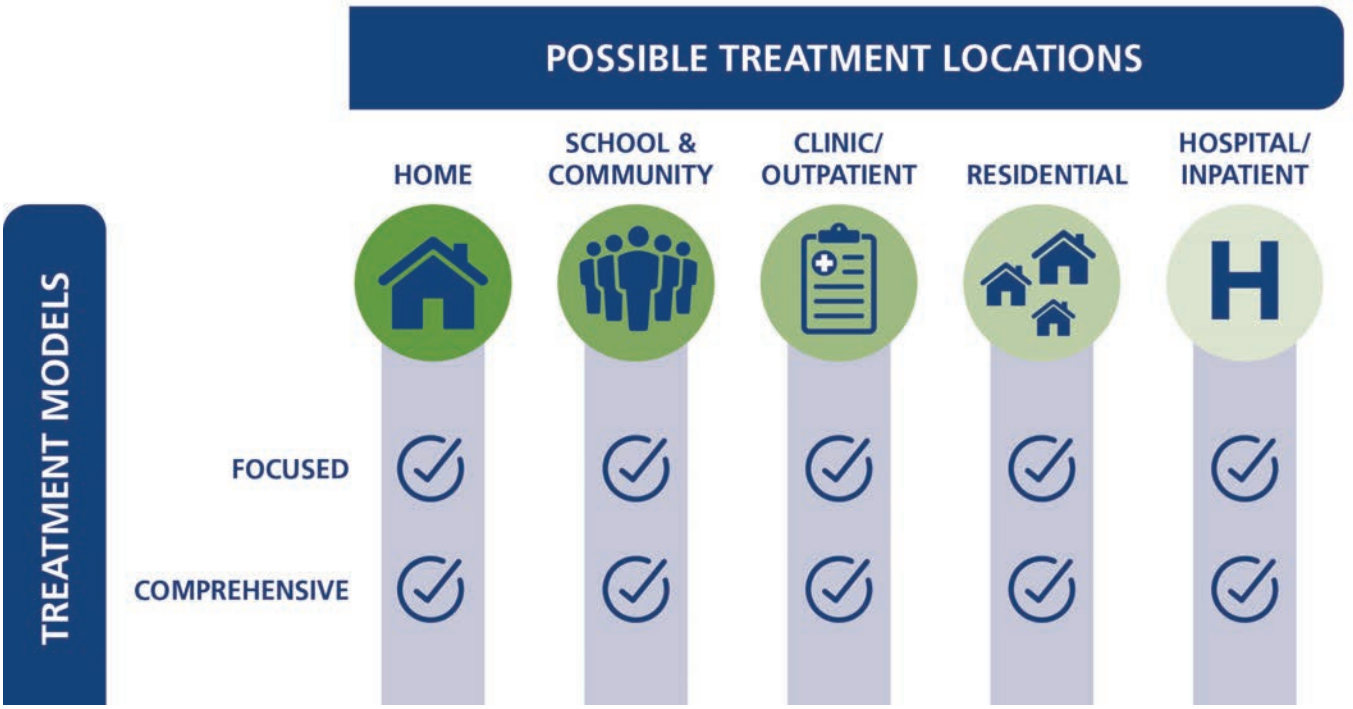
The patient's clinical needs and targeted goals should determine the location(s) where ABA services are delivered, as not all settings will facilitate the desired outcomes and specific settings may be necessary to achieve treatment objectives. Care must be deliverable in any setting that is relevant for the patient to achieve treatment goals—whether in the home, at school, in a clinic or center, or in the community. For example, patients whose goals include social interactions and coping skills in a large group and unstructured settings (e.g., on a playground, at lunch) may require treatment in an environment that facilitates social opportunities and relationship development. Treatment may begin in a structured setting (e.g., home, clinic) and transition to more natural environments (e.g., school, workplace) as treatment gains are observed. As the patient progresses and meets established criteria for participation in less structured settings, treatment in those natural settings and the larger community should be provided. However, some patients may require treatment to commence in natural settings or multiple settings concurrently due to their symptoms or other patient-specific variables. Regardless, treatment should be extended to those settings that best meet patient needs, independent of behavior in specific settings.

The behavior analyst should specify which treatment settings will optimize participation in treatment and its outcome. Abundant research documents the effects of environmental events on behavior and the importance of ensuring that behavior change carries across settings.

ABA treatment must not be restricted a priori to specific settings but instead should be delivered in the settings that maximize treatment outcomes for the individual patient. It may be medically necessary for a patient to receive services in a particular location for a variety of reasons, including but not limited to generalization needs, the impact of interactions in this environment on skill building or behavioral targets in the treatment program, or to access the required intensity of services for the patient. For example, treatment in various community settings such as daycare, school, or a recreational activity may be medically necessary to promote social–emotional reciprocity, nonverbal communicative behaviors, and the development and maintenance of relationships. Treatment should not be denied or withheld solely because a caregiver can or cannot be present at the treatment location.

ABA may be provided in any site medically necessary to address patient needs, such as:

- residential treatment facilities
- inpatient and outpatient programs
- childcare facilities
- homes
- schools[28]
- transportation
- community settings
- clinics
- vocational or other educational classes
- recreational and social environments



Safety

Behavior analysts ensure patient safety across all environments where the patient spends time and interacts with others. Behavior analysts specify the settings required to target the patient's goals in the treatment plan. If patients demonstrate low-frequency, high-risk behaviors in a specific location that may pose a safety risk for themselves or others, this setting may be included in the assessment and treatment plan. For example, adolescents and adults who display destructive behavior may be at greater risk of requiring emergency room services, inpatient services, or incarceration, especially if these behaviors occur in public settings. When specific people or environmental stimuli evoke safety concerns, these behaviors should be addressed in the relevant settings. A higher intensity of treatment may be medically necessary to provide sufficient opportunities to generalize critical safety skills (e.g., a patient who resides in a residential setting may attend multiple service settings, such as day habilitation, and may have multiple staff or caregivers).

Safety concerns and effective protocol implementation may warrant additional clinical and direct care staffing if the patient's behavior is deemed dangerous to themself and others. The appropriate staffing ratio should reflect the individual needs of the patient and be based on continuous evaluation.

In addition, staff should receive proper training in safety management and the safe use of protective personal equipment.

Staffing

Staffing should be individualized. In some cases, due to a determination that a patient's behavior is dangerous to themself or others, increased staff ratios may be required during assessment and intervention. In addition, higher staffing ratios may be needed to effectively implement protocols. One common example of the need for a higher staffing ratio is the treatment of severe or self-injurious behavior.

Conversely, staffing ratios may be less than 1:1 depending on individual patient needs. Examples of staffing ratios less than 1:1 include social skills groups or adaptive skill protocols delivered in the community.

Finally, staffing ratios may change as a function of treatment setting, current goals, and patient progress.

Critical Environmental Variables

Behavior analysts consider many variables when choosing treatment settings and developing a treatment plan, including environmental variables that may impact progress or outcome.

One consideration in treatment planning and setting selection is that critical environmental variables, such as the physical structure or the level and type of activity, may only be present in a specific location (e.g., place of work, recreational or social settings) or may present in a specific way in these settings. These variables may not be adequately replicable in a clinic or home setting to produce socially significant results or maximize therapeutic benefits. Additionally, individuals with ASD may not respond to a new stimulus with minor variations.

For some individuals, many skills taught in a structured environment may not readily transfer to the natural setting and may require in vivo training (e.g., job-related social skills, safety skills). Also, due to changing environmental variables, certain events may disrupt the patient's quality of life and require updates to the treatment plan and relevant treatment setting(s). Such events may include:

- Movement from a current living situation to a new living situation.
- The addition of services that introduce new treatment environments or the introduction of new staff.
- Changes in the family's structure, such as divorce.

Treatment Modality

ABA treatment may be rendered via traditional in-person service delivery, telehealth, or a hybrid of in-person and telehealth service modalities. The modality selected for delivery of ABA services to patients is determined based on a variety of factors, including but not limited to:

- patient characteristics
- treatment plan
- caregiver participation
- environment
- evidence of efficacy and safety
- technological requirements[29]

In Person

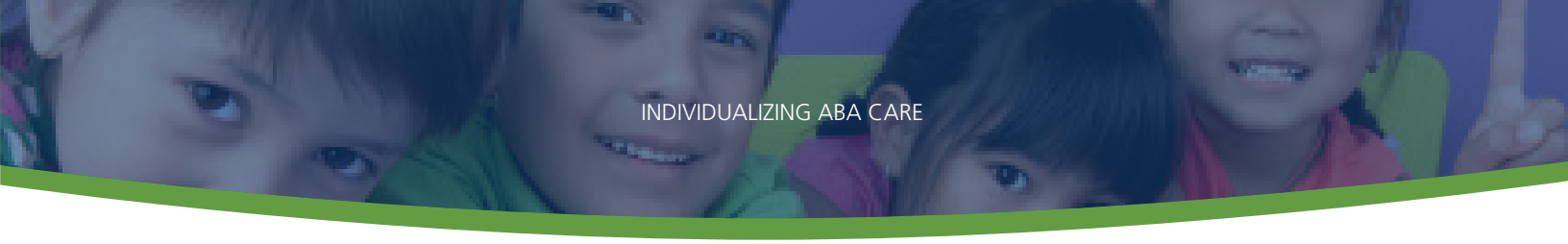
ABA services have traditionally been delivered with both the behavior technician and behavior analyst providing treatment in person. However, an in-person service-delivery model is not always possible due to provider shortages, significant travel requirements, and the lack of specialty care clinicians with expertise in the patient population. Telehealth modalities can be effective for delivering ABA services and may offer advantages that address access barriers to traditional in-person services. The service modality should be chosen by the behavior analyst based on what is most clinically effective.

Telehealth

Telehealth, defined as the "use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration," can enhance care by:

- Allowing providers at one site to provide consultation on a complex case at another site.
- Promoting coordination of care among multiple caregivers.
- Facilitating communication between the behavior analyst and technicians or caregivers during a crisis or high-stress situation (e.g., sleep protocols).
- Allowing shorter and more frequent clinical oversight of clinical programs.
- Connecting patients with similar skill levels for social interactions.

Telehealth is not a separate or distinct service; rather, it can be an effective means to deliver some ABA services



to patients and caregivers. Providers must comply with laws and regulations that govern telehealth, which vary across jurisdictions and time. The CASP Organizational Guidelines chapter on telehealth and the CASP Telehealth Practice Parameters provide guidance for determining whether patients can benefit from services delivered by telehealth, technology requirements, and other considerations. The ABA Coding Coalition and CASP have also published guidance on Reporting CPT Codes for Telehealth Delivery of Adaptive Behavior (ABA) Services, available under Resources at www.abacodes.org.

Telehealth modalities fall into three general categories:

Synchronous

Synchronous modalities allow for real-time video and audio streaming between a patient and a provider. Behavior technicians and behavior analysts can provide face-to-face services to patients and their caregivers using synchronous videoconferencing. Synchronous modalities offer the ability for the behavior analyst to:

- Render care directly to a patient with the prerequisite skills to benefit from treatment directly (e.g., direct services, social skills groups).
- Provide caregiver coaching.
- Provide supervision of the technician working in person with the patient.

Asynchronous

Asynchronous modalities include store-and-forward technologies in which the patient's treatment progress is reviewed at a different time than when services were rendered. Like a radiologist using medical imaging to diagnose and treat a patient, the behavior analyst reviews patient behavior via video or behavior data charted by the technician to determine treatment protocol modifications. Asynchronous modalities allow the behavior analyst to:

- View low-frequency behaviors, behaviors that are highly reactive to observer effects, or behaviors that occur only in the absence of the clinical team in the patient's natural environment.
- Conduct clinical observations when internet access is unavailable.
- Address provider capacity limitations by completing clinical oversight and protocol modifications during times with fewer clinical appointments (e.g., mornings).

Hybrid

A hybrid model incorporates both in-person services and telehealth to deliver ABA treatment. A hybrid model may include a blend of both in-person and telehealth delivery of any combination of direct services, caregiver coaching, clinical oversight, and social skills training. A hybrid model may be clinically appropriate in a variety of circumstances to:

- Support patient and family preferences—some patients and families may prefer to have the behavior analyst provide case supervision via telehealth to restrict the number of treating providers in their home at the same time.
- Provide services despite travel restrictions—the behavior analyst may utilize a hybrid model and provide a portion of clinical oversight in person and via telehealth to minimize travel time and ensure consistent oversight of clinical programs.
- Assess and treat low-frequency behavior—the behavior analyst may leverage telehealth to provide clinical observations for low-frequency behavior that they cannot reliably observe during in-person sessions.
- Support treatment goals—telehealth clinical oversight may be appropriate to support and coach families with specific treatment goals outside typical session hours and at varying times of day.
- Provide social skills instruction—a telehealth model may be appropriate to begin social skills instruction for a patient who does not have access to typically developing peers and is more comfortable initially practicing social skills via video streaming.

Generalization, Maintenance, and Prevention of Deterioration

Effective ABA services bring about significant, lasting, and generalized behavior changes. These changes are valued, lead to greater autonomy, and increase opportunities for patients and caregivers. Accordingly, at the start of treatment, the behavior analyst should begin to plan for the generalization and maintenance of behavioral gains achieved during treatment.

Various methods can be used to produce enduring, generalized behavior change. These are described in seminal papers and articles,[30] and include but are not limited to planned variations in treatment dimensions, leveraging of existing contingencies in criterion environments, and requiring higher mastery levels for some behaviors. For some patients, the treatment plan incorporates procedures that teach and support some level of self-management skills, such as self-observation, self-recording, and self-reinforcement.

Relying on a single treatment methodology, procedure, or setting is unlikely to achieve the desired generalization and maintenance of behavior change. Behavior analysts individualize the approach for each patient based on the patient's specific needs, response to treatment, and the evidence base. For some patients, effective treatment for ASD includes the ongoing provision of services to maintain skills and other positive outcomes of intervention and prevent deterioration in functioning.

Case Example: Programming for Generalization

Luna is a 15-year-old girl diagnosed with autism who participates in several community activities with peers. There have been suspected incidents of bullying. Therefore, a goal to address bullying was added to her treatment plan, indicating the range of environments, types of bullying, and experiences she is likely to encounter. The goal also referred to critical variations in the responses she will learn. Her clinical team introduced examples that taught her to recognize bullying attempts and respond with appropriate variation. The treatment plan was implemented in a variety of settings. It also included elements of self-management so that Luna would be able to respond to bullying in the natural environment without a caregiver or parent present.

Preventing or Minimizing Future Disability

Certain conditions in early childhood must be properly addressed or they can become increasingly disabling as a child ages and enters into more complex environments. Beyond childhood, there are stages of development across the lifespan where persons with ASD are known to be vulnerable to threats to their health, safety, independence, and autonomy. ABA treatment must help establish capabilities relevant to current and future functioning and enhance, and prevent deterioration in, abilities that are still developing.

In healthcare, it is generally accepted that chronic conditions should be treated not only to ameliorate present symptoms but also to prevent and protect against future disability. One example is the treatment and management of diabetes, where an important goal is to avoid the future need for insulin administration, dialysis, or the emergence of conditions such as neuropathy. Effective behavioral healthcare for autistic people must follow a similar approach.

Treatment Duration

The appropriate duration of treatment for ASD is based on the patient's individual needs and response to treatment. There is no specific limit on the duration of a course of treatment.

After discharge from treatment, services may need to resume at various points to address new or recurring issues. As autistic people grow older, moving through adolescence and the various stages of adulthood, treatment may be necessary to address lingering challenges as well as ASD-related deficits and behaviors that are more apparent during certain periods, such as social skills, self-advocacy, physical maturation, sexuality, and coping skills.

Family Members and Caregivers

Caregivers, including parents, guardians, siblings, daycare providers, babysitters, nannies, teachers, healthcare workers, and extended family, among others, may be included in various capacities and at different points during ABA treatment when possible and appropriate. Family members can provide important historical and contextual information about the individual with ASD to enhance treatment. Additionally, caregivers, peers, coworkers, instructors, and others whose involvement can be helpful to the overall treatment program can receive training and consultation throughout treatment, discharge, and follow-up to ensure the carryover of treatment gains at home and in various community settings.

While caregiver participation can be additive to effective treatment, it is not a substitute for treatment and is not a condition for providing services. Numerous modalities and methods exist to include caregivers in a treatment program, even when direct participation is not possible or advisable.

Contributions and Challenges

The utility of caregiver involvement and training is supported by the following circumstances, which include both contributions and challenges:

- Caregivers frequently have unique insights and perspectives about the patient's skills, abilities, preferences, and behavioral history.
- Caregivers may be responsible for the provision of care and management of challenging behaviors during all hours outside of school or a treatment program. For example, a sizeable percentage of individuals with ASD present with atypical sleeping patterns. Therefore, some caregivers are responsible for ensuring the safety of their children and implementing procedures at night.
- The behavioral challenges commonly encountered with persons diagnosed with ASD (e.g., stereotypy,

tantrums), secondary to the social and language concerns associated with ASD, often present unique challenges for caregivers. Typical parenting strategies are often insufficient to enable caregivers to improve or manage their child's behavior, which can impede the child's progress toward improved abilities and independence.

- Management of challenging behavior and supporting the development of adaptive skills at home can enhance the general effectiveness of treatment in therapeutic environments.
- Parents, guardians, siblings, and other family members may continue to support individuals with ASD throughout their lifespan. For example, caregiver training can increase the likelihood of continued effective caregiver support of the individual with ASD in adulthood.

While caregiver training supports the overall treatment plan, it is not a replacement for professionally directed and implemented treatment, nor should it be a requirement for access to treatment.[31] A parent or caregiver should not serve in the official role of a behavior technician or behavior analyst for their child (see section 2.1 on training and certification in this document for details).[32]

Engagement and Support

Due to the severity and complexity of behavioral challenges and skill needs that can accompany a diagnosis of ASD, caregiver training can be part of both focused and comprehensive ABA treatment models.

Training parents and other caregivers usually involves systematic, individualized instruction on the basics of ABA. It is common, though not required, for treatment plans to include several objective and measurable goals for parents and other caregivers. Caregiver training emphasizes skill development and support, enabling caregivers to become competent in supporting treatment goals across critical environments. Training usually involves:

- an individualized behavioral assessment
- case formulation
- customized didactic presentations
- modeling and demonstrations of skills
- practice with in vivo support for each specific skill

Ongoing activities involve:

- supervision and coaching during implementation
- problem-solving as issues arise
- support for the implementation of strategies in new environments to ensure optimal gains and promote generalization and maintenance of therapeutic changes

This training is not accomplished by simply having the caregiver or guardian present during treatment implemented by a BT.

Activities to help support treatment goals and objectives include, but are not limited to, the following:

- Supporting generalization of skills.
- Participating in household and community activities.
- Responding to health and safety concerns of the patient or others in home or community settings, including methods to support the reduction of self-injurious or aggressive behaviors toward siblings, caregivers, or others, and the establishment of alternative adaptive behaviors.
- Supporting increases in skills, such as functional communication and participation in routines that help maintain good health (e.g., involvement in dental and medical exams, feeding, sleep, toileting) in target settings where they must occur.
- Implementing behavior intervention plans in home and community settings.
- Improving relationships with family members, such as developing play with siblings.

Involvement

The dynamics of a family, their well-being, and how ASD impacts them should be reflected in how the treatment is implemented in individual cases. The ability of family members to support treatment goals outside treatment hours will be partially determined by how well-matched the treatment protocols are to the family's culture, values, needs, priorities, abilities, and resources.

Well-Being

Caring for an individual with ASD can present many joys and challenges for caregivers and families. Parents of children and adults with ASD often experience higher levels of stress and mental health concerns than parents with typically developing children or parents of children with other kinds of disabilities. Stress, anxiety, depression, and other mental health challenges, often exacerbated by sleep deprivation, may impact the extent to which caregivers or other family members can effectively support recommendations. Though an autism service provider is properly focused on the needs of the individual with ASD, they are also positioned

to provide needed support to caregivers by demonstrating compassion for the unique stressors of raising a child with ASD. Specifically:

- The level of stress experienced by parents is related to the severity of their child's ASD symptoms and challenging behavior. Providing effective caregiver training as described above may help increase family members' feelings of competence and well-being.
- Social support can reduce parental distress. Connecting family members with others who have had similar experiences may strengthen their social connections and improve their well-being. Common ways to connect family members with others include providing information about parent or sibling social support groups and autism-friendly events or conducting group parent training.
- The provider's use of compassionate therapeutic skills to build an effective working relationship with families may increase their engagement in treatment. Examples of compassionate therapeutic skills include checking in to see how the family is adapting to ASD and treatment, sharing positive feedback regarding family progress, openly listening to parental concerns, and encouraging family input and collaboration.

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.

Section 4.3 Collaboration in Care: Patient Priorities, Values, and Shared Decision-Making

Like other healthcare professionals, ABA providers consider patient and family characteristics when developing a treatment plan. 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. These considerations allow the provider to conceptualize the case and design an individual treatment plan that is culturally aligned. Both the social acceptability of the treatment and patient assent should be assessed throughout the intervention, and the results should be monitored to improve services. Central to this consideration is the behavior analyst's duty to identify the most efficacious treatment approach based on the best available scientific evidence.

Collaboration also includes shared decision-making, which respects patient and caregiver priorities in the delivery of medically necessary care. Making decisions collaboratively facilitates favorable outcomes for both the patient and the provider.

Below are general guidelines for incorporating patient preferences, priorities, and values in shared decision-making:

- The behavior analyst should discuss the anticipated benefits and possible risks associated with the care plan with the patient and caregiver at the start of treatment. Shared decision-making should be encouraged by reviewing the rationale for treatment recommendations and soliciting patient and caregiver questions and feedback. Additionally, the behavior analyst should monitor treatment acceptability and satisfaction throughout treatment and solicit feedback from the patient and caregiver.
- The behavior analyst should engage in shared decision-making, ensuring patient and caregiver satisfaction throughout the treatment process.
- The behavior analyst should obtain consent from the patient or guardian, and should obtain patient assent to participate in services whenever possible.

There are times when aspects of the proposed treatment plan may not align with the patient or caregiver's expectations, priorities, or cultural values. In situations where the patient, caregiver, or provider cannot agree on what is required to achieve clinically meaningful outcomes, treatment may need to be transferred to a different provider who can meet the needs of the patient and caregiver. When an acceptable compromise is possible, the provider should document what is recommended from a medical necessity perspective, the barriers to delivering that level of care, and what treatment the provider now expects to deliver based on the agreement. Barriers to fully implementing treatment recommendations may be related to finances, time, or other resources that limit the ability of the caregiver or patient to fully participate.

Case Example: Collaboration and Shared Decision-Making

Marco is a 4-year-old male who was diagnosed with autism at 2 ½ years of age. During his initial assessment, the clinical team thoughtfully included specific caregiver preferences, priorities, and cultural, religious, racial, gender, and ethnic values. Based on the initial assessment outcomes, Marco's first treatment plan at age 2 ½ focused on closing performance gaps compared to same-age peers and improving functioning in specific areas. The treatment plan included behavioral targets focused on cognitive, social, language, behavioral, and self-help skills. Treatment intensity was recommended at 35 hours of intervention at the ABA center.

Marco's parents were concerned about the amount of time he would be away from his home and family. Given that both center-based and in-home services were viable options to achieve the overall treatment goal of closing performance gaps and improving skills and abilities, the clinical team engaged Marco's parents in shared decision-making.

The clinical team met with the family to review the importance of the recommended dosage in achieving optimal outcomes. During the meeting, the providers expressed their understanding of the parents' concerns and reviewed the potential risks of decreased treatment hours for Marco. In the end, Marco's

family and the clinical team agreed that 35 hours per week was medically necessary, best for Marco, and in line with the long-term goals for Marco. The providers also understood the family's desire to have Marco home with his family due to his young age. Therefore, the providers and family agreed to an adjustment to the treatment setting: to start, services would primarily be provided in the home, with some daily hours in the center to assist with generalization and social development and to help Marco adjust to a therapeutic setting. The clinical team recognized and respected the parents' desire to have Marco in the home and agreed to begin most of the services there. Over time, the providers worked collaboratively with the family to increase center-based services. The decision to increase center hours was based on Marco's positive response to the center (i.e., he greatly enjoyed attending) and the caregivers' comfort level with him being outside the home. At age 3 ½, Marco is now receiving all intervention at the center, with caregiver consultation and support in the home as needed. Marco is on track to successfully integrate into a general education kindergarten by age 5.

Section 4.4 Progress and Outcome Measures

Outcome data describe the impact of a healthcare service or intervention on the broadly viewed health status of patients. The outcomes reported should come from established methods that are informed by the best available evidence. They should also reflect the variables most valuable to the patient and others affected by the patient's condition and treatment. The general goal of ABA services is to develop skills to enhance the patient's physical and psychological well-being, independence, autonomy, and relationships with others and their environment.

While seemingly straightforward, measuring the outcomes of ABA services is a complex undertaking. First, measuring the quality of behavioral healthcare is generally more complicated than measuring the quality of physical healthcare. Second, there is an imprecise relationship between treatment and outcomes, as some factors that affect outcomes may be beyond the control of the individual practitioner. In addition, autism's heterogeneity makes it unlikely that a single set of metrics will be sensitive to treatment outcomes across the entire patient population.[33]

Progress and outcome measures should be determined by the treating behavior analyst to ensure their appropriateness for the individual patient. In many cases, these align with the types of data collected during the assessment process. In addition to the information noted in 4.1 describing the use of a multi-method, multi-informant approach using reliable, well-established instruments that are appropriate for the individual patient, the following section describes factors to consider when selecting measures that describe progress and/or outcomes in treatment.

The Proximal–Distal Continuum

Outcomes may be proximal (short-term) in that they reflect the immediate or intermediate effects of intervention. They may also be distal and demonstrate the long-term cumulative effects of intervention and the resulting life changes experienced as a function of proximal outcomes. Measures of proximal outcomes are important during treatment as they often guide treatment decisions. Because measures of proximal outcomes typically have a close relationship to treatment goals, they are commonly used to describe treatment outcomes for the individual patient. Examples of an immediate measure of proximal outcomes would be the direct observation and measurement of behavior in response to the interruption of a preferred activity. An intermediate measure of proximal outcomes might be weekly self-ratings related to interactions with peers.

Distal outcomes are critical to evaluating the overall value of treatment for the individual's long-term wellbeing. Examples of measures of distal outcomes would be reduced admissions to the emergency room for severe and challenging behavior in the year following treatment or changes in scores for cognitive or adaptive abilities across the span of several years following intensive, comprehensive early intervention. While measures of distal outcomes (e.g., quality of life, access to community) may not always detect changes during treatment, it is nonetheless important to include them when possible. Thus, most outcome measures focus on proximal outcomes (e.g., immediate increase in important skills and access to the community, decreased family distress) that produce those cascading positive effects across the lifespan.

Clinicians should consider whether a particular domain is well-supported by research for the specific treatment target or treatment model provided to the individual patient. For example, most published outcome studies reporting the impact of intensive, early intervention for ASD have used norm-referenced measures of cognitive, language, social, and adaptive skills. However, these would not be appropriate for other treatment models with different goals, such as focused intervention. Similarly, a broad measure of adaptive skills may be an appropriate outcome measure for younger children who receive comprehensive, intensive treatment programs but is likely not an appropriate measure for those in a program focused primarily on establishing social skills with peers.

Measures for the Individual Patient

In addition to considering the proximal–distal relation, the outcome measures chosen should be valid, reliable, and appropriate for individual patient characteristics. Equally important, measures should align with the focus and purpose of treatment. For example, if the focus of treatment is to improve practical communication skills, then following some duration of treatment, outcomes could be assessed through direct observation and measurement of such behaviors and data from standardized assessments involving language or social skills.

Outcome measures for patients who receive different treatment intensity or whose plan focuses on different domains should reflect that individual's specific treatment.

Outcome measures may also assess how patients or their caregivers perceive ABA services and the impacts on various aspects of their lives, such as changes on quality of life, satisfaction with treatment, or impact on stress. Patient- (or caregiver-) reported outcome measures (PROMs) provide critically important information about distal (long-term) outcomes that only the patient and stakeholders can provide.

Cautions

The following section outlines additional cautions related to the measurement, reporting, and interpretation of outcomes.

Percentage Goals Mastered

There is currently no consensus or guideline that defines progress or a successful treatment outcome for a patient or group of patients, on either a short- or long-term basis, in terms of percentage of goals mastered. This situation reflects the difficulty in equating goals, the heterogeneity of the patient population, and variations in treatment intensity and duration.

Furthermore, defining successful outcomes in terms of percentage of goals mastered may inadvertently result in lesser benefits to the patient because "easier" goals are easier to achieve. However, a patient who shows no progress on any goals during an authorization period should prompt a careful review of the treatment plan and utilization of authorized services. Similarly, 100% achievement of all goals during a six-month authorization period may indicate that the treatment plan is less ambitious than necessary to deliver critical benefits to the patient.

Prescribed Batteries of Tests

Some funders or provider organizations may require specific assessment tools as part of the authorization of services. If these outcome measures are not likely to capture outcomes for the individual patient, the behavior analyst (or provider organization) should communicate this issue, select additional tools that ensure the accurate measurement of outcomes for a specific patient, and advocate for using more appropriate tools. Finally, clinicians must ensure that their choice of instruments and other data sources is appropriate for the patient and not primarily a function of familiarity with that outcome measure or its widespread use within the practice of ABA.

Interpreting Outcomes

Many variables impact patient and family outcomes and, therefore, the interpretation of outcomes. These variables may be unique to the patient or caregiver, including but not limited to:

- age at start of treatment
- severity or topography of symptoms
- presence of co-occurring conditions
- language or other communication skills
- parental stress and support networks

Some variables may be related to the treatment program, such as:

- consistency and length of treatment (especially if discharge from treatment or reduction of treatment hours is premature)
- availability and utilization of treatment dosage recommended by the treating behavior analyst
- availability and utilization of caregiver involvement

It is important to consider the impact of these variables when outcomes are not achieved as predicted, especially when those variables result in a lack of adherence to treatment recommendations.

Section 4.5 Treatment Implementation

Case Supervision Considerations

Developing appropriate goals and a treatment plan is the starting point for the delivery of quality care, but ongoing case supervision is necessary to achieve the desired patient outcomes. Case supervision is generally proportional to treatment dosage but is a distinct and separate category of service not included in direct treatment hours. This section describes the case supervision responsibilities of the supervising behavior analyst in detail.

The Importance of Short- and Long-Term Perspectives

The primary purpose of ABA services is to bring about changes in socially significant behaviors that lead to improved health status, increased independence, increased autonomy, and a higher quality of life. The

behavior analyst must also contextualize this goal for each patient. That is, the behavior analyst should always keep in mind the specific purpose of treatment (e.g., to narrow the gap with peers across all domains, create meaningful change for some behaviors, maintain skills, and prevent deterioration in health status or daily functioning). This future-oriented perspective, which includes a review of the value of specific treatment targets in achieving goals, also acts as a reminder to continually assess patient progress toward increased functioning and a reduced level of care or discharge.

Another perspective, focused on the present, helps ensure that treatment is being delivered as prescribed and that specific aspects of treatment promote progress toward treatment goals.

With these perspectives in mind, supervision of staff and case supervision constitute most of the behavior analyst's daily activities. Case supervision encompasses direct and indirect activities, such as data analysis and protocol modification. The behavior analysts' activities are often identified as direct or indirect based on the presence of the patient. Despite this categorization, both direct and indirect activities are vitally important to the delivery of quality care. If funders do not offer adequate rates that take into consideration indirect case supervision activities that are treated as a bundled service, patient care may be compromised.

Examples of **common direct case supervision activities** include but are not limited to:

- Implementing and managing the treatment plan.
- Training technicians to carry out treatment protocols accurately, frequently, and consistently; recording data on treatment targets; recording notes; summarizing data and graphing data.
- Supervising implementation with technicians and caregivers.
- Conducting direct observation of performance on treatment targets.
- Modifying treatment targets and protocols based on data.
- Observing treatment implementation for potential program revision.
- Training technicians to implement revised protocols.
- Directing staff in the implementation of new or revised protocols (with the patient present).
- Monitoring treatment integrity to ensure protocols are implemented appropriately.
- Reviewing progress with the patient and family and revising the plan and/or goals based on that review.

Examples of **common indirect case supervision activities** include but are not limited to:

- Developing the treatment plan.
- Developing treatment goals, protocols, and data collection systems.

- Selecting treatment targets in collaboration with family members and other stakeholders.
- Writing protocols for treating and measuring all treatment targets.
- Developing treatment fidelity measures.
- Summarizing and analyzing data.
- Reviewing patient data and evaluating patient progress.
- Adjusting protocols based on data.
- Coordinating care with other professionals.
- Directing and guiding the implementation of a crisis intervention.
- Reporting progress toward goals.
- Developing and overseeing a transition or discharge plan.
- Reviewing patient progress with staff without the patient present to refine treatment protocols.
- Directing staff in the implementation of new or revised protocols, with the patient absent.

In some situations, the same type of activity might be treated as a direct case supervision activity in the presence of the patient and as an indirect case supervision activity in the absence of the patient.

Some **common case supervision activities may have both direct and indirect components**, such as:

- The behavior analyst may test treatment fidelity measures during sessions with a patient after drafting them outside of a treatment session.
- The behavior analyst may analyze program data when they first arrive to observe a treatment session as well as summarize and analyze those data when documenting services in a session note after services have ended.

Other **common case supervision activities may be either direct or indirect**, such as:

- The behavior analyst may coordinate care with other professionals who are actively serving a patient during a session as well as outside of scheduled treatment sessions when the patient is absent (e.g., attending an IEP meeting).

Case supervision activities generally fall into four main categories: (a) monitoring the delivery of medically necessary care, (b) monitoring and reporting progress, (c) adapting treatment plans and modifying protocols, and (d) leading support and training. These categories are elaborated upon below.

Monitoring the Delivery of Medically Necessary Care

Treatment sessions should be monitored directly. Monitoring most often involves the supervising clinician observing the patient while services are being provided by behavior technicians to evaluate treatment integrity or patient response to new procedures.[34] Monitoring may be expanded to involve the supervising clinician working directly with the patient.

In addition, the behavior analyst must monitor prescribed, authorized, and delivered treatment hours, ensuring their alignment with each other and comparing them with the patient's progress.

The treating behavior analyst should clearly indicate in communications with funders, patient and caregivers the scope and intensity of services he or she determines to be medically necessary to meet the patient's needs. 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. Resolution includes communicating and documenting how the misalignment will impact the patient's needs and achievement of treatment goals, as well as the appropriate use of resources. A misalignment in services that have been prescribed, authorized, and delivered can be of several types:

- Authorized services are less than what has been prescribed to address medical necessity.
- Authorized services are more than what has been prescribed to address medical necessity.
- Delivered services are less than what has been authorized by the funder or prescribed by the clinician.

As a general guideline, 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 canceling treatment sessions and whether these barriers are temporary (e.g., recent illness, transportation issues) or are likely to persist.

Monitoring and Reporting Progress

Data from treatment targets are most often collected by the behavior technician and analyzed by the behavior analyst on a regular basis to monitor progress towards goals and determine if assessment or intervention procedures need to be modified. These analyses assess the effectiveness of the current programs and interventions. Regular data analyses allow the behavior analyst to quickly intervene if a patient is not making the expected progress toward goals and objectives. In addition, behavior analysts should consistently monitor the reliability of the collected data by evaluating interobserver agreement and procedural fidelity. The behavior analyst should also observe BTs periodically to assess consistency in data collection and to measure the extent to which they are implementing assessment and treatment protocols as intended (procedural fidelity).

Metrics of patient progress may include but are not limited to:

- Degree of change in levels of target behaviors over time as shown in data
- Number or rate of treatment targets on which criteria were met (e.g., for mastery of a skill or reduction of a challenging behavior)
- Changes in certain scores on standardized assessments over time.

The frequency with which data are analyzed should be individualized. A comprehensive review of progress may occur weekly, bimonthly, or monthly depending on patient need and intensity of services. Some patients require more frequent analyses. Examples might include patients in comprehensive and intensive programs, those who are progressing rapidly through treatment targets, and those with severe behavioral problems.

While clinical staff provide regular updates on progress to team members, patients, and caregivers, these regular progress updates also occur as part of a formal process for funders at the end of authorization periods to determine the need for ongoing services. However, the level of review performed by the behavior analyst for clinical decision-making purposes is generally different and more involved than what funders require to understand patient status.

Adapting Treatment Plans and Modifying Protocols

There is substantial evidence on the efficacy of ABA procedures for building useful skills and reducing challenging behaviors in people with ASD of all ages. To ensure that each patient progresses as efficiently as possible, the behavior analyst must evaluate the effectiveness of treatment procedures by reviewing direct observational data on the patient's target behaviors as described above, modify written treatment protocols if necessary, and train BTs and others to implement the revised protocols.

Regular modifications to treatment protocols are typical as patients make progress toward goals. These changes to the treatment plan are usually anticipated and are sometimes embedded within the plan itself. Changes to the treatment protocol are also needed when progress is absent, occurring unevenly, or at a lower-than-expected rate. 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).

This consideration process before changes are made begins by reviewing available data and determining if additional information is needed to identify and prioritize possible causes. For example, causes of slow progress for a specific behavioral target could reflect multiple variables, including weak prerequisite skills or inadequate reinforcement. Depending on the cause, solutions may involve teaching prerequisite skills, changing the level or type of prompting or reinforcement, increasing the number of learning opportunities, or incorporating more potent reinforcers. The appropriate adaptations reflect variables and information unique to the individual patient. All adaptations should be carefully evaluated, with frequent analysis of data.

In other cases, more significant changes to the treatment plan may be needed due to a sudden threat to the health and well-being of the patient. Appropriate adaptations may require changes in intensity, staffing ratios, types of services, or even behavioral targets.

Finally, the behavior analyst should continually review the value of specific behavioral targets to prioritize all targets in terms of achieving long-term treatment goals.

Leading Support and Training

Patient treatment goals are typically best achieved by coordinating the involvement of different individuals supporting the delivery of care. These individuals include members of the clinical and direct line staff; professionals from other disciplines; parents, siblings, caregivers, and teachers; and the patients themselves. Together, this group of individuals forms the community where behavior change occurs and is maintained.

Each group and individual supports patient care in different ways. As such, the behavior analyst engages each group in different methods. In some cases, the engagement involves collaboration, support, and training. When addressing coordination of care, communication is usually the primary goal to avoid gaps in patient needs and duplication of services.

Case Supervision Dosage

Case supervision by a behavior analyst is a critical part of service delivery. This section describes the considerations and provides guidance for case supervision within ABA service delivery.

Staff Supervision as a Component of Case Supervision

Supervision of technicians and other clinical professionals is an important activity that occurs as part of case supervision. However, this activity alone does not encompass the full breadth of activities involved in case supervision, which includes but is not limited to ongoing progress monitoring, protocol revisions, session preparation, and writing progress notes.

Ratio to Direct Treatment

The number of direct treatment hours received by patients is commonly used to determine the number of case supervision hours necessary to adequately oversee ABA services. ABA services generally require relatively high levels of case supervision due to (a) frequent adjustments to the treatment plan based on ongoing evaluation of progress and (b) oversight of the behavior technicians who most commonly deliver services.

Although the number of case supervision hours provided must be responsive to individual patient needs, one to two hours of case supervision for every 10 hours (1–2:10) of direct treatment is the general standard of care. Funders should not restrict case supervision to the established minimum standard of care, as patient needs will dictate the amount of case supervision required for each individual case. For example, patients making rapid progress may need more frequent case supervision to keep up with the pace of skill acquisition, patients with barriers to acquisition may need more frequent case supervision to problem-solve and adapt programming, or patients with severe behavior may require more intense case supervision for safety and to achieve successful outcomes. When direct treatment is 10 hours per week or less, a minimum of one to two hours per week of case supervision is still generally required, except when documented as part of a fade plan or a step down in service. A ratio closer to 1:10 may be appropriate if fewer adjustments to protocols are anticipated for a specific patient, as part of a planned step down in services, or if the main goal of treatment is to maintain the current levels of functioning.

In contrast, treatment of severe behavior that requires focused treatment in more intensive settings, such as specialized intensive-outpatient, day-treatment, residential, or inpatient programs typically requires higher staff-to-patient ratios and a richer ratio of case supervision to direct treatment, especially during assessment and the early stages of treatment. In addition, such treatment programs often have specialized treatment environments (for example, uniquely designed treatment rooms that allow for observation and keep the patient and staff as safe as possible).

Case supervision may be temporarily or permanently increased to meet the needs of individual patients at specific times (e.g., upon initial assessment, during a significant change in response to treatment, or when a change in intensity of interfering behaviors occurs). Case supervision may also be altered based on responses to specific developments in treatment. This increase in case supervision hours to direct treatment hours usually reflects the complexity of the patient's ASD symptoms and the responsive, individualized, data-based decision-making that characterizes ABA treatment. Several factors may increase or decrease case supervision needs on a short- or long-term basis, including but not limited to:

- variations in direct treatment hours
- barriers to progress
- issues of patient health and safety
- changes in behavior or the emergence of new challenging behaviors
- complexity of treatment protocols
- family dynamics or community environment
- generalization probes within new environments
- lack of progress or increased rate of progress

- changes in treatment protocols
- transitions with or without implications for continuity of care

Proportion of Case Supervision Provided by Behavior Analyst vs. Assistant Behavior Analyst

Assistant behavior analysts working under the direct supervision of behavior analysts may provide case supervision to behavior technicians and perform other case supervision activities. See Section 2.3 of this document on tiered models for an additional description of the incorporation of a mid-tier supervisor. The proportion of case supervision provided by the mid-tier supervisor (rather than the behavior analyst) for a given patient should reflect the patient's unique needs, progress in treatment, and the training, expertise, and experience of the mid-tier supervisor. Some case supervision activities, such as treatment planning, should be reserved for the behavior analyst.

These factors may indicate that the behavior analyst should provide most of the case supervision for a particular patient. The proportion of supervision among a behavior analyst's cases may vary based on these factors. However, when the behavior analyst consistently provides less than 25% of the case supervision across their caseload, there should be a compelling rationale, such as factors relating to the experience and expertise of the assistant behavior analyst, protocols being administered, patient history and response to treatment, and/or phase of treatment (e.g., fading out of services), to ensure that patient needs are being met.

Factors Impacting Caseload

To facilitate effective treatment delivery and ensure consumer protection, behavior analysts should manage a caseload that allows them to provide appropriate case supervision. A behavior analyst's caseload size typically reflects the following factors:

- complex patient and family characteristics
- average weekly direct treatment hours per patient
- locations and modality of case supervision and treatment (e.g., clinic vs. home/community, individual vs. group service model, telehealth vs. in vivo case supervision)
- use of mid-tier staff (e.g., assistant behavior analyst)
- experience, expertise, and skills of the behavior analyst
- percentage of patients who are in active treatment vs. step down or fading out of services (i.e., the case supervision to direct treatment ratio)

The percentage of case supervision time spent in the patient's presence (direct) as opposed to their absence (indirect) should be individualized and vary depending upon a patient's needs. Behavior analysts may spend 25-30% of their time in indirect case supervision activities (which may or may not be billable) and non-billable administrative, professional, or organizational activities. The degree to which the provider organization has developed systems that support clinical, management, and administrative activities, as well as the percentage of reimbursement for indirect case activities, affect the capacity of the behavior analyst to provide case supervision.

Given these considerations and the 1-2:10 case supervision and direct treatment ratios required for positive treatment outcomes, a 40-hour full-time behavior analyst may be able to provide 100-150 case supervision hours each month to support 500–1500 hours a month of direct treatment. These hourly estimates should be considered general guidelines rather than a strictly mandated range. Location of services (e.g., home, school, community, clinic) and categorization of hours as direct or indirect will impact the total number of case supervision hours provided per week, with travel decreasing the number of weekly hours that can be provided. When behavior analysts serve patients who are preparing for a step down in services or a discharge from services altogether, the case supervision ratio may move closer to 1:10. When patient progress is limited and challenging behavior occurs frequently, higher case supervision ratios will likely be necessary to achieve meaningful gains.

Several factors generally impact the range of clinical performance expectations. Behavior analysts with expertise in specific patient populations and treatment models, and who receive support from an advanced integrated clinical system, may be able to regularly operate above this range and support a higher caseload.[35] On the other hand, newly certified practitioners, or those with limited experience with a particular patient population, may be assigned a smaller caseload or fewer case supervision hours when they are new to the behavior analyst role.

Section 4.6 Collaboration and Coordination of Care

Effective treatment may require the coordinated treatment of any co-occurring behavioral health and/or medical conditions, considering how these conditions interact with each other. In such cases, each treatment provided must meet the professional standards of care applicable to that treatment.

Behavior analysts frequently treat symptoms and concerns (e.g., self-injury, communication, and social delays) concurrently being addressed by other healthcare professionals, including medical personnel, mental health personnel, speech and language therapists, and occupational therapists. Under these circumstances, cotreatment and coordination of care may be indicated. For example, behavior analysts can teach skills that support dental and medical assessment and treatment procedures, analyze the effects and side effects of medications, and distinguish between environmental and non-environmental causes of behaviors.

Common treatment goals are most likely to be achieved when there is a shared understanding and coordination among all treating healthcare providers and professionals. The need for coordination of care should be individualized to the needs of the patient and the additional services they have received, and documentation of the impact of coordination of care should be included in the treatment plan, which may, in appropriate circumstances, include concurrent treatment.

Several studies have shown that eclectic or mixed-method intervention – typically comprising some ABA procedures combined with other "therapies" – is largely ineffective for most young children with ASD, especially in comparison to intensive, comprehensive ABA intervention.[36] Therefore, behavior analysts must, to the extent allowed by their ethics code, balance the need to provide scientifically supported treatment that maximizes patient outcomes with the need to co-treat and coordinate care with other healthcare professionals who are held to their own standards of care.

Section 4.7 Transition and Discharge Planning

"Discharge" is defined as the end of services between a provider and a patient. Discharge can be initiated by the provider or the patient for a multitude of reasons and should occur in compliance with any state laws or regulations pertinent to discharge. "Transition" is a coordinated set of individualized and results-oriented activities designed to move the patient through treatment toward discharge. Transition and discharge planning is not a single event that occurs at the end of the treatment period. Abrupt termination of services may be detrimental to a patient's progress. Discharge and transition criteria should be measurable, realistic, and individualized. Envisioning outcomes that lead to a successful discharge from service should occur at the outset of treatment and should be modified with details added regularly throughout the course of treatment. The criteria for moving through a transition plan and discharging patients should be documented at the initiation of services and refined and modified throughout the treatment process based on ongoing evaluations of skills and needs. Discharge criteria are likely to be somewhat more general when services are initiated but should become more refined and specific throughout treatment. Transition and discharge planning should be conducted in collaboration with the patient, family, and other professionals involved in the patient's treatment.

Transition Planning

The transition plan should be a written document that specifies the starting point of treatment and describes to the extent known:

- the patient's symptomatology and level of functioning
- presence or absence of skills

- the patient's strengths and barriers to skill acquisition
- the patient's rate of learning and optimal learning strategies
- previous treatment strategies and the patient's response to any previous treatment (e.g., highly effective, ineffective)
- the desired outcomes of treatment

The transition plan should also specify monitoring and evaluation details. Monitoring may entail:

- assessing generalization across environments and people
- assessing maintenance of treatment gains
- monitoring the effectiveness of interventions for challenging behavior
- measuring skill maintenance

At the same time, when continuous direct care is appropriately reduced or terminated, it is important to evaluate the need for increased caregiver consultation and treatment booster sessions (i.e., direct treatment by the treating behavior analyst or behavior technician scheduled as needed after direct care has begun to fade or is terminated). Due to the potential need for ongoing consultation and treatment booster sessions as well as the monitoring required, the transition plan should be reviewed often and should account for the rights of the patient and caregiver to resume treatment if necessary.

The transition plan should outline multiple stages of transition, from more support to less support and a more independent level of care. These stages will differ for every patient depending on their baseline and targeted outcomes. Transitions in levels of care may include moving from a 1:1 model to a small group model, from a purely 1:1 model to a hybrid 1:1 and small group model, from a comprehensive program to a focused program, or from a center-based program to a community-based program.

Discharge Planning

The ongoing process of transition planning culminates in discharging a patient from services. Discharge should be initiated by the behavior analyst, not prematurely, and under the following conditions:

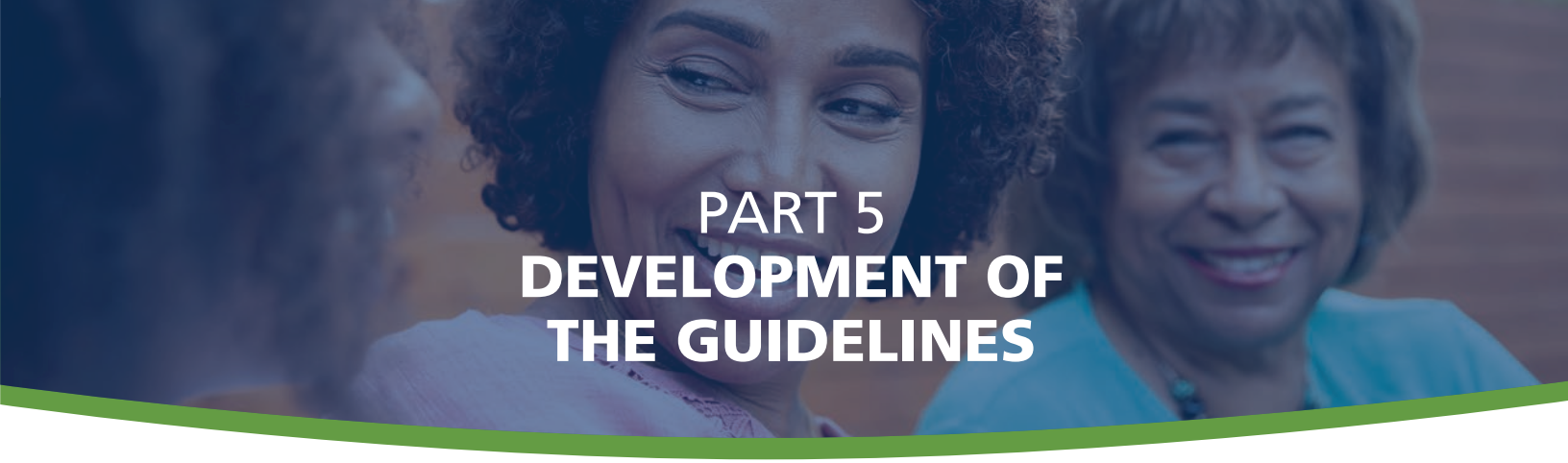
- the patient has achieved the desired socially significant outcomes as developed in collaboration between the provider, the patient, and the family, and treatment is not required to maintain functioning or prevent regression, or
- the patient's diagnosis no longer materially impacts functioning, and treatment is not required to maintain functioning or prevent regression, or
- the patient is no longer benefiting from services.

There may also be situations when a decision is made by the family or the behavior analyst to end services or temporarily suspend them despite a determination that services are medically necessary. Examples of these situations include but are not limited to:

- when the family wants to discontinue services
- when the family and provider are unable to reconcile essential issues in treatment planning and delivery
- when family circumstances or interest in treatment change
- when funding issues arise
- when the patient has been transitioned to another provider

In these situations, a distinction is made between the decision to discharge from services and the ongoing clinical recommendation for services. The discharge report should outline why the decision was made to end services, the ongoing recommendation for services, and the criteria for resuming services in the future if needed.

After the discharge decision is made, the provider should facilitate coordination of care with future service providers, as appropriate, and upon receiving consent from the family to do so. The provider, patient, and family members should discuss variables that may impact the potential need or ability to resume services in the future.



PART 5
DEVELOPMENT OF THE GUIDELINES

First Edition: The Board of Directors of the Behavior Analyst Certification Board authorized the development of practice guidelines for ABA treatment of ASD in early 2012. A coordinator was appointed who created a five-person oversight committee that designed the overall development process and content outline. The oversight committee then solicited additional content-area leaders and writers from a national pool of experts, including researchers and practitioners, to produce a first draft of the guidelines. The coordinator, oversight committee, and BACB staff then generated a second draft that was reviewed by dozens of additional reviewers. In addition to being comprised of experts in ABA, it also included consumers and experts in public policy. This second draft was also sent to all BACB directors for additional input. The project coordinator and BACB staff then used this feedback to produce the final document, which was approved by the BACB Board of Directors. The professionals who served as coordinators, oversight committee members, content-area leaders, content writers, and reviewers were all subject matter experts in ABA, as evidenced by publication records, substantial experience providing ABA services, and leadership positions within the discipline.

Second Edition: The original project coordinator and BACB leadership identified a team of doctoral-level behavior analysts, all of whom were experts in the ABA treatment of ASD. The team carefully reviewed the initial guidelines and, using a consensus process, proposed revisions and additions to the document to enhance clarity and supplement existing guidance. BACB staff then generated a revised draft that was sent to the project coordinator, revision team members, and public policy experts for additional feedback, after which the guidelines were finalized in 2014.

Third Edition: In 2020, the BACB transferred the practice guidelines to the Council of Autism Service Providers (CASP). In 2021, the CASP Board of Directors authorized the development of a third edition of the practice guidelines.

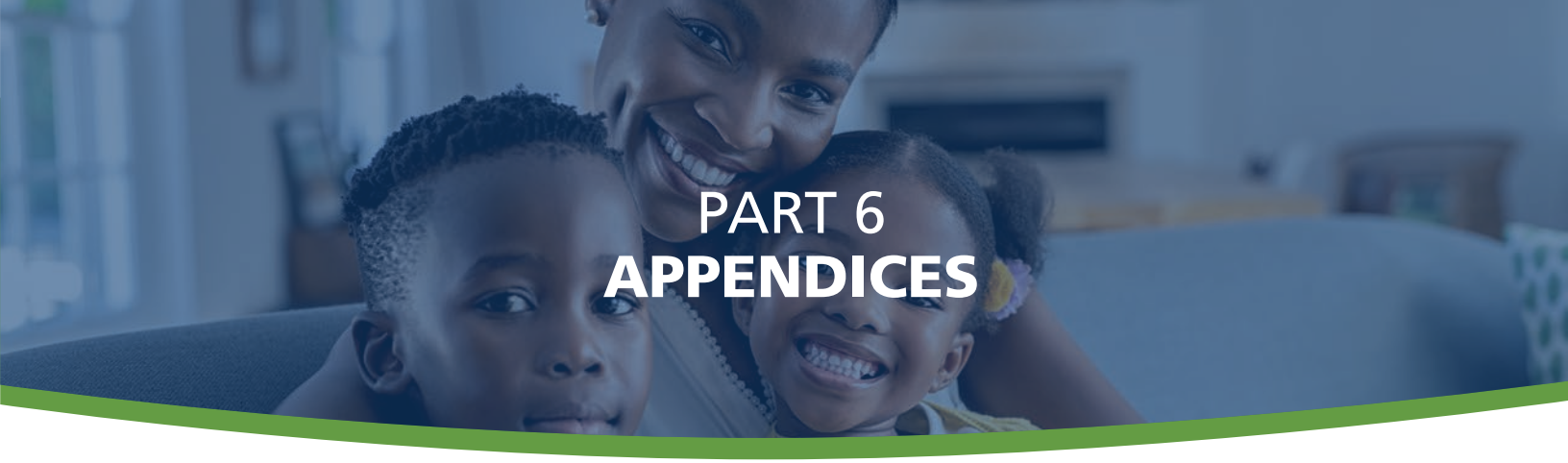
Two committees – the Guidelines & Standards Executive Steering Committee and the Practice Guidelines Steering Committee – oversaw the development of the third edition of the practice guidelines.

The Guidelines & Standards Executive Steering Committee oversees CASP initiatives related to developing and issuing standards and guidelines. It is composed of recognized leaders in the treatment of autism from the disciplines of behavior analysis, psychology, and medicine. The committee includes individuals with expertise in healthcare laws and public policy, as well as consumers of ABA services.

The Practice Guidelines Steering Committee was formed at the direction of the CASP Board and developed the initial outline for the third edition, recruited subject matter experts in each area, and helped oversee the development of respective content.

The Practice Guidelines Steering Committee included the guidelines coordinator from the first and second editions of the practice guidelines as well as nationally and internationally known doctoral-level behavior analysts with expertise in applied behavior analysis in treating autism, several of whom were frequent contributors to the literature base. Most Committee-member practitioners were also licensed psychologists in their respective states. In addition, professionals with expertise in public policy and the interpretation and enforcement of healthcare laws also served on the Committee. The Practice Guidelines Steering Committee revised and integrated the content provided by subject matter experts into a draft form of the document.

The Practice Guidelines Steering Committee and CASP staff recruited additional subject matter experts to serve as external reviewers. Teams composed of members of the Practice Guidelines Steering Committee considered and incorporated the written feedback from external reviewers. The Practice Guidelines Steering Committee then made this draft version available to the Guidelines & Standards Executive Steering Committee, which provided additional input that the Practice Guidelines Steering Committee considered in finalizing the third edition of the practice guidelines. Ultimately, more than 80 professionals, representing a range of demographics, geographies, practices, and professional interests within the field, and possessing substantial combined expertise in research, practice, and professional leadership, served as contributors to this third edition of the practice guidelines.



PART 6
APPENDICES

APPENDIX A
SELECTED BIBLIOGRAPHY

APPENDIX B
ELIGIBILITY REQUIREMENTS FROM THE BEHAVIOR ANALYST CERTIFICATION BOARD (BACB)

APPENDIX A

Bibliography

American Academy of Pediatrics (AAP) Committee on Child Health Financing (2013). Essential contractual language for medical necessity in children. *Pediatrics*, 132(2), 398–401. https://doi.org/10.1542/peds.2013-1637

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).

American Psychiatric Association. (August 2021). *What is Autism Spectrum Disorder?* https://www.psychiatry.org/patients-families/autism/what-is-autism-spectrum-disorder

Behavior Analyst Certification Board and Association of Professional Behavior Analysts (2019). *Clarifications regarding applied behavior analysis treatment for Autism Spectrum Disorder: Practice guidelines for healthcare funders and managers* (2nd ed.). https://cdn.ymaws.com/www.apbahome.net/resource/collection/1FDDBDD2-5CAF-4B2A-AB3F-DAE5E72111BF/Clarifications.ASDPracticeGuidelines.pdf

Carr, J. E., Nosik, M. R., Ratcliff, C. L., & Johnston, J. M. (2021). Professional certification for practicing behavior analysts. In W. W. Fisher, C. C. Piazza, & H. S. Roane (Eds.), *Handbook of applied behavior analysis* (2nd ed.; pp 570–577). Guilford Press.

Cohen, H., Amerine-Dickens, M., & Smith, T. (2006). Early intensive behavioral treatment: Replication of the UCLA model in a community setting. *Developmental and Behavioral Pediatrics*, 27, S145–S155. https://doi.org/10.1097/00004703-200604002-00013

Council of Autism Service Providers (n.d.). *Organizational guidelines*. www.casproviders/org/organizationalguidelines.

Council of Autism Service Providers (2021). *Practice parameters for telehealth-implementation of ABA*. https://www.casproviders.org/practice-parameters-for-telehealth

Eikeseth, S. (2009). Outcome of comprehensive psycho-educational interventions for young children with autism. *Research in Developmental Disabilities*, 30(1), 158–178. https://doi.org/10.1016/j.ridd.2008.02.003

Eikeseth, S., Smith, T, Jahr, E., & Eldevik, S. (2007). Outcome for children with autism who began intensive behavioral treatment between ages 4 and 7: A comparison controlled study. *Behavior Modification*, 31, 264-278. https://doi.org/10.1177/0145445506291396

Eldevik, S., Hastings, R. P., Hughes, J. C., Jahr, E., Eikeseth, S., & Cross, S. (2009). Meta-analysis of early intensive behavioral intervention for children with autism. *Journal of Clinical Child & Adolescent Psychology,* 38, 439–450. https://doi.org/10.1080/15374410902851739

Eldevik, S., Hastings, R. P., Hughes, J. C., Jahr, E., Eikeseth, S., & Cross, S. (2010). Using participant data to extend the evidence base for intensive behavioral intervention for children with autism. *American Journal on Intellectual and Developmental Disabilities*, 115(5), 381–405. https://doi.org/10.1352/1944-7558-115.5.381

Eldevik, S., Titlestad, K. B., Aarlie, H., & Tønnesen, R. (2020). Community implementation of early behavioral intervention: Higher intensity gives better outcome. *European Journal of Behavior Analysis*, 21(1), 92–109. https://doi.org/10.1080/15021149.2019.1629781

Eikeseth, S., Smith, T., Jahr, E., & Eldevik, S. (2002). Intensive behavioral treatment at school for 4- to 7-year-old children with autism: A 1-year comparison controlled study. *Behavior Modification*, 26, 46–68. https://doi.org/10.1177/0145445502026001004

Fein, D., Barton, M., Eigsti, I. M., Kelley, E., Naigles, L., Schultz, R. T., Stevens, M., Helt, M., Orinstein, A., Mosenthal, M., & Tyson, K. (2013). Optimal outcome in individuals with a history of autism. *Journal of Child Psychology and Psychiatry*, 54(2), 195-205. https://doi.org/10.1111/jcpp.12037

Frazier, T. W., Klingemier, E. W., Anderson, C. J., Gengoux, G. W., Youngstrom, E. A., & Hardan, A. Y. (2021). A longitudinal study of language trajectories and treatment outcomes of early intensive behavioral intervention for autism. *Journal of Autism and Developmental Disorders*, 51(12), 4534–4550. https://doi.org/10.1007/s10803-021-04900-5

Foxx, R. M. (2008). Applied behavior analysis treatment of autism: The state of the art. *Child and Adolescent Psychiatric Clinics of North America*, 17(4), 821–834. https://doi.org/10.1016/j.chc.2008.06.007

Green, G., Brennan, L. C., & Fein, D. (2002). Intensive behavioral treatment for a toddler at high risk for autism. *Behavior Modification*, 26(1), 69–102. https://doi.org/10.1177/0145445502026001005

Hanley, G. P., Iwata, B. A., & McCord, B. E. (2003). Functional analysis of problem behavior: A review. *Journal of Applied Behavior Analysis*, 36(2), 147–185. https://doi.org/10.1901/jaba.2003.36-147

Howard, J. S., Sparkman, C. R., Cohen, H. G., Green, G., & Stanislaw, H. (2005). A comparison of intensive behavior analytic and eclectic treatments for young children with autism. *Research in Developmental Disabilities*, 26(4), 359–383. https://doi.org/10.1016/j.ridd.2004.09.005

Howard, J. S., Stanislaw, H. G., Green, G., Sparkman, C. R., & Cohen, H. G. (2014). Comparison of behavior analytic and eclectic early interventions for young children with autism after three years. *Research in Developmental Disabilities*, 35(12), 3326–3344. http://dx.doi.org/10.1016/j.ridd.2014.08.021

Jacobson, J., Mulick, J., & Green, G. (1998). Cost-benefit estimates for early intensive behavioral intervention for young children with autism: General model and single state case. *Behavioral Interventions*, 13, 201–226. https://doi.org/10.1002/(SICI)1099-078X(199811)13:4<201::AID-BIN17>3.0.CO;2-R

Klintwall, L., & Eikeseth, S. (2014). Early and intensive behavioral intervention (EIBI) in autism. In V. Patel, V. Preedy, & C. Martin (Eds.), *Comprehensive guide to autism*. Springer. https://doi.org/10.1007/978-1-4614-4788-7_129

Klintwall, L., Eldevik, S., & Eikeseth, S. (2015). Narrowing the gap: Effects of intervention on developmental trajectories in autism. *Autism*, 19, 53–63. https://doi.org/10.1177/1362361313510067

Larsson, E. V., (2019). *Bibliography of research on the costs of autism and treatment*. Cambridge Center for Behavioral Studies. https://behavior.org/wp-content/uploads/2020/03/Bibliography-Larsson-2019.pdf

Leaf, J. B., Leaf, R., McEachin, J., Cihon, J. H., & Ferguson, J. L. (2018). Advantages and challenges of a home- and clinic-based model of behavioral intervention for individuals diagnosed with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 48(6), 2258–2266. https://doi.org/10.1007/s10803-017-3443-3 PMID: 29264680.

LeBlanc, L. A., Parks, N., & Hanney, N. (2014). Early intensive behavioral intervention (EIBI): Current status and future directions. In J. Luiselli (Ed.), *Children and youth with Autism Spectrum Disorder (ASD): Recent advances and innovations in assessment, education, and intervention* (pp. 63–75). Oxford.

LeBlanc, L. A., Raetz, P. B., Sellers, T. P., & Carr, J. E. (2016). A proposed model for selecting measurement procedures for the assessment and treatment of problem behavior. *Behavior Analysis in Practice*, 9(1), 77–83. https://doi.org/10.1007/s40617-015-0063-2 PMID: 27606232; PMCID: PMC4788644.

Lovaas, O. I. (1987). Behavioral treatment and normal educational and intellectual functioning in young autistic children. *Journal of Consulting and Clinical Psychology*, 55(1), 3–9. https://doi.org/10.1037//0022-006x.55.1.3

MacDonald, R., Parry-Cruwys, D., Dupere, S., & Ahearn, W. (2014). Assessing progress and outcome of early intensive behavioral intervention for toddlers with autism. *Research in Developmental Disabilities*, 35(12), 3632–3644. https://doi.org/ 10.1016/j.ridd.2014.08.036

Matson, J. L., Benavidez, D. A., Compton, L. S., Paclawskyj, T., & Baglio, C. (1996). Behavioral treatment of autistic persons: A review of research from 1980 to the present. *Research in Developmental Disabilities,* 17(6), 433–465. https://doi.org/10.1016/S0891-4222(96)00030-3

McEachin, J. J., Smith, T., & Lovaas, O. I. (1993). Long-term outcome for children with autism who received early intensive behavioral treatment. *American Journal on Mental Retardation*, 97, 359–372.

Melanson, I. J., & Fahmie, T. A. (2023). Functional analysis of problem behavior: A 40-year review. *Journal of Applied Behavior Analysis*, 56(2), 262–281. https://doi.org/10.1002/jaba.983

Nahmias, A. S., Pellecchia, M., Stahmer, A. C., & Mandell, D. S. (2019). Effectiveness of community-based early intervention for children with Autism Spectrum Disorder: A meta-analysis. Journal of Child Psychology and Psychiatry, 60(11), 1200–1209. https://doi.org/10.1111/jcpp.13073

Odom, S.L. (2021). Education of students with disabilities, science, and randomized controlled trials. *Research and Practice for Persons with Severe Disabilities*, 46(3), 132 – 145. https://doi:10.1177/15407969211032341

Padilla, K.L., Weston, R., Morgan, G.B., Lively, P., & O'Guinn, N. (2023). Validity and reliability evidence for assessments based in applied behavior analysis: A systematic review. *Behavior Modification*, 47(1), 247-288. https://doi:10.1177/01454455221098151

Perry, A., Koudys, J., Prichard, A., & Ho, H. (2017). Follow-up study of youth who received EIBI as young children. *Behavior Modification*, 43(2), 181–201. https://doi.org/10.1177/0145445517746916

Reichow, B. (2012). Overview of meta-analyses on early intensive behavioral intervention for young children with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders*, 42(2), 512–520. https://doi.org/10.1007/s10803-011-1218-9

Reichow, B., Hume, K., Barton, E. E., & Boyd, B. A. (2018). Early intensive behavioral intervention (EIBI) for young children with Autism Spectrum Disorders (ASD). *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.CD009260.pub3

Reichow, B., & Wolery, M. (2009). Comprehensive synthesis of early intensive behavioral interventions for young children with autism based on the UCLA young autism project model. *Journal of Autism and Developmental Disorders*, 39(1), 23–41. https://doi.org/10.1007/s10803-008-0596-0

Robain, F., Franchini, M., Kojovic, N., Wood de Wilde, H., & Schaer, M. (2020). Predictors of treatment outcome in preschoolers with Autism Spectrum Disorder: An observational study in the greater Geneva area, Switzerland. *Journal of Autism and Developmental Disorders*, 50(11), 3815–3830. https://doi.org/10.1007/s10803-020-04430-6

Rodgers, M., Simmonds, M., Marshall, D., Hodgson, R., Stewart, L. A., Rai, D., Wright, K., Ben-Itzchak, E., Eikeseth, S., Eldevik, S., Kovshoff, H., Magiati, I., Osborne, L. A., Reed, P., Vivanti, G., Zachor, D., & Couteur, A. L. (2021). Intensive behavioural interventions based on applied behaviour analysis for young children with autism: An international collaborative individual participant data meta-analysis. *Autism*, 25(4), 1137–1153. https://doi.org/10.1177/1362361320985680

Sallows, G. O., & Graupner, T. D. (2005). Intensive behavioral treatment for children with autism: Four-year outcome and predictors. *American Journal on Mental Retardation*, 110(6), 417–438. https://doi.org/10.1352/0895-8017(2005)110[417:IBTFCW]2.0.CO;2

Smith, D. P., Hayward, D. W., Gale, C. M., Eikeseth, S., & Klintwall, L. (2021). Treatment gains from early and intensive behavioral intervention (EIBI) are maintained 10 years later. *Behavior Modification*, 45(4), 581–601. https://doi.org/10.1177/0145445519882895

Smith, T., & Iadarola, S. (2015). Evidence base updates for Autism Spectrum Disorder. *Journal of Clinical Child & Adolescent Psychology*, 44(6), 897–922. https://doi.org/10.1080/15374416.2015.1077448

Smith, T., Klorman, R., & Mruzek, D. W. (2015). Predicting outcome of community-based early intensive behavioral intervention for children with autism. *Journal of Abnormal Child Psychology*, 43(7), 1271–1282. https://doi.org/10.1007/s10802-015-0002-2

Stanislaw, H., Howard, J., & Martin, C. (2020). Helping parents choose treatments for young children with autism: A comparison of applied behavior analysis and eclectic treatments. *Journal of the American Association of Nurse Practitioners*, 32(8), 571-578.

Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, 10(2), 349–367. https://doi.org/10.1901/jaba.1977.10-349

Virués-Ortega, J. (2010). Applied behavior analytic intervention for autism in early childhood: Meta-analysis, meta-regression and dose-response meta-analysis of multiple outcomes. *Clinical Psychology Review*, 30(4), 387–399. https://doi.org/10.1016/j.cpr.2010.01.008

Waters, C. F., Amerine Dickens, M., Thurston, S. W., Lu, X., & Smith, T. (2020). Sustainability of early intensive behavioral intervention for children with Autism Spectrum Disorder in a community setting. *Behavior Modification*, 44(1), 3–26. https://doi.org/10.1177/0145445518786463

Wergeland, G. J. H., Posserud, M., Fjermestad, K., Njardvik, U., & Öst, L. (2022). Early behavioral interventions for children and adolescents with Autism Spectrum Disorder in routine clinical care: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice*, 29(4), 400–414. https://doi.org/10.1037/cps0000106

Wojcik, M., Eikeseth, S., Eikeseth, F.F., Budzinska, E., & Budzinska, A. (2023) A comparison controlled study examining outcome for children with autism receiving intensive behavioral intervention (IBI). *Behavior Modification*, 47(5), 1071-1093. https://doi.org/10.1177/01454455231165934

Wong, C., Odom, S. L., Hume, K., Cox, A. W., Fettig, A., Kucharczyk, S., Brock, M.E., Plavnick, J.B., Fleury, V.P., & Schultz, T.R. (2013). *Evidence-based practices for children, youth, and young adults with Autism Spectrum Disorder*. Chapel Hill, NC: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice Review Group. https://doi.org/10.1007/s10803-014-2351-z

APPENDIX B

Eligibility Requirements from Behavior Analyst Certification Board

The following table shows an overview of the eligibility pathways for becoming a BCBA.

Overview of Eligibility Pathways				
	Pathway 1: Degree from APBA-Accredited Program or ABAI-Accredited or Recognized Program (ABAI Tier 1, 2a, or 2b)	**Pathway 2:** Behavior-Analytic Coursework	**Pathway 3:** Faculty Teaching and Research	**Pathway 4:** Postdoctoral Experience
Degree	Master's degree or higher from an APBA-accredited program or an ABAI-accredited or recognized behavior analysis degree program (ABAI Tier 1, 2a, or 2b)	Master's degree or higher	Master's degree or higher	Doctoral degree
Behavior-analytic content		Behavior-analytic coursework	Faculty teaching and research	Postdoctoral experience in applied behavior analysis
Fieldwork	Practical fieldwork in applied behavior analysis	Practical fieldwork in applied behavior analysis	Practical fieldwork in applied behavior analysis	Practical fieldwork in applied behavior analysis

https://www.bacb.com/bcba-handbook

The following table shows an overview of the eligibility pathways for becoming a BCaBA:

Overview of Eligibility Pathways		
	Pathway 1: Degree from ABAI-Accredited Program	Pathway 2: Behavior-Analytic Coursework
Degree	Bachelor's degree or higher from an ABAI-accredtied program	Undergradutate degree
Behavior-analytic content		Behavior-analytic coursework
Fieldwork	Practical fieldwork in applied behavior analysis	Practical fieldwork in applied behavior analysis

https://www.bacb.com/bcaba-handbook

The following table shows an overview of the requirements for becoming an RBT.

Requirement	How to Demonstrate This Requirement
Age: You must be at least 18 years old when you submit your RBT certification application.	Have your RBT Supervison or RBT Requirements Coordinator confirm your age as part of your RBT certification application. Please note that your RBT Supervisor/Requirements Coordinator is not required to confirm your age via documentation if such a review has been conducted by the organization employing you that proves you are at least 18 years of age.
Education: You must have at least a high school-level education or the equivalent when you apply for RBT certification.	Upload a high school diploma or transcript that reflects a graduation date with your RBT Certification Application. You may also submit a transcript from a post-high-school institution (e.g., a university) demonstrating that you have been able to enroll in at least one course. If you completed your education in a country that does not offer a high-school-equivalent diploma, you must provide documentation that shows you remained in full-time education for your country's required duration. This documentation must be translated into English using an official translation service.
Background Check: Within 180 days of paying for your RBT certification application, you must complete and pass a criminal background check and an abuse registry check comparable to child care professionals, and teachers in the community where you will provide services.	Have your RBT Supervisor or RBT Requirements Coordinator confirm that you passed a criminal background check and an abuse registry check as part of your RBT Supervisor/Requirements Coordinator is not required to confirm that you passed a criminal background check abd an abuse registry check if such a review has been conducted by the organization employing you within 180 days of paying for your application that proves you were suitable for employment. In the event of an audit, your RBT Supervisor/Reurements Coordinator must provide documentation to support their attestation.

Requirement	How to Demonstrate This Requirement
Training: You must complete a 40-hour training that meets the requirements outlined in the RBT 40-hour Training Packet. To learn more abut the 40-hour training and where to complete it, review the RBT 40-Hour Training Fact Sheet. Available at bacb.com	Include a copy of your 40-hour training certificate with your RBT certification application. Your training provider will provide this certificate when you complete a 40-hour training program. Check with your instructor to confirm that your course was designed to meet this requirement.
Initial Competency Assessment: After you complete the required 40-hour training and no more thatn 90 days before you submit an RBT certification application, you must demonstrate that you can competently perform the tasks outlined on the RBT Initial Competency Assessment. Learn more about the assessment in the RBT Initial Competency Assessment Fact Sheet. Available at bacb.com	Complete the RBT Competency Assessment with your assessor and upload the completed assessment with your RBT certification application.

https://www.bacb.com/rbt-handbook

ENDNOTES

1 American Psychiatric Association. (August 2021). What is Autism Spectrum Disorder? https://www.psychiatry.org/patients-families/autism/what-is-autism-spectrum-disorder

2 For more information about the discipline of applied behavior analysis, see Behavior Analyst Certification Board, https://www.bacb.com/about-behavior-analysis/; Association for Professional Behavior Analysts, https://www.apbahome.net/page/aboutba, and https://cdn.ymaws.com/www.apbahome.net/resource/collection/1FDDBDD2-5CAF-4B2A-AB3F-DAE5E72111BF/APBAwhitepaperABAinterventions.pdf

3 Behavior Analyst Certification Board. (n.d.). Home page. https://www.bacb.com/

4 Behavior Analyst Certification Board. (n.d.) BACB certificant registry. https://www.bacb.com/services/o.php?page=101135

5 Behavior Analyst Certification Board. (n.d.) Verify BACB certification. https://www.bacb.com/verify-certification/

6 See https://www.bacb.com/ethics-information/ethics-codes/ for ethics codes for all certificants.

7 Behavior Analyst Certification Board. (n.d.) Ethics. https://www.bacb.com/ethics-information/

8 Institute for Credentialing Excellence. (n.d.) NCCA accreditation. https://www.credentialingexcellence.org/Accreditation/Earn-Accreditation/NCCA

9 Behavior Analyst Certification Board. (n.d.) Board Certified Behavior Analyst. http://www.bacb.com/Behavior Analyst

10 Visit www.bacb.com for current information on the eligibility requirements, as these change periodically.

11 Behavior Analyst Certification Board (n.d.) Board Certified Behavior Analyst – Doctoral. https://www.bacb.com/bcba/#BCBAD

12 Behavior Analyst Certification Board. (n.d.) Board Certified Assistant Behavior Analyst. https://www.bacb.com/Behavior Analyst/

13 Behavior Analyst Certification Board. (n.d.) Registered Behavior Technician. https://www.bacb.com/rbt/

14 Behavior Analyst Certification Board (n.d.) July 2023 Newsletter. https://www.bacb.com/wp-content/uploads/2023/07/BACB_July2023_Newsletter-230913-a.pdf

15 American Medical Association, Policy No. H-320.953 ("Definitions of 'Screening' and 'Medical Necessity'") (last modified 2016).

16 *See* American Academy of Pediatrics (AAP) Committee on Child Health Financing. (2013). Essential contractual language for medical necessity in children. *Pediatrics*, 132(2), 398–401 (containing additional information and analysis and specifically referencing children with autism)

17 Giardino, A. P., Hudak, M. L., Sood, B. G., Pearlman, S. A., & Committee on Child Health Financing. (2022). Considerations in the determination of medical necessity in children: application to contractual language. *Pediatrics*, 150(3), e2022058882.

18 Cal. Health & Safety Code § 1374.72(a)(1) (health care service plans); Cal. Ins. Code § 10144.5(a)(1) (disability insurance policies).

19 *See* Cal. Health & Safety Code § 1374.721(f)(1) (health care service plans); Cal. Ins. Code § 10144.5(a)(1) (disability insurance policies). Both statutes provide that "medically necessary treatment of a mental health or substance use disorder" means:

"… a service or product addressing the specific needs of that patient, for the purpose of preventing, diagnosing, or treating an illness, injury, condition, or its symptoms, including minimizing the progression of that illness, injury, condition, or its symptoms, in a manner that is all of the following:

(i) In accordance with the generally accepted standards of mental health and substance use disorder care.

(ii) Clinically appropriate in terms of type, frequency, extent, site, and duration.

(iii) Not primarily for the economic benefit of the health care service plan and subscribers or for the convenience of the patient, treating physician, or other health care provider."

The California statute further provides that "valid evidence based sources" of generally accepted standards of care include "clinical practice guidelines and recommendations of nonprofit health care provider professional associations."

20 215 Ill. Comp. Stat. Ann. 5/356z.14(i); see also 18 Del. C. § 3366€(5) (similar).

21 29 U.S.C. § 1185a (a)(3)(A)(ii); 29 C.F.R. §2590.712 (c)(4).

22 https://www.nashp.org/medical-necessity/ (50-state review of medical necessity definitions).

23 *Id*

24 42 U.S.C. § 1396d(r)(5).

25 For example, in 2019, a federal court found that all of the employer-sponsored health plans administered by United Behavioral Health, one of the nation's largest behavioral health benefits administrators, required, as one condition of coverage, that services must be consistent with generally accepted standards of care. *See Wit v. United Behavioral Health*, No. 14-CV-02346-JCS, 2019 WL 1033730, at *13 (N.D. Cal. Mar. 5, 2019), aff'd in part, rev'd in part and remanded, *Wit v. United Behavioral Health*, 79 F.4th 1068, 1077 (9th Cir. 2023) (upholding factual finding that the class members' plans "provide that a precondition of coverage is that treatment be consistent with generally accepted standards of care]").

26 *See*, e.g., Aetna, Applied behavior analysis medical necessity guide (June 2021), available at https://www.aetna.com/document-library/healthcare-professionals/documents-forms/applied-behavioral-analysis.pdf; United Behavioral Health, Supplemental Clinical Criteria: Applied Behavior Analysis, Doc. Number BH803ABA032021 (Mar. 15, 2021), available at https://www.providerexpress.com/content/dam/ope-provexpr/us/pdfs/clinResourcesMain/autismABA/abaSCC.pdf. CASP cites these clinical policies as examples only and does not endorse the clinical criteria or express any opinion as to whether they comply with generally accepted standards of care or other legal requirements.

27 Higher intensity treatments tend to produce the largest gains across domains (e.g., Eldevik, Hastings, Hughes, Jahr, Eikeseth, & Cross, 2009, 2010; Klintwell, Eldevik, & Eikeseth, 2015, Virues-Ortega, Rodriguez, & Yu, 2013

Higher intensity treatments tend to produce the largest gains across domains (e.g., Eldevik, Hastings, Hughes, Jahr, Eikeseth, & Cross, 2009, 2010; Klintwell, Eldevik, & Eikeseth, 2015, Virues-Ortega, Rodriguez, & Yu, 2013

Low-Intensity ABA produces smaller gains across domains than high-intensity ABA treatments (Eldevik, Eikeseth, Jahr, & Smith, 2006; Eldevik, Hastings, Jahr, & Hughes, 2013

Eclectic programs, even when individualized and at higher intensities tend to be less effective for most children with ASD (Smith, Jahr, & Eldevik et al, 2009, 2010; Stanislaw, Howard, & Martin, 2019; Howard, Stanislaw, Green, Sparkman, & Cohen, 2014; Howard, Sparkman, Cohen, Green, & Stanislaw, 2005; Klintwall et al, 2015)

Although most of the participants in these studies were 2-8 years old when treatment began, other studies show that older individuals also benefit from comprehensive treatment (Hassiotis et al, 2011; Ivy & Schreck, 2016; Wong et al, 2017)

28 In addition to being provided by healthcare-funded providers as a medically necessary service in school settings, ABA in some form may be provided by or through schools for purposes of a "free and appropriate education" under the Individuals with Disabilities Education Act.

29 Council of Autism Service Providers (2021). Practice parameters for telehealth-implementation of applied behavior analysis (2nd ed.).

30 For example, Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, 10(2), 349–367. https://doi.org/10.1901/jaba.1977.10-349

31 Behavior Analyst Certification Board and Association of Professional Behavior Analysts (2019). *Clarifications regarding applied behavior analysis treatment for Autism Spectrum Disorder: Practice guidelines for healthcare funders and managers* (2nd ed.). https://cdn.ymaws.com/www.apbahome.net/resource/collection/1FDDBDD2-5CAF-4B2A-AB3F-DAE5E72111BF/Clarifications.ASDPracticeGuidelines.pdf

32 California Association for Behavior Analysis Alert (2024). Important alert for individuals, organizations, and regulatory entities involved in delivery of applied behavior analysis services. Retrieved from www.calaba.org

33 In addition, it should be noted that while fewer of the challenging characteristics of ASD may be observed post-treatment, it is not appropriate to assume that elimination of all characteristics of ASD is a goal of treatment.

34 The Behavior Analyst Certification Board (BACB) has outlined the minimum supervision standards for Registered Behavior Technicians (RBTs) to maintain their credential.

35 See "Organizational Support of Clinical Excellence" in *CASP Organizational Guidelines*

36 See Howard et al. (2005, 2014), Cohen et al. (2006) and Waters et al. (2021) for examples of published studies that included eclectic treatment on community services as usual control conditions.

The Council of Autism Service Providers

The Council of Autism Service Providers

1516 Corley Mill Road,

Lexington, SC 29072

info@casproviders.org

casproviders.org