



# Applied Behavior Analysis Treatment of Autism Spectrum Disorder:

Practice Guidelines for Healthcare Funders and Managers

These standards are provided for informational purposes only and do not represent professional or legal advice. There are many variables that influence and direct the professional delivery of Applied Behavior Analysis (ABA) services. The BACB and authors of these standards assume no liability or responsibility for application of these standards in the delivery of ABA services. The standards presented in this document reflect the consensus of a number of subject matter experts, but do not represent the only acceptable practice. These standards also do not reflect or create any affiliation among those who participated in their development. The BACB does not warrant or guarantee that these standards will apply or should be applied in all settings. Instead, these standards are offered as an informational resource that should be considered in consultation with parents, behavior analysts, regulators, and healthcare funders and managers.

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## PART I: Overview

### SECTION 1: EXECUTIVE SUMMARY

The purpose of this document is to inform decision-making regarding the use of Applied Behavior Analysis (ABA) to treat medically necessary conditions so as to develop, maintain, or restore, to the maximum extent practicable, the functioning of individuals with Autism Spectrum Disorder (ASD) in ways that are both efficacious and cost effective.<sup>1</sup>

The document is based on the best available scientific evidence and expert clinical opinion regarding the use of ABA as a behavioral health treatment for individuals diagnosed with ASD. The guidelines are intended to be a brief and user-friendly introduction to the delivery of ABA services for ASD. These guidelines are written for healthcare funders and managers, such as insurance companies, government health programs, employers, among others. The guidelines may also be useful for consumers, service providers, and regulatory bodies.

This document provides clinical guidelines and other information about ABA as a treatment for ASD. As a behavioral health treatment, ABA includes a number of unique clinical and delivery components. Thus, it is important that those charged with building a provider network understand these unique features of ABA.

This is the second edition of this resource manual and it will continue to be periodically updated to reflect changes in clinical practice and research findings. Additional references and information can be found in the appendices.



## SECTION 2: **AUTISM SPECTRUM DISORDER AND APPLIED BEHAVIOR ANALYSIS**

### **1 What is ASD?**

ASD is characterized by varying degrees of difficulty in social interaction and verbal and nonverbal communication, and the presence of repetitive behavior and/or restricted interests.<sup>2</sup> Due to the variability and symptom presentation, no two individuals with an ASD diagnosis are the same with respect to how the disorder manifests and its impact on families. Because of the nature of the disorder, people with ASD often will not achieve the ability to function independently without appropriate medically necessary treatment.

### **2 What is ABA?**

ABA is a well-developed scientific discipline among the helping professions that focuses on the analysis, design, implementation, and evaluation of social and other environmental modifications to produce meaningful changes in human behavior. ABA includes the use of direct observation, measurement, and functional analysis of the relations between environment and behavior. ABA uses changes in environmental events, including antecedent stimuli and consequences, to produce practical and significant changes in behavior. These relevant environmental events are usually identified through a variety of specialized assessment methods. ABA is based on the fact that an individual's behavior is determined by past and current environmental events in conjunction with organic variables such as their genetic endowment and physiological variables. Thus, when applied to ASD, ABA focuses on treating the problems of the disorder by altering the individual's social and learning environments.

The current guidelines are specific to ABA as a behavioral health treatment of ASD. Nevertheless, ABA has also been demonstrated as effective for treating the symptoms of a variety of conditions, including severe destructive behavior, substance abuse, dementia, pediatric feeding disorders, traumatic brain injury, among others.



What is ABA?, cont.

The successful remediation of core deficits of ASD, and the development or restoration of abilities, documented in hundreds of peer-reviewed studies published over the past 50 years, has made ABA the standard of care for the treatment of ASD (see Appendix B).

### SECTION 3: CONSIDERATIONS

- This document contains guidelines and recommendations that reflect established research findings and best clinical practices. However, individualized treatment is a defining feature and integral component of ABA, which is one reason why it has been so successful in treating this heterogeneous disorder.
- Some individuals diagnosed with ASD have co-occurring conditions including, but not limited to, intellectual disabilities, seizure disorders, psychiatric disorders, chromosomal abnormalities, feeding disorders, sleep disorders, elimination disorders, destructive behavior (for example, self-injury, aggression), and a variety of other conditions that require additional medical treatment. **These guidelines apply to individuals diagnosed with ASD with these co-occurring conditions, as research has established ABA as effective for these client populations as well.**
- The guidelines in this document are pertinent to the use of ABA as a behavioral health treatment to develop, maintain, or restore, to the maximum extent practicable, the functioning of an individual with ASD.
- These guidelines should not be used to diminish the availability, quality, or frequency of currently available ABA treatment services.
- Coverage of ABA treatment for ASD by healthcare funders and managers should not supplant responsibilities of educational or governmental entities.
- Specification of ABA in an educational or government program should not supplant ABA coverage by healthcare funders and managers.
- ABA treatment must not be restricted a priori to specific settings but instead should be delivered in those settings that maximize treatment outcomes for the individual client.
- This document provides guidance regarding ABA treatment only; other behavioral health treatments are not addressed.





**PART II:**

# Unique Features of Applied Behavior Analysis

## SECTION 1: TRAINING AND CREDENTIALING OF BEHAVIOR ANALYSTS

ABA is a specialized behavioral health treatment approach and most graduate or postgraduate training programs in psychology, counseling, social work, or other areas of clinical practice do not provide in-depth training in this discipline. Thus, an understanding of the credentialing process of Behavior Analysts by the Behavior Analyst Certification Board® (BACB®) can assist health plans and their subscribers in identifying those providers who meet the basic competencies to practice ABA.

The formal training of professionals certified by the BACB is similar to that of other medical and behavioral health professionals. That is, they are initially trained within academia and then begin working in a supervised clinical setting with clients. As they gradually demonstrate the competencies necessary to manage complex clinical problems across a variety of clients and medical environments, they become independent practitioners. In summary, Behavior Analysts undergo a rigorous course of training and education, including an “internship” period in which they work under the direct supervision of an experienced Behavior Analyst.

It should be noted that other licensed professionals may have ABA included within their particular scope of training and competence. In addition, a small subset of clinicians may be licensed by another profession and also hold a credential from the BACB, thereby providing additional evidence of the nature and depth of their training in ABA.

Although healthcare funding and management of behavioral health treatments supervised by Behavior Analysts is relatively recent, Behavior Analysts—like other medical and behavioral health providers—rely upon strategies and procedures documented in peer-reviewed literature, established treatment protocols, and clinical decision-making frameworks. They continually evaluate the current state of the client and customize treatment options based on the results of direct observation and data from a range of other assessments. Behavior Analysts also solicit and integrate information from the client and family members and coordinate care with other professionals.



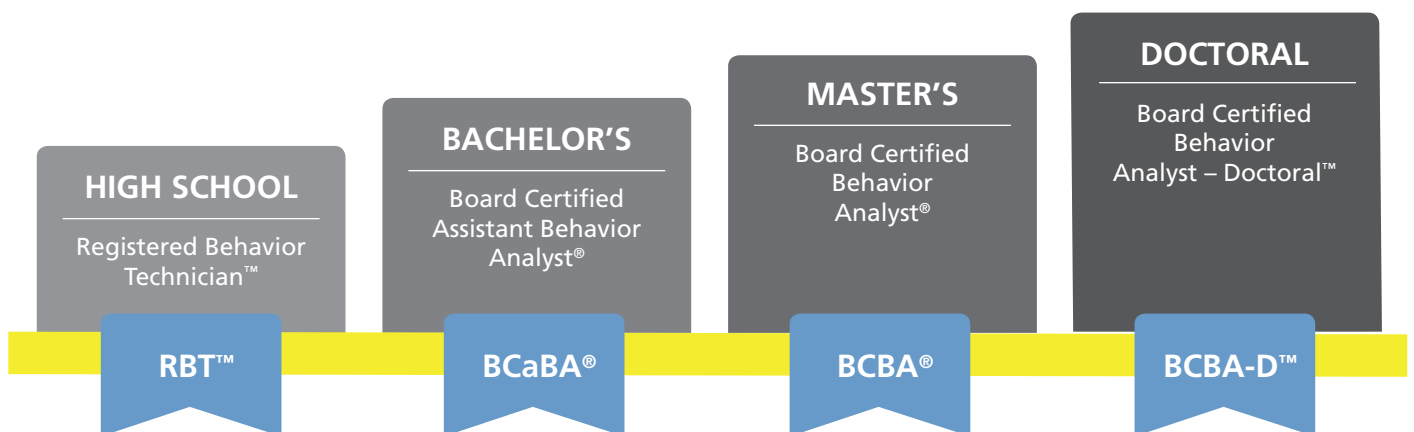
## The Behavior Analyst Certification Board

The BACB is a nonprofit 501(c)(3) corporation established to meet professional credentialing needs identified by Behavior Analysts, governments, and consumers of behavior analysis services. The mission of the BACB is to protect consumers of behavior analysis services worldwide by systematically establishing, promoting, and disseminating professional standards. The BACB has established uniform content, standards, and criteria for the credentialing process that are designed to meet:

- The legal standards established through state, national, and case law;
- The accepted standards for certification programs; and
- The “best practice” and ethical standards of the behavior analysis profession.

The BCBA and BCaBA certification programs are currently accredited by the National Commission for Certifying Agencies (NCCA), the accreditation arm of the Institute for Credentialing Excellence. NCCA reviews and oversees all aspects related to ensuring the development and application of appropriate credentialing processes.

The BACB credentials and recognizes practitioners at four levels:

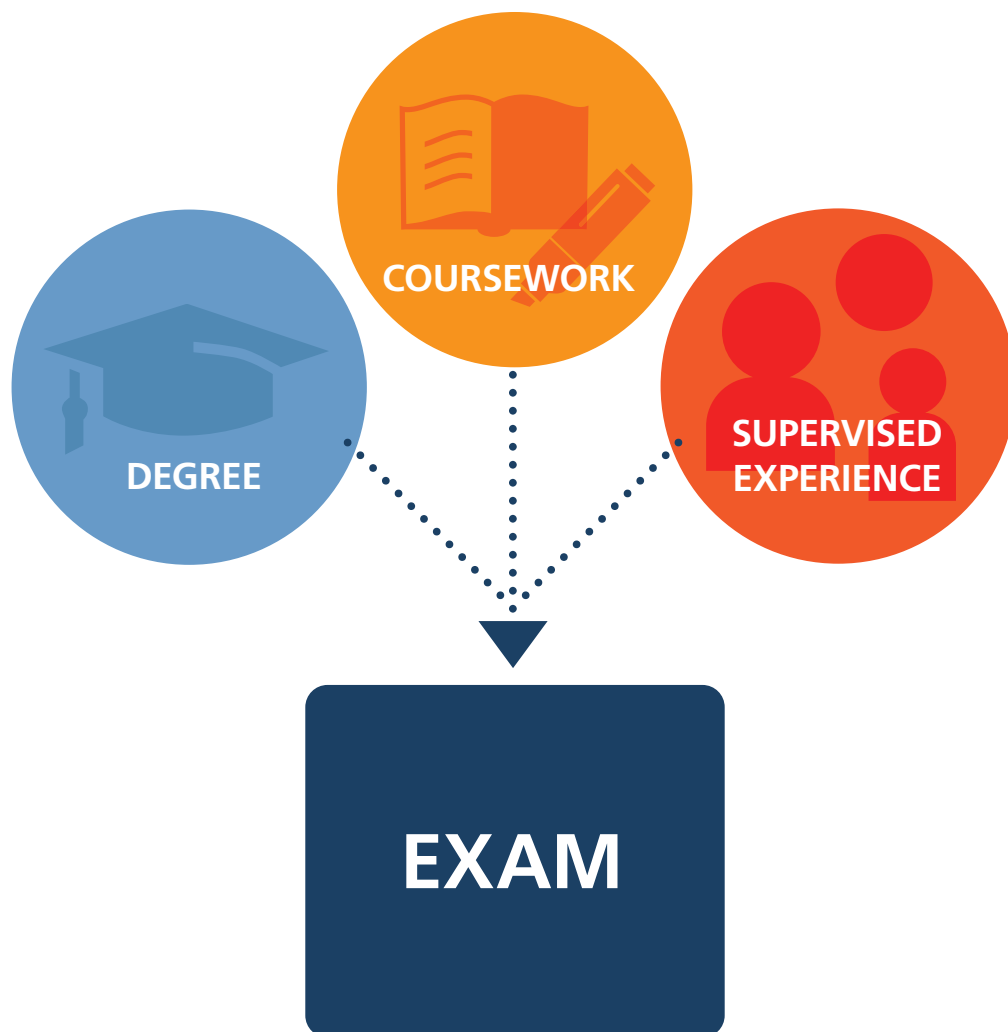


Practitioners credentialed at the BCBA-D and BCBA levels are defined as Behavior Analysts. The BACB requires that BCaBAs, or Assistant Behavior Analysts, work under the supervision of a BCBA-D or BCBA. RBTs must work under the supervision of a BCBA-D, BCBA, or BCaBA. Note: requirements for the RBT credential are described in Section 5 (Tiered Service-Delivery Models and Behavior Technicians).



## Eligibility Requirements for Behavior Analysts & Assistant Behavior Analysts

Applicants who meet the degree, coursework, and supervised experience eligibility requirements described in the next section are permitted to sit for either the BCBA or BCaBA examination (see figure below). Each examination is professionally developed to meet accepted examination standards and is based on the results of a formal job analysis and survey. In addition, all BACB examinations are offered under secure testing conditions and are professionally administered and scored.



*Primary requirements for certification by the BACB.*

## Continuing Education and Maintaining Certification

BACB certificants are required to attest to their compliance with the organization's ethical and disciplinary rules (see below) on a biennial basis and obtain 20 (BCaBA) or 32 (BCBA, BCBA-D) hours\* of continuing education every two years, 4 hours of which must relate to professional ethics. Organizations that employ Behavior Analysts and Assistant Behavior Analysts should support and provide this training as needed.



\*continuing ed. credits every 2 years

## Disciplinary Procedures

All certificants must regularly report any matter that might impact their ethical compliance. The BACB's ethical requirements may be found at [www.BACB.com](http://www.BACB.com).

The BACB uses an online complaint system by which the organization is alerted to potential disciplinary violations. Each complaint is evaluated by the BACB legal department and then, based on its merit, is forwarded to a committee for review and processing. The committee members are senior BCBA's or BCBA-Ds selected for their knowledge and independence, and when advisable includes a member from the certificant's region. Disciplinary actions for certificants include, but are not limited to, advisory consultation, mandated continuing education, suspension of certification, or revocation of certification. Resulting disciplinary actions are publicly reported online.

## Licensure of Behavior Analysts

BACB certification credentials or standards are currently the basis for licensure in the U.S. states where Behavior Analysts are licensed. Basing licensure on BACB credentials is cost effective and ensures that critical competencies regarding practice and research are periodically reviewed and updated by practitioners and researchers. Whether it is used as the basis for licensure or as a "free-standing" credential, BACB certification credentials are recognized in those states where insurance reform laws have been enacted and in other states as well.



## SECTION 2: APPLIED BEHAVIOR ANALYSIS IN THE TREATMENT OF AUTISM SPECTRUM DISORDER

Applied Behavior Analysis is a well-developed discipline among the helping professions, with a mature body of scientific knowledge, established standards for evidence-based practice, distinct methods of service delivery, recognized experience and educational requirements for practice, and identified sources of requisite education in universities. Professionals in ABA engage in the specific and comprehensive use of principles of learning, including operant and respondent learning, to address the needs of individuals with ASD in diverse settings. Services are provided and supervised by Behavior Analysts with expertise and formal training in ABA for the specific treatment of ASD.

### 1 Identifying ABA

Healthcare funders and managers must be able to recognize the following core characteristics of ABA:

1. An objective assessment and analysis of the client's condition by observing how the environment affects the client's behavior, as evidenced through appropriate data collection
2. Importance given to understanding the context of the behavior and the behavior's value to the individual, the family, and the community
3. Utilization of the principles and procedures of behavior analysis such that the client's health, independence, and quality of life are improved
4. Consistent, ongoing, objective assessment and data analysis to inform clinical decision-making

## 2 Essential Practice Elements of ABA

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

1. **Comprehensive assessment** that describes specific levels of behavior at baseline and informs subsequent establishment of treatment goals
2. An emphasis on **understanding the current and future value** (or social importance) of behavior(s) targeted for treatment
3. A practical focus on **establishing small units of behavior** which build towards larger, more significant changes in functioning related to improved health and levels of independence
4. Collection, quantification, and analysis of **direct observational data** on behavioral targets during treatment and follow-up to maximize and maintain progress toward treatment goals
5. Efforts to **design, establish, and manage the social and learning environment(s)** to minimize problem behavior(s) and maximize rate of progress toward all goals
6. An approach to the treatment of problem behavior that **links the function** of (or the reason for) the behavior to the programmed intervention strategies
7. Use of a **carefully constructed, individualized and detailed behavior-analytic treatment plan** that utilizes reinforcement and other behavioral principles and excludes the use of methods or techniques that lack consensus about their effectiveness based on evidence in peer-reviewed publications
8. Use of **treatment protocols that are implemented repeatedly, frequently, and consistently** across environments until discharge criteria are met
9. An emphasis on **ongoing and frequent direct assessment, analysis, and adjustments to the treatment plan** (by the Behavior Analyst) based on client progress as determined by observations and objective data analysis
10. **Direct support and training of family members and other involved professionals** to promote optimal functioning and promote generalization and maintenance of behavioral improvements
11. A **comprehensive infrastructure for supervision** of all assessment and treatment by a Behavior Analyst



## 3 Treatment Models

ABA treatment programs for ASD incorporate findings from hundreds of applied studies focused on understanding and treating ASD published in peer-reviewed journals over a 50-year span. Treatment may vary in terms of intensity and duration, the complexity and range of treatment goals, and the extent of direct treatment provided. Many variables, including the number, complexity, and intensity of behavioral targets and the client's own response to treatment help determine which model is most appropriate. Although existing on a continuum, these differences can be generally categorized as one of two treatment models: Focused or Comprehensive ABA Treatment.<sup>3</sup>

### Focused ABA Treatment

#### ***Service Description***

Focused ABA refers to treatment provided directly to the client for a limited number of behavioral targets. It is not restricted by age, cognitive level, or co-occurring conditions.

Focused ABA treatment may involve increasing socially appropriate behavior (for example, increasing social initiations) or reducing problem behavior (for example, aggression) as the primary target. Even when reduction of problem behavior is the primary goal, it is critical to also target increases in appropriate alternative behavior, because the absence of appropriate behavior is often the precursor to serious behavior disorders. Therefore, individuals who need to acquire skills (for example, communication, tolerating change in environments and activities, self-help, social skills) are also appropriate for Focused ABA.

*Focused ABA treatment may involve increasing socially appropriate behavior ... or reducing problem behavior.*

Focused ABA plans are appropriate for individuals who (a) need treatment only for a limited number of key functional skills or (b) have such acute problem behavior that its treatment should be the priority.

Examples of key functional skills include, but are not limited to, establishing instruction-following, social communication skills, compliance with medical and dental procedures, sleep hygiene, self-care skills, safety skills, and independent leisure skills (for example, appropriate participation in family and community activities). Examples of severe problem behaviors requiring focused intervention



include, but are not limited to, self-injury, aggression, threats, pica, elopement, feeding disorders, stereotypic motor or vocal behavior, property destruction, noncompliance and disruptive behavior, or dysfunctional social behavior.

When prioritizing the order in which to address multiple treatment targets, the following should be considered:

- **Behavior that threatens the health or safety of the client or others or that constitute a barrier to quality of life** (for example, severe aggression, self-injury, property destruction, or noncompliance);
- **Absence of developmentally appropriate adaptive, social, or functional skills that are fundamental to maintain health, social inclusion, and increased independence** (for example, toileting, dressing, feeding, and compliance with medical procedures).

When the focus of treatment involves increasing socially appropriate behavior, treatment may be delivered in either an individual or small-group format. When conducted in a small group, typically developing peers or individuals with similar diagnoses may participate in the session. Members of the behavior-analytic team may guide clients through the rehearsal and practice of behavioral targets with each other. As is the case for all treatments, programming for generalization of skills outside the session is critical.

When the focus of treatment involves the reduction of severe problem behavior, the Behavior Analyst will determine which situations are most likely to precipitate problem behavior and, based on this information, begin to identify its potential purpose (or “function”). This may require conducting a functional analysis procedure to empirically demonstrate the function of the problem behavior. The results enable the Behavior Analyst to develop the most effective treatment protocol. When the function of the problem behavior is identified, the Behavior Analyst will design a treatment plan that alters the environment to reduce the motivation for problem behavior and/or establish a new and more appropriate behavior that serves the same function and therefore “replaces” the problem behavior.

In some cases, individuals with ASD display co-occurring severe destructive behavior disorders that require focused treatment in more intensive settings, such as specialized intensive-outpatient, day-treatment, residential, or inpatient programs. In these cases, these behavior disorders are given separate and distinct diagnoses (for example, Stereotypic Movement Disorder with severe self-injurious behavior). The ABA services delivered in these settings typically require higher staff-to-client ratios (for example, 2 to 3 staff for each client) and close on-site direction from the Behavior Analyst. In addition, such treatment programs often have specialized treatment environments (for example, treatment rooms designed for observation and to keep the client and the staff as safe as possible).

## Comprehensive ABA Treatment

### *Service Description*

Comprehensive ABA refers to treatment of the multiple affected developmental domains, such as cognitive, communicative, social, emotional, and adaptive functioning. Maladaptive behaviors, such as noncompliance, tantrums, and stereotypy are also typically the focus of treatment. Although there are different types of comprehensive treatment, one example is early intensive behavioral intervention where the overarching goal is to close the gap between the client's level of functioning and that of typically developing peers. These programs tend to range from 30-40 hours of treatment per week (plus direct and indirect supervision and caregiver training). Initially, this treatment model typically involves 1:1 staffing and gradually includes small-group formats as appropriate. Comprehensive treatment may also be appropriate for older individuals diagnosed with ASD, particularly if they engage in severe or dangerous behaviors across environments.

Initially, treatment is typically provided in structured therapy sessions, which are integrated with more naturalistic methods as appropriate. As the client progresses and meets established criteria for participation in larger or different settings, treatment in those settings and in the larger community should be provided. Training family members and other caregivers to manage problem behavior and to interact with the individual with ASD in a therapeutic manner is a critical component of this treatment model.





Treatment Models > Comprehensive ABA Treatment, cont.

### ***Typical Program Components***

Treatment components should generally be drawn from the following areas (ordered alphabetically):

- adaptive and self-care skills
- attending and social referencing
- cognitive functioning
- community participation
- coping and tolerance skills
- emotional development
- family relationships
- language and communication
- play and leisure skills
- pre-academic skills
- reduction of interfering or inappropriate behaviors
- safety skills
- self-advocacy and independence
- self-management
- social relationships
- vocational skills

For information on treatment intensity and duration for various Focused and Comprehensive Treatments, see Section 4 (Service Authorization and Dosage).

## **4 Variations Within These Models**

Treatment programs within any of these models vary along several programmatic dimensions, including the degree to which they are primarily provider- or client-directed (sometimes described as “structured vs. naturalistic”). Other variations include the extent to which peers or parents are involved in the delivery of treatment. Finally, some differ in terms of the degree to which they are “branded” and available commercially.

Decisions about how these various dimensions are implemented within individual treatment plans must reflect many variables, including the research base, the age of the client, specific aspects of the target behaviors, the client’s rate of progress, demonstration of prerequisite skills, and resources required to support implementation of the treatment plan across settings.

## 5 ABA Procedures Employed In These Models
















A large number of ABA procedures are routinely employed within the models previously described. They differ from one another in their complexity, specificity, and the extent to which they were designed primarily for use with individuals diagnosed with ASD. All are based on the principles of ABA and are employed with flexibility determined by the individual's specific treatment plan and response to treatment. If one ABA procedure or combination of ABA procedures is not producing the desired outcomes, a different one may be systematically implemented and evaluated for its effectiveness.

These procedures include different types of reinforcement and schedules of reinforcement, differential reinforcement, shaping, chaining, behavioral momentum, prompting and fading, behavioral skills training, extinction, functional communication training, discrete-trial teaching, incidental teaching, self-management, functional assessment, preference assessments, activity schedules, generalization and maintenance procedures, among many others (see the BACB Fourth Edition Task List). The field of behavior analysis is constantly developing and evaluating applied behavior-change procedures.

## 6 Locations Where Treatment is Delivered

The standard of care provides for treatment to be delivered consistently in multiple settings to promote generalization and maintenance of therapeutic benefits. No ABA model is specific to a particular location and all may be delivered in a variety of settings, including residential treatment facilities, inpatient and outpatient programs, homes, schools, transportation, and places in the community. Treatment across settings with multiple adults, siblings, and/or typically developing peers, under the supervision of a Behavior Analyst, supports generalization and maintenance of treatment gains. It should be noted that treatment might occur in multiple settings (for example, home, community, and transportation) on the same day. Treatment should not be denied or withheld because a caregiver cannot be at the treatment location consistently.

To ensure continuity of care, sufficient ABA treatment and consultation should be delivered in subsequent educational and therapeutic settings (for example, residence to school, hospital to home) to successfully support and transition individuals.

		POSSIBLE TREATMENT LOCATIONS				
		HOME	SCHOOL & COMMUNITY	CLINIC/ OUTPATIENT	RESIDENTIAL	HOSPITAL/ INPATIENT
TREATMENT MODELS	FOCUSED					
	COMPREHENSIVE					
						

## 7 Client Age

Treatment should be based on the clinical needs of the individual and not constrained by age. 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. Additionally, ABA is effective across the life span. Research has not established an age limit beyond which ABA is ineffective.

*There is evidence that the earlier treatment begins, the greater the likelihood of positive long-term outcomes.*

## 8 Combining ABA With Other Forms Of Treatment

Findings from several studies show that an eclectic model, where ABA is combined with non-evidence-based treatment, is less effective than ABA alone. Therefore, treatment plans that combine ABA with additional procedures that lack scientific evidence as established by peer-reviewed publications should be considered eclectic and do not constitute ABA treatment.





## SECTION 3: **ASSESSMENT, FORMULATION OF TREATMENT GOALS, AND MEASUREMENT OF CLIENT PROGRESS**

### **1 The Assessment Process**

A developmentally appropriate ABA assessment process must identify strengths and weaknesses across domains and potential barriers to progress. The information from this process is the basis for developing the individualized ABA treatment plan. An ABA assessment typically utilizes information obtained from multiple methods and multiple informants, including the following:

#### **File Review**

Information about medical status, prior assessment results, response to prior treatment and other relevant information may be obtained via file review and incorporated into the development of treatment goals and intervention. Examples of assessments that should be reviewed include intellectual and achievement tests, developmental assessments, assessments of comorbid mental health conditions, and evaluations of family functioning and needs. In some cases, if assessment information is incomplete, the Behavior Analyst should refer the client to other professionals for needed assessments.

#### **Interviews and Rating Scales**

Clients, caregivers, and other stakeholders, as appropriate, are included when selecting treatment goals, developing protocols, and evaluating progress. Behavior Analysts use interviews, rating scales, and social validity measures to assess perceptions of the client's skill deficits and behavioral excesses, and the extent to which these deficits and excesses impede the life of the individual and the family. Examples of rating scales include adaptive-behavior assessments, functional assessments, among others.

## Direct Assessment and Observation

Direct observation and data collection and analysis are defining characteristics of ABA. The analysis of such data serves as the primary basis for identifying pretreatment levels of functioning, developing and adapting treatment protocols on an ongoing basis, and evaluating response to treatment and progress toward goals. Behavior should be directly observed in a variety of relevant naturally occurring settings and structured interactions. Examples of structured direct assessments include curricular assessment, structured observations of social interactions, among others.

## Assessment from Other Professionals

Periodic assessments from other professionals may be helpful in guiding treatment or assessing progress. Examples might include assessment of general intellectual functioning, medical status, academic performance, among others.

## 2 Selecting and Monitoring Progress Toward Treatment Goals

Goals are prioritized based on their implications for the client's health and well-being, the impact on client, family and community safety, and contribution to functional independence. ABA treatment goals are identified based on the previously described assessment process. Each goal should be defined in a specific, measurable way to allow frequent evaluation of progress toward a specific mastery criterion. The number and complexity of goals should be consistent with the intensity and setting of service provision. The appropriateness of existing and new goals should be considered on a periodic basis.

The measurement system for tracking progress toward goals should be individualized to the client, the treatment context, the critical features of the behavior, and the available resources of the treatment environment. Specific, observable and quantifiable measures should be collected for each goal and should be sensitive enough to capture meaningful behavior change relative to ultimate treatment goals.

The results of standardized assessments may be used to monitor progress toward long-term treatment goals. However, IQ scores and other global assessments are not appropriate as sole determiners of an individual's response or nonresponse to ABA treatment. Many individuals may show substantial progress in important characteristics of the disorder (for example, language functioning, social functioning, repetitive behavior, adaptive behavior, safety and wellness, and co-morbid mental health

conditions) without a substantial change in measures of intellectual functioning. Thus, scores on such assessments should not be used to deny or discontinue ABA treatment.

### 3 Functional Assessment of Problem Behavior

When a client exhibits problem behavior at a level that is disruptive to the environment or dangerous to the client or others, a functional assessment is warranted. Functional assessment refers to the overall process of identifying the aspects of the environment that may contribute to the development and continued occurrence of problem behavior. That is, functional assessment is designed to identify where, when and the likely reasons why a problem behavior occurs. Such information is then directly incorporated into the problem behavior treatment plan in the form of a function-based intervention.

- The functional assessment process typically includes multiple sources of information such as interviews with caregivers, structured ratings scales, and collection of direct observation data and consideration of potential medical conditions that may impact problem behavior.
- Direct observation may take the form of assessment of ongoing interactions in the natural environment or the form of a functional analysis.
- Functional analysis refers to directly changing environmental events and evaluating the impact of those changes on the level of problem behavior via direct observation. Functional analyses can be complex and may require higher staffing ratios and more direction by the Behavior Analyst.

### 4 Duration and Frequency of Assessment

The assessment process required for the initial development of Comprehensive treatment programs may take 20 hours or longer. Subsequent assessments and assessments for Focused treatments that involve a small number of uncomplicated goals often require fewer hours. The functional assessment process for severe problem behavior is often complex and may require considerably longer durations.

Assessment of overall progress toward comprehensive treatment goals should be summarized at regular intervals (for example, on a semiannual basis).





## SECTION 4: SERVICE AUTHORIZATION AND DOSAGE

### 1 Service Authorization

Authorization periods should not typically be for less than 6 months and may involve some or all of the following services. If there is a question as to the appropriateness or effectiveness of ABA for a particular client, a review of treatment data may be conducted more frequently (for example, after 3 months of treatment). In addition, if third-party clinical review (also known as peer review) is required by a healthcare funder or manager, the reviewer should be a Behavior Analyst with experience in ABA treatment of ASD.

The following list represents common services\* that should be authorized for optimal treatment outcome. Others may be appropriate.

1. Behavior-Analytic Assessment
2. Treatment Plan Development and Modification
3. Direct Treatment to Individuals or Groups with Implementation by Behavior Analysts and/or Behavior Technicians.
4. Supervision (both direct and indirect) by Behavior Analysts
5. Travel to Ensure Equitable Access to Services (for example, rural and underserved areas)
6. Parent and Community Caregiver Training to Individuals or Groups
7. Consultation to Ensure Continuity and/or Coordination of Care
8. Discharge Planning

\*These services may be effectively delivered via telehealth in jurisdictions that permit such delivery systems.

## Critical Features of a Treatment Plan for Service Authorization *(page 1 of 2)*

### I. Patient Information

### II. Reason for Referral

### III. Brief Background Information

- a. Demographics (name, age, gender, diagnosis)
- b. Living situation
- c. Home/school/work information

### IV. Clinical Interview

- a. Information gathering on problem behaviors, including developing operational definitions of primary area of concern and information regarding possible function of behavior

### V. Review of Recent Assessments/Reports (file review)

- a. Any recent functional behavior assessment, cognitive testing, and/or progress reports

### VI. Assessment Procedures & Results

- a. Brief description of assessments, including their purpose
  - INDIRECT ASSESSMENTS:
    - › Provide summary of findings for each assessment (graphs, tables, or grids)
  - DIRECT ASSESSMENTS:
    - › Provide summary of findings for each assessment (graphs, tables or grids)
- b. Target behaviors are operationally defined, including baseline levels

### VII. Treatment Plan (Focused ABA)

- a. Treatment setting
- b. Operational definition for each behavior and goal
- c. Specify behavior management (that is, behavior reduction and/or acquisition) procedures:
  - Antecedent-based interventions
  - Consequence-based interventions
- d. Describe data collection procedures
- e. Proposed goals and objectives\*

## Critical Features of a Treatment Plan for Service Authorization *(page 2 of 2)*

### VIII. Treatment Plan (Skill Acquisition – Comprehensive ABA)

- a. Treatment setting
- b. Instructional methods to be used
- c. Operational definition for each skill
- d. Describe data collection procedures
- e. Proposed goals and objectives\*

### IX. Parent/Caregiver Training

- a. Specify parent training procedures
- b. Describe data collection procedures
- c. Proposed goals and objectives\*

### X. Number of Hours Requested

- a. Number of hours needed for each service
- b. Clinical summary that justifies hours requested
- c. Billing codes requested (for example, CPT, HCPCS)

### XI. Coordination of Care

### XII. Transition Plan

### XIII. Discharge Plan

### XIV. Crisis Plan

\* *Each goal and objective must include:*

- Current level (baseline)
- Behavior parent/caregiver is expected to demonstrate, including condition under which it must be demonstrated and mastery criteria (the objective or goal)
- Date of introduction
- Estimated date of mastery
- Specify plan for generalization
- Report goal as met, not met, modified (include explanation)

## 2 Treatment Dosage

Treatment dosage, which is often referenced in the treatment literature as “intensity,” will vary with each client and should reflect the goals of treatment, specific client needs, and response to treatment. Treatment dosage should be considered in two distinct categories: intensity and duration.

### Intensity

Intensity is typically measured in terms of number of hours per week of direct treatment. Intensity often determines whether the treatment falls into the category of either Focused or Comprehensive.

#### ***Focused ABA Treatment***

Focused ABA generally ranges from **10-25 hours per week** of direct treatment (plus direct and indirect supervision and caregiver training). However, certain programs for severe destructive behavior **may require more than 25 hours per week** of direct therapy (for example, day treatment or inpatient program for severe self-injurious behavior).

#### ***Comprehensive ABA Treatment***

Treatment often involves an intensity level of **30-40 hours of 1:1 direct treatment to the client per week**, not including caregiver training, supervision, and other needed services. However, very young children may start with a few hours of therapy per day with the goal of increasing the intensity of therapy as their ability to tolerate and participate permits. Treatment hours are subsequently increased or decreased based on the client’s response to treatment and current needs. Hours may be increased to more efficiently reach treatment goals. Decreases in hours of therapy per week typically occur when a client has met a majority of the treatment goals and is moving toward discharge.

Although the recommended number of hours of therapy may seem high, this is based on research findings regarding the intensity required to produce good outcomes. It should also be noted that time spent away from therapy may result in the individual falling further behind typical developmental trajectories. Such delays will likely result in increased costs and greater dependence on more intensive services across their life span.

### Duration

Treatment duration is effectively managed by evaluating the client’s response to treatment. This evaluation can be conducted prior to the conclusion of an authorization period. Some individuals will continue to demonstrate medical necessity and require continued treatment across multiple authorization periods. See Section 8 for information on discharge planning.



## SECTION 5: TIERED SERVICE-DELIVERY MODELS AND BEHAVIOR TECHNICIANS

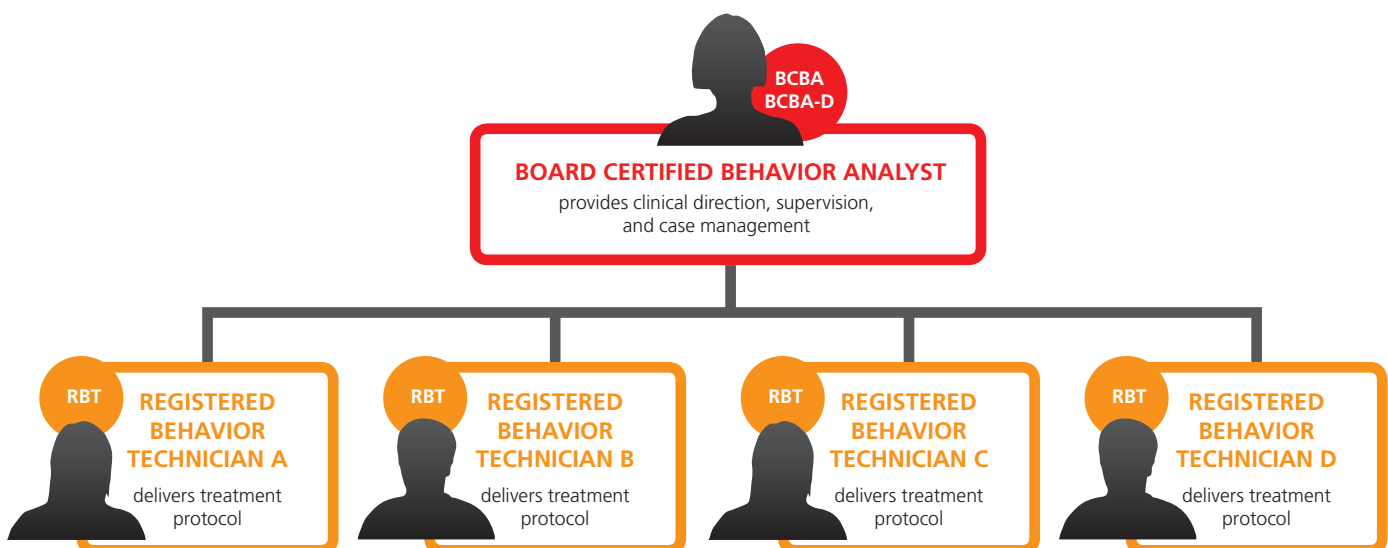
Most ABA treatment programs involve a tiered service-delivery model in which the Behavior Analyst designs and supervises a treatment program delivered by Assistant Behavior Analysts and Behavior Technicians.

### 1 Description of a Tiered Service-Delivery Model

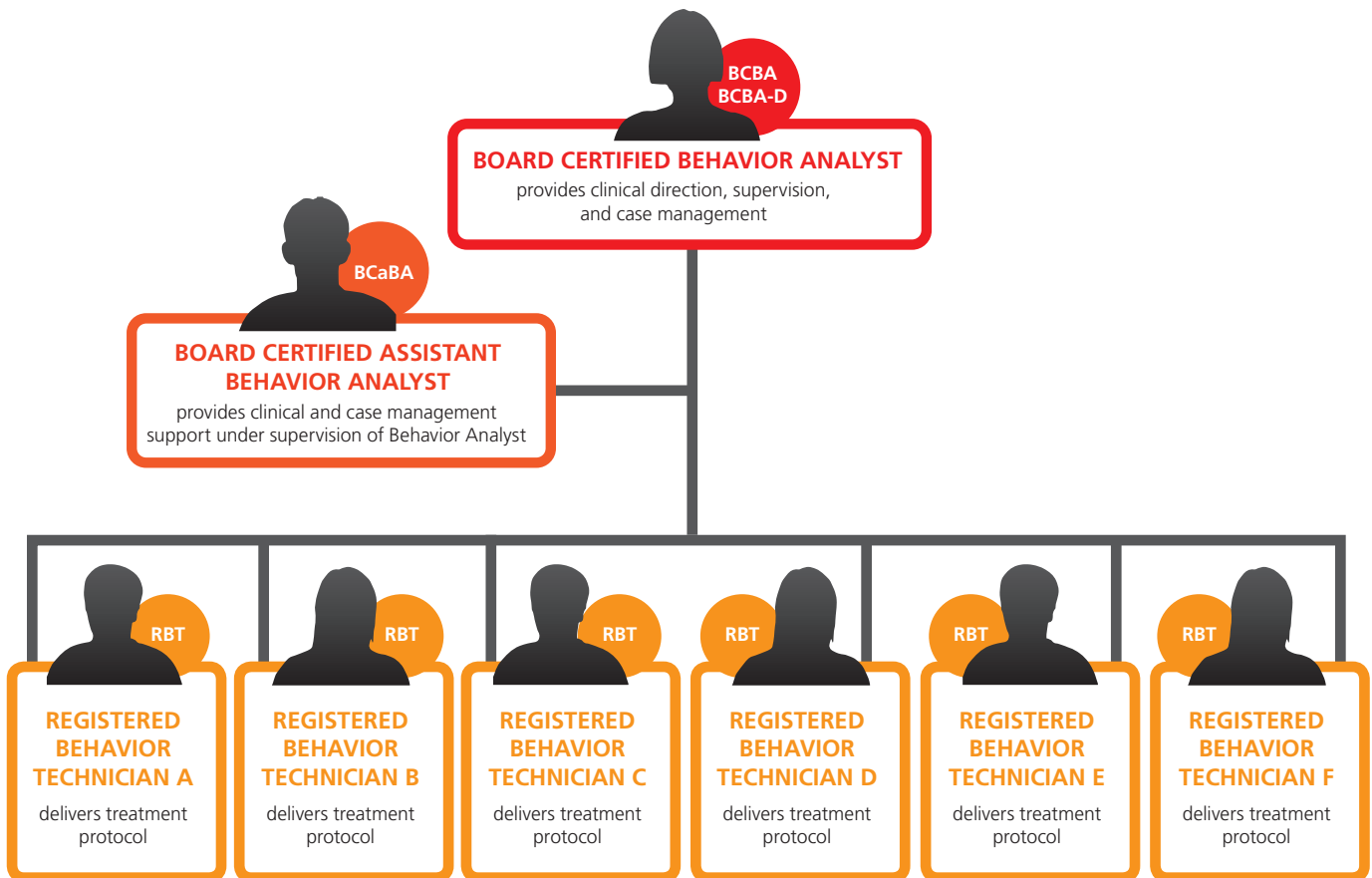
Behavior Analyst's clinical, supervisory, and case management activities are often supported by other staff such as Assistant Behavior Analysts working within the scope of their training, practice, and competence.

Following are two examples of tiered service-delivery models (among others), an organizational approach to treatment delivery considered cost-effective in delivering desired outcomes.

In the first example (below), the Behavior Analyst oversees a treatment team of Behavior Technicians.



In the second example (below), the Behavior Analyst is supported by an Assistant Behavior Analyst; the two of them jointly oversee a treatment team of Behavior Technicians.



Such models assume the following:

1. The BCBA or BCBA-D is responsible for all aspects of clinical direction, supervision, and case management, including activities of the support staff (for example, a BCaBA) and Behavior Technicians.
2. The BCBA or BCBA-D must have knowledge of each member of the treatment team's ability to effectively carry out clinical activities before assigning them.
3. The BCBA and BCBA-D must be familiar with the client's needs and treatment plan and regularly observe the Behavior Technician implementing the plan, regardless of whether or not there is clinical support provided by a BCaBA.

## 2 Rationales for a Tiered Service-Delivery Model

- Tiered service-delivery models that rely on the use of Assistant Behavior Analysts and Behavior Technicians have been the primary mechanism for achieving many of the significant improvements in cognitive, language, social, behavioral, and adaptive domains that have been documented in the peer-reviewed literature.<sup>4</sup>
- The use of carefully trained and well-supervised Assistant Behavior Analysts and Behavior Technicians is a common practice in ABA treatment.<sup>5,6</sup>
- Their use produces more cost-effective levels of service for the duration of treatment.
- The use of tiered service-delivery model enables healthcare funders and managers to ensure adequate provider networks and deliver medically necessary treatment.
- It additionally permits sufficient expertise to be delivered to each client at the level needed to reach treatment goals. This is critical as the level of supervision required may shift rapidly in response to client progress or need.
- Tiered service-delivery models can also help with treatment delivery to families in rural and underserved areas, as well as clients and families who have complex needs.



### 3 Selection, Training, and Supervision of Behavior Technicians

- Behavior Technicians should receive specific, formal training before providing treatment. One way to ensure such training is through the Registered Behavior Technician credential (see page 30).
- Case assignment should match the needs of the client with the skill level and experience of the Behavior Technician. Before working with a client, the Behavior Technician must be sufficiently prepared to deliver the treatment protocols. This includes a review by the Behavior Analyst of the client's history, current treatment programs, behavior reduction protocols, data collection procedures, etc.
- Caseloads for the Behavior Technician are determined by the:
  - complexity of the cases
  - experience and skills of the Behavior Technician
  - number of hours per week the Behavior Technician is employed
  - intensity of hours of therapy the client is receiving
- Quality of implementation (treatment integrity checks) should be monitored on an ongoing basis. This should be more frequent for new staff, when a new client is assigned, or when a client has challenging behaviors or complex treatment protocols are involved.
- Behavior Technicians should receive supervision and clinical direction on treatment protocols on a weekly basis for complex cases or monthly for more routine cases. This activity may be in client briefings with other members of the treatment team including the supervising Behavior Analyst, or individually, and with or without the client present. The frequency and format should be dictated by an analysis of the treatment needs of the client to make optimal progress.
- Although hiring qualifications and initial training are important, there must be ongoing observation, training, and direction to maintain and improve the Behavior Technician's skills while implementing ABA-based treatment.

## Requirements for the Registered Behavior Technician (RBT) Credential

### Eligibility Requirements

#### Applicants for the RBT credential must:

- Be at least 18 years of age
- Possess a minimum of a high school diploma or national equivalent
- Successfully complete a criminal background registry check at the time of application
- Complete a 40-hour training program (conducted by a BACB certificant) based on the RBT Task List
- Pass the RBT Competency Assessment administered by a BACB certificant

### Ongoing Practice Requirements

#### RBTs must:

- Receive ongoing supervision by a BACB certificant for a minimum of 5% of the hours spent providing applied behavior-analytic services per month (including at least 2 face-to-face, synchronous supervisory contacts).
- Abide by a subset of the BACB's Professional and Ethical Compliance Code for Behavior Analysts identified as relevant for RBTs.



## SECTION 6: CASE SUPERVISION

ABA treatment is often characterized by the number of direct treatment hours per week. However, it is also critical to consider the required levels of additional case supervision (aka clinical direction) hours by the Behavior Analyst. Case supervision begins with assessment and continues through client discharge. ABA treatment requires comparatively high levels of case supervision to ensure effective outcomes because of (a) the individualized nature of treatment, (b) the use of a tiered service-delivery model, (c) the reliance on frequent collection and analysis of client data, and (d) the need for adjustments to the treatment plan.

This section will describe the case supervision activities that are individualized for the client and medically necessary to achieve treatment goals. Routine organizational activities (for example, timekeeping, employee evaluations, among others) that are not involved in individualized clinical treatment are not included here.

### 1 Case Supervision Activities

Case supervision activities can be described as those that involve contact with the client or caregivers (direct supervision, also known as clinical direction) and those that do not (indirect supervision). Both direct and indirect case supervision activities are critical to producing good treatment outcomes and should be included in service authorizations. It should be noted that direct case supervision occurs concurrently with the delivery of direct treatment to the client. On average, direct supervision time accounts for 50% or more of case supervision.

Case Supervision Activities, cont.

The list below, while not exhaustive, identifies some of the most common case supervision activities:

**OBSERVE**

**MONITOR**

**DIRECT**

**ANALYZE**

**EVALUATE**

**COORDINATE**

**DEVELOP**

**REVISE**

### Direct Supervision Activities

- Directly observe treatment implementation for potential program revision
- Monitor treatment integrity to ensure satisfactory implementation of treatment protocols
- Directing staff and/or caregivers in the implementation of new or revised treatment protocols (client present)

### Indirect Supervision Activities

- Develop treatment goals, protocols, and data collection systems
- Summarize and analyze data<sup>8</sup>
- Evaluate client progress towards treatment goals
- Adjust treatment protocols based on data
- Coordination of care with other professionals
- Crisis intervention
- Report progress towards treatment goals
- Develop and oversee transition/discharge plan
- Review client progress with staff without the client present to refine treatment protocols
- Directing staff and/or caregivers in the implementation of new or revised treatment protocols (client absent)

Case Supervision Activities, cont.

Supervisory Staff Qualifications:

## BEHAVIOR ANALYST

### Qualifications

- BCBA-D/BCBA or License in related field
- Competence in supervising and developing ABA treatment programs for clients with ASD<sup>9</sup>

### Responsibilities

- Summarize and analyze data
- Evaluate client progress towards treatment goals
- Supervise implementation of treatment
- Adjust treatment protocols based on data
- Monitor treatment integrity
- Train and consult with caregivers and other professionals
- Evaluate risk management and crisis management
- Ensure satisfactory implementation of treatment protocols
- Report progress towards treatment goals
- Develop and oversee transition/discharge plan

## ASSISTANT BEHAVIOR ANALYST

### Qualifications

- BCaBA (preferred)

### Responsibilities

- Various supervisory tasks that have been delegated and are overseen by the Behavior Analyst

## 2 Modality

Some case supervision activities occur in vivo; others can occur remotely (for example, via secure telemedicine or virtual technologies). However, telemedicine should be combined with in vivo supervision. In addition, some case supervision activities are appropriate for small groups. Some indirect case supervision activities are more effectively carried out outside of the treatment setting.

## 3 Dosage of Case Supervision

Although the amount of supervision for each case must be responsive to individual client needs, **2 hours for every 10 hours of direct treatment** is the general standard of care. When **direct treatment is 10 hours per week or less, a minimum of 2 hours per week** of case supervision is generally required. Case supervision may need to be temporarily increased to meet the needs of individual clients at specific time periods in treatment (for example, initial assessment, significant change in response to treatment).



This ratio of case supervision hours to direct treatment hours reflects the complexity of the client's ASD symptoms and the responsive, individualized, data-based decision-making which characterizes ABA treatment. A number of factors increase or decrease case supervision needs on a shorter- or longer-term basis. These include:

- treatment dosage/intensity
- barriers to progress
- issues of client health and safety (for example, certain skill deficits, dangerous problem behavior)
- the sophistication or complexity of treatment protocols
- family dynamics or community environment
- lack of progress or increased rate of progress
- changes in treatment protocols
- transitions with implications for continuity of care



## 4 Caseload Size

Behavior Analysts should carry a caseload that allows them to provide appropriate case supervision to facilitate effective treatment delivery and ensure consumer protection. Caseload size for the Behavior Analyst is typically determined by the following factors:

- complexity and needs of the clients in the caseload
- total treatment hours delivered to the clients in the caseload
- total case supervision and clinical direction required by caseload
- expertise and skills of the Behavior Analyst
- location and modality of supervision and treatment (for example, center vs. home, individual vs. group, telehealth vs. in vivo)
- availability of support staff for the Behavior Analyst (for example, a BCaBA)

The recommended caseload range for one (1) Behavior Analyst supervising **Focused treatment**

› ***without support of a BCaBA*** is 10 - 15.\*

› ***with support of one (1) BCaBA*** is 16 - 24.\*

Additional BCaBAs permit modest increases in caseloads.

The recommended caseload range for one (1) Behavior Analyst supervising **Comprehensive treatment**

› ***without support by a BCaBA*** is 6 - 12.

› ***with support by one (1) BCaBA*** is 12 - 16.

Additional BCaBAs permit modest increases in caseloads.

\* Focused treatment for severe problem behavior is complex and requires considerably greater levels of case supervision, which will necessitate smaller caseloads.





## SECTION 7: **WORKING WITH CAREGIVERS AND OTHER PROFESSIONALS**

### **1 Family Members/Others as Important Contributors to Outcomes**

Family members, including siblings, and other community caregivers should be included in various capacities and at different points during both Focused and Comprehensive ABA treatment programs. In addition to providing important historical and contextual information, caregivers must receive training and consultation throughout treatment, discharge, and follow-up.

The dynamics of a family and how they are impacted by ASD must be reflected in how treatment is implemented. In addition, the client's progress may be affected by the extent to which caregivers support treatment goals outside treatment hours. Their ability to do this will be partially determined by how well matched the treatment protocols are to the family's own values, needs, priorities, and resources.

The need for family involvement, training and support reflects the following:

- Caregivers frequently have unique insight and perspective about the client's functioning, information about preferences, and behavioral history.
- Caregivers may be responsible for provision of care, supervision, and dealing with challenging behaviors during all waking hours outside of school or a day treatment program. A sizeable percentage of individuals with ASD present atypical sleeping patterns. Therefore, some caregivers may be responsible for ensuring the safety of their children and/or implementing procedures at night and may, themselves, be at risk for problems associated with sleep deprivation.
- Caring for an individual with ASD presents many challenges to caregivers and families. Studies have documented the fact that parents of children and adults with ASD experience higher levels of stress than those of parents with typically developing children or even parents of children with other kinds of special needs.

- The behavioral problems commonly encountered with persons diagnosed with ASD (for example, stereotypy, aggression, tantrums) secondary to the social and language deficits associated with ASD, often present particular challenges for caregivers as they attempt to manage their behavior problems. Typical parenting strategies are often insufficient to enable caregivers to improve or manage their child's behavior, which can impede the child's progress towards improved levels of functioning and independence.
- Note that while family training is supportive of the overall treatment plan, it is not a replacement for professionally directed and implemented treatment.

## 2 Parent and Caregiver Training

Training is part of both Focused and Comprehensive ABA treatment models. Although parent and caregiver training is sometimes delivered as a stand-alone treatment, there are relatively few clients for whom this would be recommended as the sole or primary form of treatment. This is due to the severity and complexity of behavior problems and skill deficits that can accompany a diagnosis of ASD.

Training of parents and other caregivers usually involves a systematic, individualized curriculum on the basics of ABA. It is common for treatment plans to include several objective and measurable goals for parents and other caregivers. Training emphasizes skills development and support so that caregivers become competent in implementing treatment protocols across critical environments. Training usually involves an individualized behavioral assessment, a case formulation, and then customized didactic presentations, modeling and demonstrations of the skill, and practice with in vivo support for each specific skill. Ongoing activities involve supervision and coaching during implementation, problem-solving as issues arise, and support for implementation of strategies in new environments to ensure optimal gains and promote generalization and maintenance of therapeutic changes. Please note that such training is not accomplished by simply having the caregiver or guardian present during treatment implemented by a Behavior Technician.

*Training of parents and other caregivers usually involves a systematic, individualized curriculum on the basics of ABA.*

The following are common areas for which caregivers often seek assistance. These are typically addressed in conjunction with a Focused or Comprehensive ABA treatment program.

- Generalization of skills acquired in treatment settings into home and community settings
- Treatment of co-occurring behavior disorders that risk the health and safety of the child or others in the home or community settings, including reduction of self-injurious or aggressive behaviors against siblings, caregivers, or others; establishment of replacement behaviors which are more effective, adaptive, and appropriate
- Adaptive skills training such as functional communication, participation in routines which help maintain good health (for example, participation in dental and medical exams, feeding, sleep) including target settings where it is critical that they occur
- Contingency management to reduce stereotypic, ritualistic, or perseverative behaviors and functional replacement behaviors as previously described
- Relationships with family members, such as developing appropriate play with siblings

### 3 Coordination with Other Professionals

Consultation with other professionals helps ensure client progress through efforts to coordinate care and ensure consistency including during transition periods and discharge.

Treatment goals are most likely to be achieved when there is a shared understanding and coordination among all healthcare providers and professionals. Examples include collaboration between the prescribing physician and the Behavior Analyst to determine the effects of medication on treatment targets. Another example involves a consistent approach across professionals from different disciplines in how behaviors are managed across environments and settings. Professional collaboration that leads to consistency will produce the best outcomes for the client and their families.

Differences in theoretical orientations or professional styles may sometimes make coordination difficult. If there are treatment protocols that dilute the effectiveness of ABA treatment, these differences must be resolved to deliver anticipated benefits to the client.

Coordinate with Other Professionals, cont.

The BACB's ethical codes (the current *Guidelines for Responsible Conduct for Behavior Analysts* and the impending *Professional and Ethical Compliance Code for Behavior Analysts*) require the Behavior Analyst to recommend the **most** effective scientifically supported treatment for each client. The Behavior Analyst must also review and evaluate the likely effects of alternative treatments, including those provided by other disciplines as well as no treatment.

In addition, Behavior Analysts refer out to professionals from other disciplines when there are client conditions that are beyond the training and competence of the Behavior Analyst, or where coordination of care with such professionals is appropriate. Examples would include, but are not limited to, a suspected medical condition or psychological concerns related to an anxiety or mood disorder.





## SECTION 8: **DISCHARGE, TRANSITION PLANNING, AND CONTINUITY OF CARE**

The desired outcomes for discharge should be specified at the initiation of services and refined throughout the treatment process. Transition and discharge planning from a treatment program should include a written plan that specifies details of monitoring and follow-up as is appropriate for the individual and the family. Parents, community caregivers, and other involved professionals should be consulted as the planning process accelerates with 3-6 months prior to the first change in service.

A description of roles and responsibilities of all providers and effective dates for behavioral targets that must be achieved prior to the next phase should be specified and coordinated with all providers, the client, and family members.

Discharge and transition planning from all treatment programs should generally involve a gradual step down in services. Discharge from a Comprehensive ABA treatment program often requires 6 months or longer. For example, a client in a Comprehensive treatment program might step down to a Focused treatment model to address a few remaining goals prior to transition out of treatment.

### **Discharge**

Services should be reviewed and evaluated and discharge planning begun when:

- The client has achieved treatment goals; OR
- The client no longer meets the diagnostic criteria for ASD (as measured by appropriate standardized protocols); OR
- The client does not demonstrate progress towards goals for successive authorization periods; OR
- The family is interested in discontinuing services; OR
- The family and provider are not able to reconcile important issues in treatment planning and delivery.

*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 III: Appendices

### APPENDIX A: ELIGIBILITY REQUIREMENTS FOR BACB CERTIFICATION

#### BCBA Eligibility Requirements

##### A. Degree Requirement (effective 2016)

Possession of a minimum of a master's degree from an accredited university that was (a) conferred in behavior analysis, education, or psychology, or (b) conferred in a degree program in which the candidate completed a BACB approved course sequence.

##### B. Coursework and Experience Requirements

###### 1. Coursework:

The applicant must complete 270 classroom hours of graduate level instruction in the following content areas and for the number of hours specified:

###### a. Ethical and Professional Conduct – 45 hours

- The content must be taught in 1 or more freestanding courses devoted to ethical and professional conduct.

###### b. Concepts and Principles of Behavior Analysis – 45 hours

- The content should be based on the BACB Foundational Knowledge List.

###### c. Research Methods in Behavior Analysis

- Measurement (including Data Analysis) – 25 hrs
- Experimental Design – 20 hrs

###### d. Applied Behavior Analysis

- Fundamental Elements of Behavior Change & Specific Behavior Change Procedures – 45 hrs
- Identification of the Problem & Assessment – 30 hrs
- Intervention & Behavior Change Considerations – 10 hrs
- Behavior Change Systems – 10 hrs
- Implementation, Management and Supervision – 10 hrs

###### e. Discretionary – 30 hours

(any one or more of the content areas above OR for any applications of behavior analysis)



## 2: Experience.



Two additional pathways to the BCBA credential exist for university faculty and senior, doctoral-level practitioners. Details on these pathways are available at [www.BACB.com](http://www.BACB.com).

### BCBA-D Eligibility Requirements

The BCBA-D is a designation that recognizes doctoral-level BCBA's who:

1. Are actively certified as a BCBA; AND
2. Have earned a doctoral degree from a graduate program accredited by the Association for Behavior Analysis International; OR
3. Have earned a doctoral degree from an accredited university in which he or she conducted a behavior-analytic dissertation (including at least 1 experiment); AND passed at least 2 behavior analysis courses as part of the doctoral program of study; AND met all BCBA coursework requirements prior to receiving the doctoral degree.

### BCaBA Eligibility Requirements

#### A. Degree Requirement

Possession of a minimum of a bachelor's degree from an accredited university.

#### B. Coursework and Experience Requirements

##### 1. Coursework:

The applicant must complete 180 classroom hours of instruction in the following content areas and for the number of hours specified:

##### a. Ethical and Professional Conduct – 15 hours

##### b. Concepts and Principles of Behavior Analysis – 45 hours

- The content should be based on the BACB Foundational Knowledge List.



**c. Research Methods in Behavior Analysis**

- Measurement (including Data Analysis) – 10 hrs
- Experimental Design – 5 hrs

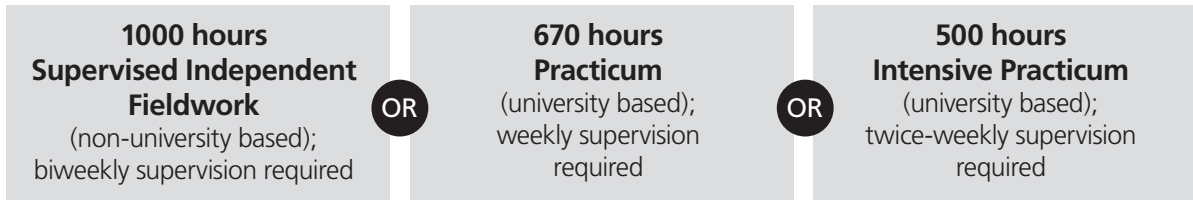
**d. Applied Behavior Analysis**

- Fundamental Elements of Behavior Change & Specific Behavior Change Procedures – 45 hrs
- Identification of the Problem & Assessment – 30 hrs
- Intervention & Behavior Change Considerations – 5 hrs
- Behavior Change Systems – 5 hrs
- Implementation, Management and Supervision – 5 hrs

**e. Discretionary** – 15 hours

(any one or more of the content areas above OR for any applications of behavior analysis)

**2. Experience:**





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## APPENDIX C: FOOTNOTES

<sup>1</sup> Throughout this document the term Autism Spectrum Disorder (ASD) is used to refer to a group of complex neurological disorders that are sometimes referred to as Autistic Disorder, Pervasive Developmental Disorder Not Otherwise Specified, Asperger’s Syndrome, High Functioning Autism, among others.

<sup>2</sup> ICD and DSM systems for Autistic Disorder and Autistic Spectrum Disorder.

<sup>3</sup> Focused and Comprehensive ABA exist on a continuum that reflects the number of target behaviors and hours of direct treatment and supervision.

<sup>4</sup> These staff are competent to administer treatment protocols and are often referred to by a variety of terms including ABA therapist, senior therapist, paraprofessional tutor, or direct line staff.

<sup>5</sup> The training and responsibilities of Behavior Technicians who implement treatment protocols are distinctly different from those of workers who perform caretaking functions.

<sup>6</sup> When possible, several Behavior Technicians are often assigned to each case to promote generalized and sustained treatment benefits for the client. This also helps prevent a lapse in treatment hours due to staff illness, scheduling availability, and turnover, etc. Intensive, comprehensive treatment programs may have 4-5 Behavior Technicians assigned to a single case. Each Behavior Technician may also work with several clients across the week.

<sup>7</sup> Depending on the needs of the individual client, Behavior Technicians may also require training in commercially available risk management programs for aggression and assaultive behavior. Other trainings may relate to informing employees of policies and procedures at the agency, state, and national levels.

<sup>8</sup> Given the intensity of the program, frequent review of the data and the treatment plan are needed. The Behavior Analyst should generally review direct-observation data at least weekly.

<sup>9</sup> See also consumer guidelines for identifying Behavior Analysts with competence in treating ASDs from the Autism Special Interest Group of the Association for Behavior Analysis International: <http://www.asatonline.org/research-treatment/book-reviews/abai-autism-special-interest-group-consumer-guidelines>.

## Development of the Guidelines

The BACB Board of Directors authorized the development of practice guidelines for ABA treatment of ASD in early 2012. The following procedures were followed to develop the initial and revised versions of the guidelines.

**Version 1.0:** A coordinator was appointed who then 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 that included 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, which in addition to being comprised of experts in ABA, 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 coordinator, 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.

**Version 2.0:** 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.



**Behavior Analyst Certification Board, Inc.**

8051 Shaffer Parkway  
Littleton, CO 80127 USA

T: 1-720-438-4321

F: 1-720-468-4145

[info@bacb.com](mailto:info@bacb.com)



[www.BACB.com](http://www.BACB.com)