HEALTH LICENSING OFFICE
Kate Brown, Governor

Oregon Health Authority

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http://www.oregon.gov/OHLA/Pages/index.aspx

WHO: **Health Licensing Office**
Behavior Analysis Regulatory Board

WHEN: **1:30 p.m. March 31, 2015**

WHERE: **Health Licensing Office**
Rhoades Conference Room
700 Summer St. NE, Suite 320
Salem, Oregon

What is the purpose of the meeting?
The purpose of the meeting is to conduct board business. A working lunch may be served for board members and designated staff in attendance. A copy of the agenda is printed with this notice. Go to http://www.oregon.gov/OHLA/BARB/Pages/meetings.aspx for current meeting information.

May the public attend the meeting?
Members of the public and interested parties are invited to attend all board/council meetings. All audience members are asked to sign in on the attendance roster before the meeting. Public and interested parties' feedback will be heard during that part of the meeting.

May the public attend a teleconference meeting?
Members of the public and interested parties may attend a teleconference board meeting **in person** at the Health Licensing Office at 700 Summer St. NE, Suite 320, Salem, OR. All audience members are asked to sign in on the attendance roster before the meeting. Public and interested parties' feedback will be heard during that part of the meeting.

What if the board/council enters into executive session?
Prior to entering into executive session the board/council chairperson will announce the nature of and the authority for holding executive session, at which time all audience members are asked to leave the room with the exception of news media and designated staff. Executive session would be held according to ORS 192.660.

No final actions or final decisions will be made in executive session. The board/council will return to open session before taking any final action or making any final decisions.

Who do I contact if I have questions or need special accommodations?
The meeting location is accessible to persons with disabilities. A request for accommodations for persons with disabilities should be made at least 48 hours before the meeting. For questions or requests contact a board specialist at (503) 373-2049.

Items for Board Action

Approval of the Agenda

Health Licensing Office
Behavior Analysis Regulatory Board

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1:30 p.m., March 31, 2015
700 Summer St. NE, Suite 320
Salem, Oregon

***Meeting will be a teleconference**

Call to order

1. Items for board action
- Approval of agenda
- Approval of the minutes for Feb. 17 and Feb. 23, 2015
- Review of applications

2. Executive session-Pursuant to ORS 192.660(2)(f) for the purpose of considering information or records exempt from public inspection. (Legal advice)

3. Items for board action II
- Petition for rulemaking vote

4. Reports
- Director report
  Legislative update
- Licensing and fiscal statistical reports

5. Policy
- Interventionist oversight discussion
- Rules advisory committee discussion

6. Public/interested parties' feedback

7. Other board business

Agenda is subject to change.
For the most up to date information visit www.oregon.gov/OHLA

Approval of Minutes

Health Licensing Office
Behavior Analysis Regulatory Board

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Feb. 17, 2015
700 Summer St. NE, Suite 320
Salem, Oregon

MINUTES

MEMBERS PRESENT VIA TELECONFERENCE
Jenny Fischer, Chair
Kurt Freeman, Vice Chair
Wendy Machalicek
Amy Donaldson
Alice Austin

STAFF PRESENT
Holly Mercer, Director
Sylvie Donaldson, Fiscal Services and Licensing Manager
Joanna Tucker Davis, Assistant Attorney General, Oregon Department of Justice
Anne Thompson, Policy Analyst
Debby Daniels, Qualification Specialist

MEMBERS PRESENT
Michele Raddish

Call to order

Chair Jenny Fischer called the Behavior Analysis Regulatory Board to order at 1:32 p.m. on Feb. 17, 2015. Roll was taken.

Items for board action

- **Approval of agenda**

Kurt Freeman made a motion, with a second by Michele Raddish, to approve the agenda. The motion passed unanimously.

- **Approval of minutes**

Michele Raddish made a motion, with a second by Kurt Freeman, to approve the Jan. 15, 2015, meeting minutes. The motion passed unanimously.

- **Applications**

The Health Licensing Office received applications from:

- Saradarian, Corey – Behavior Analyst
- Marin, Casey – Behavior Analyst
- Cox, Beth-Ann – Behavior Analyst

- Rossi, Denise – Behavior Analyst
- Schwartz, Heather – Behavior Analyst
- Gann, Brandon – Behavior Analyst
- Binns, Lyndsey – Behavior Analyst
- Erickson, Emilie – Behavior Analyst

By consent agenda, Kurt Freeman moved, with a second by Michele Raddish, to license Saradarian, Marin, Cox, Rossi, Schwartz, Gann, Binns and Erickson. Motion passed unanimously.

By consent agenda, Alice Austin moved, with a second by Kurt Freeman, to license Behavior Analyst Wendy Machalicek. Motion passed unanimously. Board member Wendy Machalicek recused.

The Health Licensing Office received applications from:

- Grund, Janine – Behavior Analysis Interventionist

Michele Raddish made a motion, with a second by Alice Austin, to register Grund. Motion passed unanimously. Chair Jenny Fischer recused.

Policy

♦ **Legislative changes, concepts, rules advisory committee**

Director Holly Mercer updated the Board on the legislative activity that affects them. Mercer said that she and some other stakeholders met with the Oregon Legislative Counsel about HB 2563, Paul Terdal's bill that changes the structure of the Behavior Analysis Regulatory Board. She said that Sen. Alan Bates also may have a bill that could have an impact, but that it hasn't yet been released.

Mercer said that things were moving quickly with HB 2563, but that there was a long way to go. She said that one of the primary issues that came out of discussions about HB 2563 was that the registration of the Other Health Care Professional in the current statute may be deleted. The idea is that professionals with Applied Behavior Analysis (ABA) in their scope would answer to their own boards.

She said that another primary topic of discussion was around insurance reimbursement. She said the discussion focused on making the new statute a title act, the idea being that anyone can do the work, but only licensees can use the title. Mercer explained that the Board would license behavior analysts, assistant behavior analysts and behavior analysis interventionists. She said there was discussion around the clear qualifications around interventionists and that licensure would mean more than just being on a list.

Members asked if the Board would regulate who could supervise interventionists. Mercer said that the Board would license interventionists and the licensees would be responsible for making sure their supervision meets the Board's criteria.

Mercer said that HB 2563 may have a licensure for what has been referred to as the "truly unlicensed" group, people who are not licensed by any other board or have national certification. She explained that no one knows how many people would fall into this category, but that she hopes to get more information when the bill has its legislative hearings.

Mercer said another issue she hopes the new legislation will help with is moving the Board under the Health Licensing Office's (HLO) administrative umbrella. This would allow HLO to issue licenses to applicants who meet criteria. The statute the Board has now requires the Board to approve or deny applications, and to prevent service delays, the Board has been meeting frequently. This is a burden to the Board, HLO, applicants and the clients they serve.

Freeman asked about the possibility of the Board getting a practice act. He said that, for example, the psychology board goes after people who are practicing psychology without a license. He said he is nervous about people who are practicing with no oversight at all.

Mercer said that while there was some discussion about a practice act, the feedback is that other professionals that have ABA in their scope don't need to be licensed with this Board. But the idea is still on the table. She also explained that a practice act may have a greater fiscal impact.

Freeman had questions about who decided what was in other professionals' scope and Mercer said it was up to the boards who govern the professions.

Austin asked about the best way to propose alternatives to the legislation that's being discussed. Mercer said that most of the feedback will come from public testimony. Mercer explained that Board members may testify as members of the public but HLO is neutral. Staff attends to answer questions about fiscal matters.

Public/interested parties' feedback

Melissa Gard from the Oregon Association for Behavior Analysis said that a lot of what she came to discuss may be moot in light of the legislative changes that are being discussed. She said she supported the title/practice bill ideas and that most challenges came from lumping professionals together. She asked the Board to take comments from ABA professionals regarding overlaps and gaps in scope.

Other board business

The Board discussed the submitted letter from the Center for Autism and Related Disorders (CARD) regarding the registration of a behavior analysis interventionist.

Freeman said that when the criteria was set, the bar was high. Raddish agreed. Mercer said staff could reach out to CARD for more information.

Mercer said that the next Board is set for March 31, but that is a long time for applicants to wait for Board approval or denial of licenses and registration. She asked if the Board could reach quorum for a short period to only review applications.

Austin said she submitted an application for an interventionist and was hoping to get it approved at this meeting. She said she was in danger of losing her employee.

Freeman said he was worried about setting a precedent; the psychology board reviews applications twice a year. He said the meetings are noticed and "setting policy based on individual problems is a slippery slope."

Fischer said that supervisors can communicate with their interventionists and make sure their applications are in two weeks before the Board meeting.

The Board decided to hold at meeting 3:45 p.m. on Feb. 23 just to review applications.

The Board adjourned at 2:50 p.m.

Minutes prepared by Anne Thompson, Policy Analyst

Health Licensing Office
Behavior Analysis Regulatory Board

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Feb. 23, 2015
700 Summer St. NE, Suite 320
Salem, Oregon

MINUTES

MEMBERS PRESENT VIA TELECONFERENCE
Jenny Fischer, Chair
Amy Donaldson
Alice Austin
Michele Raddish
Harmony Miller

STAFF PRESENT
Sylvie Donaldson, Fiscal Services and Licensing Manager
Anne Thompson, Policy Analyst
Debby Daniels, Qualification Specialist

MEMBERS ABSENT
Kurt Freeman, Vice Chair
Wendy Machalicek

Call to order

Chair Jenny Fischer called the Behavior Analysis Regulatory Board to order at 3:45 p.m. on Feb. 23, 2015. Roll was taken.

Items for board action

♦ **Approval of agenda**

Alice Austin made a motion, with a second by Michele Raddish, to approve the agenda. The motion passed unanimously.

♦ **Applications**

The Health Licensing Office (HLO) received applications from:

- Boylan, Kelly – Behavior Analysis Interventionist
- Eggenberger, Sarah – Behavior Analysis Interventionist
- Marks, Piper – Behavior Analysis Interventionist
- Smith, Jessica – Behavior Analysis Interventionist

Alice Austin said Boylan and Eggenberger both had training that occurred the first week of January 2015, before anyone was a licensed behavior analyst in Oregon. After Jan. 1, 2015, training has to be given by a licensed behavior analyst. The applications were marked incomplete.

Alice Austin moved, with a second by Amy Donaldson, to register Marks. Motion passed unanimously. Board chair Jenny Fischer recused.

Michele Raddish moved, with a second by Amy Donaldson, to register Smith. Motion passed unanimously. Board member Alice Austin recused.

The HLO received applications from:

- Annette Grandolfo – Behavior Analyst
- Amy Loukus – Behavior Analyst
- Kara Magee-Arick – Behavior Analyst
- Candice Pogge – Behavior Analyst
- Maria Gilmour – Behavior Analyst

By consent agenda, Harmony Miller, with a second by Alice Austin, moved to license Grandolfo, Loukus, Magee-Arick, Pogge and Gilmour. Motion passed unanimously.

The Board meeting was adjourned at 4:02 p.m.

Minutes prepared by Anne Thompson, Policy Analyst

Application Review

Issue Statement

Issue Statement

HEALTH LICENSING OFFICE

Issue:
The Behavior Analysis Regulatory Board must approve or deny registration for Behavior Analysts and Behavior Analysis Interventionists.

Recommendation:
The Board moves to approve the applications from:

Hannah Acock – Behavior Analysis Interventionist
Amanda Cox – Behavior Analysis Interventionist
Emiley Atkins – Behavior Analysis Interventionist
Donnia Schwarz – Behavior Analysis Interventionist
Kelly Boylan – Behavior Analysis Interventionist
Sarah Eggenberger – Behavior Analysis Interventionist
Samantha Leseney – Behavior Analysis Interventionist
Leah Lefever – Behavior Analysis Interventionist (pending LEDS check)
Michelle Grendvil – Behavior Analysis Interventionist (pending LEDS check)

By consent agenda, the Board moves to approve the application from:

Kelsey J. Townsend – Behavior Analyst
Sarah Cooper – Behavior Analyst
Ellen E. Lynch – Behavior Analyst (pending LEDS check)
Mairi Ann Nielsen – Behavior Analyst (pending LEDS check)

Items Redacted Available via Public Records Request

Executive Session

♦ ♦

ORS 192.660(2)(f) for the purpose of considering information or records exempt from public inspection.

Items for Board Action

Petition For Rulemaking

Proposed Rules on Registration of Licensed Health Care Professionals:

824-030-0030 Registration of Licensed Health Care Professional

An individual applying for registration as a Licensed Health Care Professional must:

(1) Submit a completed application form prescribed by the Board, which must contain the information listed in OAR 824-010-0040 and be accompanied by payment of the required application fees;

(2) Submit affidavit of licensure as a Licensed Health Care Professional in a profession for which the scope of practice includes Applied Behavior Analysis.

(a) The following practices of licensed health care professions are recognized to include Applied Behavior Analysis:

(A) the practice of psychology, as defined in ORS 675.010 (4);

(B) the practice of speech-language pathology, as defined in ORS 681.205(5);

(C) the practice of occupational therapy, as defined in ORS 675.210(4);

(D) the practice of professional counseling, as defined in ORS 675.705(7)(a); and

(E) the practice of clinical social work, as defined in ORS 675.510(2).

(b) For other licensed health care professions, please provide an explanation of how Applied Behavior Analysis is within your licensed scope of practice.

(3) Submit an official transcript demonstrating attainment of at least a master's degree in any of these areas of study:

(a) Behavior analysis;

(b) Clinical psychology;

(c) Counseling;

(d) Developmental psychology;

(e) Education;

(f) Medicine – Medical doctor/doctor of osteopathic medicine;

(g) Occupational therapy;

(h) Physical therapy

(i) School psychology;

(j) Social Work;

(k) Speech/language pathology.

(4) Attest to having clinical experience treating individuals diagnosed with autism spectrum disorder.

(5) Provide a declaration describing the applicant's scope of professional practice and competence in implementing Applied Behavior Analysis, including:

(a) Types of patients, including age range and specific indications or symptoms; and

(b) Approaches to Applied Behavior Analysis for which the provider is qualified, which may include but are not limited to UCLA / Lovaas, Early Start Denver Model, Pivotal Response Training, Project ImPACT, or other methods.

(6) Provide all applicable evidence of sufficient competency to practice applied behavior analysis as defined in 824-010-0005(3). Evidence must include examples from each of the following categories:

(a) Evidence of competency in implementing one or more intervention based on Applied Behavior Analysis as demonstrated by meeting one or more of the following criteria:

(A) Certification in one or more approach to Applied Behavior Analysis;

(B) Graduate level course work related to Applied Behavior Analysis;

(C) Teaching courses at the college level on Applied Behavior Analysis principles and interventions;

(D) Teaching professional courses on Applied Behavior Analysis principles and interventions; or

(E) Published research in peer-reviewed journals on Applied Behavior Analysis interventions that demonstrate competency in implementation.

(b) Demonstrate competence in the ability to assess behavior, collect data on the intervention, analyze data and adjust treatment as needed to achieve a measurable behavioral change. Competence will be demonstrated by meeting one or more of the following criteria:

(A) Publication of research on Applied Behavior Analysis in a peer-reviewed journal;

(B) Submission of evidence of data collection and outcomes based on Applied Behavior Analysis interventions for at least two individuals. Evidence must include specific and measurable goals, techniques used to address the goals, and outcomes; or

(C) Continuing Education courses in principles of Applied Behavior Analysis.

(c) Demonstrate competency in working with families and professionals in the design and implementation of Applied Behavior Analysis treatment programs as evidenced by one or more of the following:

(A) Continuing Education or graduate level coursework on family systems and effective strategies to train professionals/parents;

(B) Proof of management and training of licensed health care professionals for at least one year;

(C) Teaching professional courses;

(D) Teaching college courses;

(E) Supervision of graduate students in fieldwork placements; or

(F) Clinical supervisory position with professional staff

(7) Submit required registration fees.

Issue Statement

HEALTH LICENSING OFFICE

BACKGROUND:

During the 2013 Legislative Session Senate Bill 365 passed, creating the Behavior Analysis Regulatory Board (BARB) and licensing for behavior analysts and assistant behavior analysts and registration of licensed health care providers and behavior analysis interventionists.

OAR 676.800 tasked BAR with establishing by rule criteria for the licensing of behavior analysts and assistant behavior analysts and registration of licensed health care professionals and behavior analysis interventionists.

On Oct. 16, 2014, BARB voted to adopt permanent administrative rules.

ISSUE:

On Jan. 8, 2015 the Health Licensing Office (HLO) formerly the Oregon Health Licensing Agency, received a Petition to Amend an Administrative Rule from Paul Terdal; it was presented by Shane Jackson. According to ORS 183.390 HLO and Board are required, within 90 days of the receipt of a *Petition for Rulemaking*, to either begin the rulemaking process or deny the petition request. HLO and the Board must also first invite public comment pursuant to ORS 183.390 and obtain information on any of the following factors:

- Whether options exist for achieving the rule's substantive goals in a way that reduces the negative impact on businesses;
- The continued need for the rule;
- The nature of complaints or comments received concerning the rule;
- The complexity of the rule;
- The extent to which the rule overlaps, duplicates or conflicts with other state rules of federal regulations and, to the extent feasible, with local government regulations; and
- The degree to which technology, economic conditions or other factors have changed in the subject area affected by the rule, and the statutory citation or legal basis for the rule.

RECOMMENDATION:

Determine whether to deny the petition or enter into the rulemaking process.

Rule Petition
Public Comment

Issue Statement

HEALTH LICENSING OFFICE

Issue:
The Behavior Analysis Regulatory Board (Board) received exhibits numbered 1-17 as public comments on the petition for rulemaking:

Exhibits:
1. Franklin W. Bender
2. G. Robert Buckendorf
3. Laura Cook
4. Amy Constanza-Smith
5. Jill K. Dolata
6. Anna Dvortcsak
7. Kim Elliott
8. Deborah Ferguson
9. Sean Gillespie
10. Cheryl Green
11. Cate Read Hickman
12. Carol Markovics
13. Andy McMillin
14. Robert Nickel
15. Tobi Rates
16. Pam Smith
17. Tatiana Terdak

Recommendation:
The Board accept the public comments for the petition for rulemaking.

2/17/15
Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

I would also ask the board to consider reviewing the attached article by a member of BARB. I believe that Dr. Donaldson outlines that speech-language pathologists have both the academic and professional training to use operant-based approaches within daily therapeutic experiences. As a licensed SLP, I would never operate outside of my scope of practice and ever say that I was a licensed ABA-Therapist. However, that should not preclude me from using operant-based approaches, of which I've had both graduate and post graduate training, when serving my clients.

I would respectfully request that the board consider the petition to amend OAR 824-003-0405 in order for our two professions to operate in a team-based manner to best support children and adults.

Sincerely,

Franklin W. Bender, MS, CCC-SLP

Past President
Oregon Speech-Language and Hearing Association

Attachment:
LSHSS
Tutorial

Team Collaboration: The Use of Behavior Principles for Serving Students With ASD

Amy L. Donaldson[a] and Aubyn C. Stahmer[b,c,d]

Purpose: Speech-language pathologists (SLPs) and behavior analysts are key members of school-based teams that serve children with autism spectrum disorders (ASD). Behavior analysts approach assessment and intervention through the lens of applied behavior analysis (ABA). ABA-based interventions have been found effective for targeting skills across multiple domains for children with ASD. However, some SLPs may be unfamiliar with the breadth of ABA-based interventions. The intent of this tutorial is to briefly introduce key ABA principles, provide examples of ABA-based interventions used within schools, and identify strategies for successful collaboration between behavior analysts

and SLPs.
Method: This tutorial draws from empirical studies of ABA-based interventions for children with ASD within school settings, as well as discussions in the extant literature about the use of behavior principles by SLPs and strategies for interdisciplinary collaboration.
Conclusion: Given the prevalence of ASD at 1 in 68 children (Centers for Disease Control and Prevention, 2014) and the high cost of serving these children within schools (an average cost of 286% over regular education; Chambers, Shkolnik, & Perez, 2003), the need for effective, comprehensive service provision and efficiency within interdisciplinary teams is paramount. Communication, mutual understanding, and recognition of common ground between SLPs and behavior analysts can lead to successful collaboration.

Autism spectrum disorders (ASD) are characterized by impairment in social communication and the presence of repetitive behaviors and restricted interests (American Psychiatric Association, 2013). However, children with ASD vary greatly in symptom severity, presence of intellectual disability, and language deficits, and there are often significant changes in behavioral features within individuals over time (Lord, Leventhal, & Cook, 2001). Additionally, the pervasive nature of the disorder across all areas of development (communication, social, cognitive, play, motor, adaptive skills) means that multiple disciplines are necessarily involved in effective intervention. This can often create challenges in coordinating and implementing services for children with ASD.

Large-scale research in the United States indicates that children with ASD are likely to receive school-based services as a primary intervention service (Mandell, Walrath, Manteuffel, Sgro, & Pinto-Martin, 2005). In a recent study of 101 higher functioning children with ASD, 81% of children were receiving special education services (White, Scahill, Klin, Koenig, & Volkmar, 2007). According to the U.S. Department of Education (2013), over 455,000 students with autism received services during the 2011–2012 school year, making children with ASD the third most frequently served population of children with special education needs that year. Additionally, the American Speech-Language-Hearing Association (ASHA, 2012) reported that 90% of schoolbased speech-language pathologists (SLPs) reported serving students with ASD in 2012; this reflects an increase of 13% since 2000. Moreover, the number of students with ASD served by school-based SLPs per month has doubled (from four per month in 2000 to eight per month in 2012). No other population of students has grown to this degree during this time period; indeed, several have decreased or remained the same (ASHA, 2012).

The prevalence of ASD continues to rise (one in 68 children and one in 42 boys; Centers for Disease Control and Prevention [CDC], 2014), and the costs for educating children with autism are high. Recent research indicates that the annual costs associated with educating a child with ASD are roughly $6,500 to $10,400 higher than for educating

a child without special education needs (Lavelle et al., 2013). These increased costs may be related to the intensity

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Editor: Marilyn Nippold
Associate Editor: Stephen Camarata
Received March 28, 2014
Revision received May 27, 2014
Accepted July 30, 2014
DOI: 10.1044/2014_LSHSS-14-0038
Disclosure: Amy L. Donaldson is a member of the Behavior Analysis Regulatory Board (BARB) for the State of Oregon.

of service needs in this population. In order to maximize staffing and the benefit of costly services, school-based teams must carefully coordinate care.

Assessment and intervention methods based on principles of behavior are used widely within school settings. Indeed, applied behavior analysis (ABA) is the lens through which behavior analysts and other team members (including SLPs) target skills for children with ASD. "Applied behavior analysis is a scientific approach for discovering environmental variables that reliably influence socially significant behavior" (Cooper, Heron, & Heward, 2007, p. 15); careful examination of these variables, or intervention methods, through data collection and analysis, determine if one continues an effective intervention or discontinues an ineffective one.

Social communication deficits are a core feature of ASD (APA, 2013). Certified and licensed SLPs, with their specialized background and expertise in social and communication skills, are particularly well qualified to provide services for these students (ASHA, 2006). The training and knowledge of board-certified behavior analysts (BCBAs) also makes them highly qualified to serve children with ASD, particularly for addressing the needs of children with ASD who present with challenging behaviors. In addition, many children with ASD demonstrate improved outcomes across multiple domains when taught within a behavioral framework (National Autism Center, 2011; Z. Warren et al, 2011). Thus, both team members are vital for providing students with ASD comprehensive school-based services.

SLPs and behavior analysts will find that they are often targeting skills within the same developmental domains, even using some of the same strategies, but may be viewing the needs through different lenses. Many SLPs may be employing principles of ABA within their daily clinical practice, yet may not recognize them as such (Ogletree & Oren, 2001). Indeed, the discipline of speech-language pathology has its roots in behavioral principles (e.g., Gray & Ryan, 1973; Hargrave & Swisher, 1975; Mulac & Tomlinson, 1977). However, current practitioners may have limited familiarity with the breadth of intervention methods that are based on ABA, from very structured to naturalistic. Thus, increased understanding is warranted to promote successful coordination and collaboration.

Given these issues, the overarching purpose of this tutorial

is to further acquaint SLPs with core ABA principles and ABA-specific practices, to increase understanding and communication with behavior analyst colleagues. Specifically, we (a) briefly introduce key ABA principles; (b) provide examples of both structured and naturalistic evidence-based interventions based on ABA principles in use within school settings; (c) discuss ABA strategies that are often used by SLPs; and (d) describe ways in which SLPs and behavior analysts might successfully collaborate on school-based intervention teams serving children with ASD.

Introduction to ABA Principles

Applied behavior analysis is a scientific approach to examining behavior (Cooper et al., 2007). Although ABA has been widely applied to intervention for individuals with special needs from its inception (e.g., Bijou, 1970), many everyday interactions and explanations for human behavior are based on these principles (Kearney, 2008; Sidman, 1994). Interventions based on ABA adhere to an operant model, which holds that learning is the result of consequences that follow a behavior, and these consequences determine the likelihood of a behavior occurring again in the future (Baer, Wolf, & Risley, 1968). The operant model involves three main parts: (a) an antecedent, which is an event or experience that happens before a behavior and occasions or triggers the behavior; (b) a behavior or response (or lack of response) from an individual; and (c) a consequence that occurs after the behavior, the value of which can increase, decrease, or maintain the behavior in the future. This is called the three-part contingency (referred to as "the ABCs of ABA"), and it is the basis for ABA interventions (Skinner, 1968). Within an intervention context, the antecedent is most often the stimulus presented by the clinician with the intent to elicit the target behavior, the behavior is the child's response to the stimulus, and the consequence delivered by the clinician can either reinforce (increase), shape (modify), or punish (decrease) the behavior (Cooper et al., 2007; Kearney, 2008). For a more detailed introduction to the principles of ABA, see Kearney (2008).

Although no one intervention has been identified as the most effective for all children with ASD, strategies based on the principles of ABA have the most empirical support for this population at this time (e.g., Maglione, Gans, Das, Timbie, & Kasari, 2012; National Autism Center, 2009, 2011; Z. Warren et al., 2011). Contrary to popular belief, ABA is not synonymous with one method or technique (e.g., discrete trial training; Lovaas, 1987). ABA-based interventions range from highly structured programs that are conducted in a one-on-one treatment setting to more naturalistic inclusion programs that include typically developing children as models. Some ABA programs are distinguishable by "brand names," such as discrete trial training (DTT) and pivotal response training (PRT; R. L. Koegel, Schreibman, Good, Cerniglia, Murphy, & Koegel, 1989), whereas other programs use the principles of ABA (such as the ABCs) more generally. For a complete review of current evidence-based practices in schools for children with autism, please see National Autism Center (2011).

As indicated, principles of ABA can be applied across

a wide continuum of intervention methods, from structured to naturalistic. DTT is one example of a highly structured ABA approach, whereas PRT is one example of a more naturalistic approach. DTT involves multiple or massed trials of the same skill at one time, with complexity systematically increased.

Discrete Trial Training (DTT)

Intervention within a DTT framework most often proceeds as follows:

1. The clinician gains the child's attention;

2. the clinician presents the antecedent (referred to as a discriminative stimulus or S_D) intended to elicit the target behavior;
3. the child responds to the stimulus (behavior);
4. the clinician provides the consequence; and
5. there is a brief pause before introduction of the next trial (referred to as an intertrial interval).

Depending upon the accuracy of the behavior, the consequence either reinforces desired behaviors or shapes approximations of desired behaviors using a specific, predetermined error-correction procedure, such as saying, "Try again," or modeling the correct behavior (Smith, Mruzek, Wheat, & Hughes, 2006) and repeating the trial. Within DTT, desired behaviors are often reinforced with a consequence that is not directly related to the behavior, such as an edible or sticker (referred to as an artificial reinforcer).

A preference assessment, which is a formal, systematic way of gathering information about children's preferred rewards, can be used to choose effective reinforcers. Multiple assessment methods can be used, such as (a) providing forced choices—a systematic method of pairing multiple potential reinforcers in a forced-choice paradigm and rank ordering the items according to the child's choices to determine effective reinforcers; (b) using time-based assessment—the clinician provides an array of potentially reinforcing items and collects data on the amount of time the child spends with each item in a free access situation; and/or (c) interviewing caregivers—using systematic interview protocol, the clinician obtains information about child preferences. (See Cooper et al., 2007, Chapter 11, for more detailed description.)

As an example, when targeting expressive vocabulary using DTT, the activity may present as follows. The child or clinician chooses a reward (often an artificial reinforcer). The clinician gains the child's attention and then presents the child with a picture of a cat and says, "What's that?" (antecedent). The child responds, "Cat" (behavior). The clinician states, "Yes! It's a cat," and gives the child the reinforcer (immediate consequence that reinforces the behavior).

If the child does not respond or responds in error, a consequence intended to shape the behavior is presented. For example, if the child does not respond, the clinician may give the child an expectant look and point to the picture. If the child's response is incorrect (e.g., the child says, "Dog"), the clinician may respond with a specific error correction procedure intended to reduce the likelihood of another error (e.g., holding up the picture and modeling,

"Cat"). The sequence is repeated with a brief pause (intertrial interval) between each trial. A child who is learning a new skill typically requires use of a continuous reinforcement schedule (e.g., production of one target behavior followed directly by the reinforcer; 1:1 reinforcement schedule), as described above. As the child's performance improves, the clinician may modify the reinforcement schedule (e.g., production of two target behaviors followed by the reinforcer; 2:1 reinforcement schedule) and/or use a token system.

A token economy system of reinforcement can be very useful in a school environment. In this system, tokens (which can be pennies, stickers, or any small item) serve as symbols that may be traded for the chosen/desired reinforcer after successful collection of a predetermined number of tokens. Use of a token economy can be advantageous in teaching a child to complete a series of trials, while delaying reinforcement. It may also be helpful when the child's desired reinforcer is not immediately available, so delayed access is necessary. Tokens can be earned for any number of behaviors, such as a correct trial in the example above, periods of time with desired behavior (e.g., a token is placed in a jar for every 10 min that the child does not call out in class), or for participation (e,g., engaging in a social game). When the child has earned the number of tokens predetermined with the adult, s/he is given access to the preselected reinforcer (delayed consequence).

Once a trial is complete and reinforcement is provided (immediate or a token), data about the trial(s) are documented. A core principle of ABA is data analysis to inform clinical decision making. Therefore, the clinician carefully documents the child's performance and the level of support provided for each trial. This DTT framework may be quite familiar to SLPs who use drill-based learning to target speech sounds and/or specific language behaviors. Indeed, such an approach has a rich history within the discipline of speech-language pathology. See Duchan (2010) for a historical review of SLP practices within school settings.

Pivotal Response Training (PRT)

In contrast to DTT, PRT (L. K. Koegel, Koegel, Harrower, & Carter, 1999; R. L. Koegel et al., 1989) is an example of a naturalistic ABA-based intervention. A variety of naturalistic behavioral interventions grounded in the principles of ABA were developed to address some of the limitations of highly structured approaches such as poor generalization of responding to new stimuli, people, and environments, and limited maintenance of some skills over time (Simpson, 2005). PRT is a multicomponent intervention shown to be effective for improving communication (e.g., R. L. Koegel, Dyer, & Bell, 1987), play (e.g., Stahmer, 1995), joint attention (e.g., Whalen & Schreibman, 2003), social interaction (e.g., R. L. Koegel & Frea, 1993), and speech intelligibility (e.g., R. L. Koegel, Camarata, Koegel, Ben-Tall, & Smith, 1998). PRT has been established as an evidence-based treatment for children with ASD (National Autism Center, 2009, 2011; Z. Warren et al., 2011; Wong et al., 2013). It is based on a series of studies identifying important treatment components and demonstrating their effect on child behavior.

The “pivotal” responses trained in PRT are motivation, initiation, and responsivity to multiple cues (i.e., increasing breadth of attention). Specific elements include gaining the child’s attention, presenting clear and appropriate instructions, interspersing easier tasks (maintenance) with more difficult ones (acquisition), sharing control (including following the child’s choice and taking turns), requiring the child to

respond to multiple aspects of the learning environment (e.g., both the color and shape of a puzzle piece), providing contingent consequences, ensuring a direct relationship between the child’s response and the reinforcer, and reinforcing attempts at correct responding (Humphries, 2003; R. L. Koegel et al., 1989; Verschuur, Didden, Lang, Sigafoos, & Huskens, 2013).

To provide a direct comparison of naturalistic and highly structured ABA-based methods, the previous example of targeting the expressive vocabulary word cat is presented here. Within PRT, the clinician might teach the word cat in the context of playing with a set of animal figurines or an animal puzzle, offering the child a choice between the two activities (child choice). If the child chooses the puzzle activity, the clinician holds up the cat puzzle piece and asks, “What’s this?” (antecedent). If the student responds, “Cat,” the clinician hands the student the cat puzzle piece to put into the puzzle (consequence), and then the clinician takes his/her turn by labeling a piece and placing it in the puzzle (shared control). Note that the consequence of giving the child the cat puzzle piece directly relates to the behavior of saying “cat”; this is referred to as a natural or direct reinforcer. If the child makes an attempt at correct responding, by approximating the production, the clinician would model the correct production and then follow the same steps to reward the child for the attempt, thereby increasing motivation to respond and shaping the target behavior. If the child responds incorrectly, for example, with “dog,” or does not respond to the antecedent, the clinician might say, “Cat. It’s a cat,” to model the expected behavior, and then withhold giving the puzzle piece to the child. The clinician would then present the antecedent again and reinforce the child’s imitation of “cat” or an attempt to do so by giving the child the puzzle piece. If the child seems to be unresponsive due to lack of motivation for the activity the clinician might provide alternative choices that may be more motivating. Within PRT, the clinician would use several examples of cats, such as different cat puzzles, books that contain cats, and cat figurines to ensure the child generalizes the concept of “cat” across different stimuli.

Again, this PRT framework is most likely familiar to SLPs; however, they may recognize it under a different name—milieu teaching. Like PRT, naturalistic behavioral intervention methods such as enhanced milieu teaching and prelinguistic milieu teaching combine principles of behavior with a social–pragmatic emphasis on adult responsivity and reciprocity. Milieu teaching methods have been found to be effective for increasing the language skills of young

children with ASD (Franco, Davis, & Davis, 2013; Ingersoll, Meyer, Bonter, & Jelinek, 2012; Yoder & Stone, 2006a, 2006b). Additionally, a combination of DTT and milieu teaching/PRT has been found effective for increasing the joint attention skills of children with ASD (e.g., Kasari, Freeman, & Paparella, 2006; Whalen & Schreibman, 2003; see Patten & Watson, 2011, for further information regarding joint attention interventions and the clinical implications for SLPs).

ABA in the Schools

Although the effects of comprehensive ABA-based interventions have been most widely investigated with young children in home-based or research settings (e.g., Dawson et al., 2010; Smith, 1999; Z. Warren et al., 2011), numerous school-based interventions employ principles of ABA. Some specific ABA strategies, such as positive behavioral supports, have been widely implemented in schools over the past several decades (e.g., Neitzel, 2010). Also, researchers have started to examine the effectiveness of comprehensive ABAbased interventions for children with ASD within school settings (e.g., Eikeseth, Smith, Jahr, & Eldevik, 2007; Mandell, Stahmer, Shin, Xie, & Marcus, 2013). Some researchers have worked to adapt previously established ABA-based intervention methods to meet the unique needs of schools.

Comprehensive Behavioral Approaches

The following discussion provides examples of comprehensive school-based interventions based on principles of ABA. The discussion is intended to orient readers to several of the ABA-based interventions that they may encounter within schools. It is not intended to be inclusive of all such interventions, nor an endorsement of any particular method. Although further research is needed to establish the efficacy of these interventions as a comprehensive approach to education for children with ASD, the components within these interventions have been established as evidencebased treatments for children with ASD within schools (National Autism Center, 2011). For further information regarding evidence-based practices for children with ASD, please refer to the EBP Report (2014) of the National Professional Development Center on ASD (http://autismpdc.fpg.unc.edu/content/evidence-based-practices).

Classroom Pivotal Response Training (CPRT). CPRT (Stahmer, Suhrheinrich, Reed, Schreibman, & Bolduc, 2011) is a comprehensive school-based intervention for children ages 3–11 years based on PRT that is used by school teams to target skills across developmental domains. The program was developed in collaboration with teachers after research indicated that teachers and other school-based professionals were not using the research-based model PRT (L. K. Koegel et al., 1999) as specified in the original training manual (Stahmer, Collings, & Palinkas, 2005; Stahmer, Suhrheinrich, Reed, & Schreibman, 2012; Suhrheinrich, Stahmer, & Schreibman, 2007).

Because the majority of studies related to PRT have been completed in home-based or research settings, teacherrecommended adaptations to PRT were tested to ensure the intervention would still be effective when adapted for use

in a school environment. A new manual was developed to help teachers, SLPs, and other team members use CPRT in classroom and group settings to address school-related goals. Teachers and SLPs wanted these additional materials and examples to help them use CPRT within group activities, address Individualized Education Plan (IEP) goals using

CPRT, and train paraprofessionals in use of the methods. For instance, team members had difficulty implementing turn-taking strategies within school settings. So the CPRT manual provides examples of how to assist students in modeling turn-taking behavior for each other during group activities. In addition, the manual includes a data collection system that ties in with IEP goals and allows for collection of data in both group and individual teaching interactions that was developed with the help of an advisory board of school-based professionals.

Preliminary analysis of student outcomes following implementation of CPRT indicated progress on observational measures of IEP goal attainment and standardized communication assessments. Rates of student engagement (appropriate and on-task behavior) doubled after CPRT (Stahmer et al., 2012).

Although there are no clear data to determine which students will benefit most from methods such as those used in CPRT, early PRT studies suggest that increased toy exploration and approach behaviors may predict a better response to a play-based intervention that requires interaction with toys and an adult, such as CPRT in preschoolage children. In addition, high levels of nonverbal stereotypy and avoidance may predict a slower response to naturalistic strategies and suggest a need for more structured interventions (Schreibman, Stahmer, Bartlett & Dufek, 2009; Sherer & Schreibman, 2005). More recent data have suggested that these behaviors may not be predictive of treatment response in a younger-aged sample of children (age 24–30 months) with ASD (Cunningham, 2007).

Strategies for Teaching Based on Autism Research (STAR). STAR (Arick et al., 2003) is another school-based program for children with ASD in preschool through early elementary school. The STAR program utilizes a number of ABA-based methods, including DTT, PRT, and functional routine (FR) instruction. In this model, DTT is used to teach primarily receptive language and preacademic concepts. PRT is used to teach play skills, social interaction, and spontaneous language concepts, and FR instruction is used to encourage generalization and self-help skills and routines. Functional routines are events that are predictable, follow a chain of behaviors, and are typically associated with a functional outcome (e.g., using the bathroom, morning arrival to the classroom, etc.). Functional routines are taught in a step-by-step, systematic manner to children with ASD to increase independence for common school and self-care routines (Arick et al., 2003). An example of a functional routine within a classroom might be washing hands in preparation for lunchtime. The hand washing sequence is broken into specific steps: turn on the water, put

hands in the water, put soap on hands, rub hands together, turn off the water, get paper towel, dry hands, put paper towel in the garbage. The clinician might provide the child with visual supports for each step, facilitate completion of the task with verbal and nonverbal supports, and reinforce completion of the routine with social praise and access to snack. Teaching of FRs is a great opportunity for collaboration between behavior analysts and SLPs, because BCBAs are specifically trained in task analysis (i.e., identifying task components and breaking complex tasks into discrete steps), and the language expertise of SLPs enables them to determine the appropriate level of instruction (i.e., use of verbal language instructions) and how to best utilize visual supports to increase student understanding.

The STAR program also uses the behavioral strategy of errorless learning. Errorless learning (sometimes referred to as most-to-least prompting) is an approach to teaching that attempts to minimize errors by the child with ASD (Demchak, 1990; Libby, Weiss, Bancroft, & Ahearn, 2008). This is achieved when the clinician controls the prompt to ensure correct production of the behavior and consequent reinforcement (Leaf, Sheldon, & Sherman, 2010). For example, when targeting identification of body parts, the clinician might say, "Touch your nose," while providing hand-overhand assistance to the child to touch his nose. When the child does so (even with full assistance), the clinician says, "Yes! You touched your nose" (consequence). The clinician repeats this level of prompting several times before slightly fading the prompt; perhaps, instead of providing full handover-hand prompting, the clinician might simply touch the child's elbow as a partial physical prompt while saying, "Touch your nose." Errorless learning may also be familiar to SLPs who serve adults, as it is an oft-used strategy when working with individuals with acquired neurogenic communication disorders (ASHA, 2013; Frattali, 2004).

Arick and colleagues (2003) completed an investigation of the effects of the STAR curriculum with two cohorts of children with ASD ages 2–6 years who were receiving school-based services within the state of Oregon. Across children who presented with varied communication, cognitive, and social skill profiles at baseline, they found overall increases in language, basic academic skills, social skills, adaptive skills, and cognitive skills for both cohorts following at least 2 years of intervention. In addition, parents reported above-average satisfaction with the quality of intervention services their child received. In a more recent randomized trial of STAR in Philadelphia schools, Mandell and colleagues (2013) found that student progress was related to fidelity of implementation; however, this varied greatly across classrooms.

Based on their results, Arick and colleagues (2003) made several recommendations for school-based services for children with ASD, including the use of one-to-one DTT, PRT, and group-based FR teaching; consistent progress measurement through ongoing data collection and assessment; and ongoing service provider training. The Mandell et al. (2013) results also highlight the need for ongoing support for teachers implementing complex strategies in classrooms. Given the increase of push-in services and

the important role of collaboration within response to intervention models, SLPs are in an ideal position to support such classroom needs.

Learning Experiences, an Alternative Program for Preschoolers and Their Parents (LEAP). LEAP (Strain & Bovey, 2008) is an inclusion, public school-based program that capitalizes on incidental teaching and uses peer

mediation (described in detail below) to facilitate the social and communication competence of children with ASD. It incorporates a variety of ABA-based teaching approaches, including errorless learning, PRT, picture exchange communication system (also described below; Frost & Bondy, 2002), and positive behavior supports (Strain & Bovey, 2008).

Incidental teaching is a naturalistic behavioral intervention strategy similar to PRT. Incidental teaching was one of the first naturalistic strategies developed first for use with children from impoverished environments (B. M. Hart & Risley, 1982). Incidental teaching involves

1. arranging the environment to elicit communication from the child (e.g., placing preferred materials in sight, but out of reach);
2. waiting for the child to initiate an interaction around an item of interest;
3. the teacher/clinician providing support/cues for more complex communication or language; and
4. reinforcing the child by providing the item of interest (Fenske, Krantz, & McClannahan, 2001; S. F. Warren & Kaiser, 1986).

This is very similar to the procedures described above for PRT in that the clinician follows the child's lead; shapes a specific response; and uses a natural, direct reward to increase that response. However, often the antecedent is primarily environmental, rather than a specific prompt by the clinician, as is often used in PRT. This is due to increased focus on child initiation in incidental teaching procedures.

Positive behavior supports (PBS), or positive behavior interventions, refer to the use of systematic strategies to support prosocial behaviors and decrease challenging behaviors. These interventions are often employed on a schoolwide basis (not exclusively with children with ASD). They use a prevention model of providing environmental supports to promote positive behavior, and a data-driven, systematic approach to intervention for challenging behavior (Horner et al., 2005).

Components of PBS that may be effective when serving children with ASD include use of clearly and positively stated classroom/school expectations and rules (including use of visual supports for routines and transitions); reinforcement of positive social behaviors; and systematic, data-driven strategies for responding to challenging behaviors, such as the functional behavior assessment (FBA; Carr, 1977; Carr & Durand, 1985). ABA-based tools, such as the FBA, are used to assist teams in determining the function of behaviors, particularly challenging ones, and developing behavior plans to support use of alternative behaviors that enable the child

to appropriately express his intent. The process of completing an FBA includes several steps:

1. identifying team members;
2. identifying the challenging behavior;
3. collecting data about the behavior;
4. developing a hypothesis about the function of the behavior;
5. testing the hypothesis; and
6. developing a behavior plan (Neitzel & Bogin, 2008).

SLPs often serve as key members of FBA teams throughout all steps of the process. However, they demonstrate particular expertise in identifying functional communication behaviors to replace challenging ones, and leading teams in developing and implementing behavior plans to teach the replacement communication skill. That is, after identifying the function of a challenging behavior in collaboration with the FBA team, SLPs not only can identify replacement communication behaviors that are within the speech and language developmental levels of the student, but also can guide team members in the level of their instruction when teaching the replacement behavior. See Bopp, Brown, and Mirenda (2004) for further information about the role of SLPs in PBS and, more specifically, as members of an FBA team.

A randomized, controlled trial of LEAP revealed that children in classrooms that received 2 years of training and coaching in the LEAP model achieved greater cognitive, language, and social gains than children in classrooms that received LEAP intervention manuals only with no further training (Strain & Bovey, 2011). In addition, children in the experimental classrooms showed greater improvements in challenging behaviors and autism symptoms, as compared to children in control classrooms. There is currently no evidence regarding differential effects of LEAP based on child characteristics; however, perhaps more importantly from a service provision perspective, the fidelity with which LEAP was implemented predicted child outcomes. That is, school teams required extensive training in the LEAP model in order to implement it with fidelity, and children in classrooms where teams demonstrated the highest levels of fidelity also achieved the best outcomes (Strain & Bovey, 2011). This reinforces the importance of clear, consistent understanding and implementation of intervention strategies across the entire school intervention team. It also illustrates the important role of SLPs in helping other team members effectively use social and communication intervention methods.

ABA-Based Methods Used in Schools

In addition to the more comprehensive behavioral approaches described above that are often used in schools, there are several other methods that are well suited to the expertise of SLPs. In fact, many SLPs are most likely employing these methods, yet some may not recognize them as ABA-based. In contrast to the comprehensive interventions described above, these methods are used most often to target one specific area of need (e.g., communication, social, play, adaptive, etc.). Again, these examples are intended to capture the breadth of ABA methods that are commonly in use within schools and may be of particular interest to SLPs.

Picture Exchange Communication System (PECS).

PECS (Frost & Bondy, 2002) is an augmentative and alternative communication system intended to support the functional communication of preverbal or minimally verbal individuals with autism and other communication deficits. PECS is widely implemented by SLPs in schools and other service provision sites. PECS, as used according to the manual, is a communication intervention based on the behavioral principles of B. F. Skinner (1957; Frost & Bondy, 2002). The six phases of PECS are intended to help children progress from requesting (referred to as manding) to independent and spontaneous commenting through the use of picture symbols. These phases are as follows:

- Phase I: Learning to Communicate (exchange of single pictures for desired items/activities)
- Phase II: Distance and Persistence (continued use of single pictures with different communication partners and across physical distance)
- Phase III: Picture Discrimination (selection and request of desired object/activity from two or more pictures)
- Phase IV: Sentence Structure (use of "I want" + desired item/activity picture to request—known as a sentence strip)
- Phase V: Answering Questions (use of sentence strip to respond to "What do you want?")
- Phase IV: Commenting (use of pictures and sentence strip to comment on environment, feelings, thoughts, etc.)

See Frost and Bondy (2002) for a full description of PECS and implementation procedures for each phase.

PECS has been well researched and has been identified as an evidence-based intervention for increasing the functional communication skills of children with ASD (Wong et al., 2013). PECS has been found to increase requesting, social communication, and speech production, and to decrease challenging behaviors (S. L. Hart & Banda, 2010).

As Bondy (2011) reported, significant challenges to successful use of PECS include misunderstanding about its roots in ABA, and lack of adequate training and consistency in implementation. Indeed, Bondy (2011) stated,

> Fundamentally, ABA is often misunderstood. It is therefore not surprising that PECS is often misunderstood as well. From my perspective, many people view ABA programs as solely relying on a discretetrial approach, in which the teacher and a student sit at a desk and the teacher leads all lessons. (p. 793)

As indicated above, the view of ABA as synonymous with only highly structured approaches such as DTT is incorrect and outdated (Stahmer, 2014). With regard to training and implementation of PECS, clinicians and teachers may stray from the manualized and evidence-based method of introducing PECS and moving a child through the phases. Phase I can be particularly vulnerable to implementation errors, because it requires two intervention team members in order to capitalize on the child's own motivation and initiation.

For a child learning use of PECS within Phase I, the clinician first determines what objects may be reinforcing for the child (e.g., highly preferred toy, edible, etc.). The clinician then arranges the environment to include a picture of the highly preferred item (placed in front of the child) and the item itself; the clinician serves as the communication partner, and another team member positioned behind the child serves as the helper/physical prompter. The clinician shows the child the item, but does not say anything. As the child reaches for the item, the clinician opens his/her hand, while at the same time the helper guides (hand over hand) the child from behind to pick up the picture symbol and place it in the communication partner's hand. When the clinician receives the picture, the clinician gives the child the object, labeling it, and the sequence is continued. Neither the clinician nor the helper verbally prompts the child, nor do they give any hand-over-hand prompts before the child demonstrates initiation of a gesture request (reaching for object). The child's reach is interpreted as an initiation to request the object. In this way, PECS capitalizes on a child's natural motivation and initiation (Frost & Bondy, 2002). The use of a second person to provide prompts also reduces the likelihood of later dependence on the communicative partner for prompting.

Another implementation challenge observed when using PECS is confusion regarding when to begin use of PECS. As such, SLPs play a fundamental role on the team by identifying the student's current level of communication skills and thus guiding the team's decision making about when to introduce PECS (or use of another communication method) and when to fade use as the child's verbal language increases. Bondy (2011) stated, "Beginning PECS immediately [after starting intervention] does not interfere or compete with working on vocal production, vocal imitation and blending, and other skills that are necessary to produce functional vocal behavior" (p. 795). Because PECS includes protocol for using spoken language, research indicates that it does not seem to impede the development of spoken language in children with ASD when speech is also reinforced appropriately (Schreibman & Stahmer, 2013). However, many team members may demonstrate confusion about how and when to implement PECS with a nonverbal child.

If the child begins to demonstrate use of spoken language while learning PECS, it is important for SLPs to instruct the team in how to facilitate continued spoken language growth while appropriately reinforcing all methods of the child's communication. A common error in PECS implementation occurs when a child's verbal production is ignored at the insistence of use of the picture symbol. The team should directly reinforce a child's verbal request to promote additional productions. However, the opposite can also be observed. Team members must be careful not to ignore the child's appropriate use of PECS by demanding verbal production in addition to the picture exchange prior to providing the reinforcer. Thus, the SLP plays a leading role in training teams to high fidelity of implementation to avoid

such errors, as well as in modeling reliable implementation of PECS within all school environments. SLPs can also ensure that children with ASD have access to their communication books at all times, not simply during specific highrequest activities (e.g., snack time) and that the decision to move to the next phase of PECS is data driven.

In recent studies, authors have compared the use of PECS to naturalistic behavioral strategies for eliciting verbal communication. In general, for young children with ASD who are nonverbal or minimally verbal, using PECS or a naturalistic verbal approach leads to similar levels of spoken language over time (Schreibman & Stahmer, 2013), as well as an increase in joint attention skills (Yoder & Stone, 2006a, 2006b). However, there may be benefits to one or the other based on the child's early joint attention skills. For children who demonstrate joint attention skills prior to intervention, targeting use of verbal communication may result in an increase in initiation of joint attention. For children with more limited joint attention skills prior to intervention, use of PECS may lead to use of more requests and initiation of joint attention (Yoder & Stone, 2006a). In addition, children who began treatment with low object exploration benefited more from the verbal communication intervention, whereas children who began treatment with higher levels of object exploration benefited more from PECS (Yoder & Stone, 2006b). In another similar study, Cunningham (2007) found that toddlers entering treatment with no words were less likely to develop spoken language than those entering with just a few words; however, 80% of these children did develop augmentative communication skills through PECS. Although these findings must be replicated, they provide some preliminary clues regarding when to use PECS or a verbal communication approach with young children who have ASD. However, the two approaches need not be mutually exclusive. That is, use of PECS is often combined with other methods within comprehensive approaches to intervention (e.g., LEAP: Strain & Bovey, 2008; Early Start Denver Model: Rogers & Dawson, 2009).

Verbal behavior. Verbal behavior therapy is based on the principles of ABA and, like PECS, is rooted in the language development theories of B. F. Skinner (1957). In this model, spoken language is viewed as a learned behavior; thus, principles of behavior (antecedent, behavior, consequence; reinforcement; motivation) can be used to teach language. The intervention focuses on teaching children with autism to use language to communicate effectively, rather than teaching only vocabulary, as was the case for very early DTT models.

Of particular interest to SLPs may be an understanding of the terminology used within verbal behavior interventions. They may encounter these terms in their interactions with other professionals and mutual understanding is key. In other words, professionals may be using different words to discuss the same communicative concepts. Skinner described four word types: (a) mand, a request; (b) tact, a comment used to gain attention or share an experience; (c) intraverbal, a response to a question; and (d) echoic, a word that is simply repeated. The verbal behavior intervention begins by teaching the child mands for preferred items. The child can

use a variety of means, including nonverbal (reaching or pointing) and verbal communication (vocalization, approximation, verbalization), to request and achieve access to the desired object. By accepting approximations of communication behaviors in the beginning of intervention, the child learns communication as a skill. The intent is to gradually increase accuracy to correct production of a verbal request. There is also a systematic progression of moving toward more complex tact and intraverbal skills as children master earlier skills (see Sundberg & Michael, 2001). Verbal behavior, like other interventions based on ABA, focuses on motivation as an important antecedent and tries to use direct reinforcement (rewards that are directly related to the activity) as a tool to increase children's use of skills over time and across environments. Careful assessment guides the teaching of new skills.

The efficacy of verbal behavior interventions has been investigated in many small studies. Although these studies have demonstrated effectiveness in improving communication skills in children with autism (Sundberg & Michael, 2001), additional research is needed to confirm efficacy and examine which children will benefit (National Autism Center, 2009).

Peer-mediated intervention. Speech-language pathologists such as Goldstein and colleagues (Goldstein, Kaczmarek, Pennington, & Shafer, 1992; Goldstein, Schneider, & Thieman, 2007; Goldstein & Wickstrom, 1986) have long advocated use of peer mediation to increase the social communication skills of children with ASD. Peer mediation typically refers to one of two approaches to training peers with the intent of increasing the social communication skills of children with ASD: (a) training peers to increase their initiations and directly teach skills to children with ASD (e.g., Goldstein et al., 1992; Strain & Odom, 1986); or (b) training peers strategies to elicit and facilitate the social and communication skills of children with ASD (e.g., Kuhn, Bodkin, Devlin, & Doggett, 2008).

Peer mediation is a key component of the LEAP program described above and, although it is not in and of itself an ABA method, principles of ABA are well suited to teaching peers behaviors that facilitate the social and communication skills of children with ASD. For example, within the LEAP program (Strain & Bovey, 2011), peers are taught to support the communication of children with autism using modeling and reinforcement and then, in turn, the peers are given supports for presenting antecedents to children with ASD and reinforcing their behaviors. In another example, Pierce and Schreibman (1995, 1997) investigated the use of ABA within peer mediation in a school setting. They trained classroom peers in the use of PRT strategies to promote the social and communication skills of children with autism. The peers were trained in 10 PRT strategies:

1. gaining the child with ASD's attention
2. providing the child with ASD choices to increase motivation

3. engaging in a variety of toys/activities
4. modeling appropriate social behaviors, using a variety of play, social, and language examples
5. reinforcing all communicative and social attempts by the child with ASD
6. encouraging conversation by briefly withholding an object or activity until the child with ASD initiates
7. extending conversation by asking questions and commenting on object/topics of interest to the child with ASD;
8. taking turns during play
9. narrating their own play
10. teaching responsivity to multiple cues by commenting on the properties of object/activities

Peers demonstrated high fidelity in use of the strategies. Children with autism demonstrated increased language and joint attention behaviors. In addition, teachers reported an increase in positive social behavior and an increase in peer-preferred activities (Pierce & Schreibman, 1997).

Training peers in use of PRT strategies is a method that can readily be used by SLPs in schools and other service provision sites to promote the social and communicative growth of children with ASD. In addition, it may be especially important because it is likely that children with ASD, especially in special education settings, have limited opportunities to interact in structured ways with typically developing peers (Stahmer, 2007). Donaldson, Hidde, Mershon, and Sanford (2012) have trained graduate speech-language pathology student clinicians to teach PRT strategies to siblings of children with ASD (sibling mediation). Graduate student clinicians have demonstrated high fidelity of implementation, and sibling dyads have demonstrated improved social communication behaviors and overall social engagement.

Children with ASD who have some awareness of their peers and are not actively avoidant of peers (e.g., they tolerate parallel games) may be good candidates for peermediated intervention (Ingersoll, Stahmer, & Schreibman, 2001). However, it is important to be cautious of the notion that children must achieve some social or communicative criteria in order to benefit from facilitated interactions with typical peers. There is no evidence to support “inclusion myths” such as (a) a child with ASD must demonstrate certain readiness skills prior to interaction/inclusion with typical peers; (b) a child with ASD only learns within individual instruction settings; (c) the challenging behavior of a child with ASD is tied directly to the level of stimulation within an inclusive environment (i.e., overstimulation); and (d) severe problem behaviors can only be targeted within restrictive environments (Strain, McGee, & Kohler, 2001; Strain, Schwartz, & Barton, 2011). In fact, in a recent study of children in an urban public school program, more severely impaired children with ASD demonstrated greater benefit from inclusive preschool placements over disabilityonly placements. Children with limited communication skills, severe social impairments, and lower adaptive skills had greater relative cognitive outcomes than higher functioning children (Nahmias, Kase, & Mandell, 2014).

Indeed, use of peer mediation to address core social communication

deficits requires daily interaction with typical peers, as well as training of those peers (Strain & Bovey, 2011).

Video modeling. Video modeling is another example of an intervention that has been examined within a behavioral framework to target skills across a variety of areas. This intervention involves the creation of a video of a peer and/or adult demonstrating a discrete skill/target behavior, showing the video to the child with ASD, and then practicing the skill within the same activity demonstrated on the video model. Video modeling has been found effective for increasing social communication, play, and adaptive skills in children with ASD (Shukla-Mehta, Miller, & Callahan, 2010; Wang & Spillane, 2009). For school teams, video modeling is an intervention method that might be combined with other intervention methods to target a range of skills within a school environment. Indeed, Donaldson et al. (2012) combined use of video modeling and sibling mediation to target the social communication skills of a school-age child with ASD. The child with ASD demonstrated increased responsiveness to her sibling, joint engagement, and requests.

For more information on use of video modeling within schools for children with ASD, refer to Wilson (2013) and Whalen, Franke, and Lara-Brady (2011).

Common Ground Between SLPs and Behavior Analysts

Speech-language pathologists increase the communication and social skills of children with ASD not only through their direct intervention services, but also through sharing their expertise with behavior analysts and other team members. Conversely, SLPs may improve their use of behavioral strategies and methods, which support their treatment with children with ASD, by working alongside their behavior analyst colleagues.

As indicated throughout this tutorial, SLPs are most likely using some, if not many, ABA principles within their current clinical practice. Recognition of this commonality may be an important step in effectively collaborating with behavior analysts and other team members serving children with ASD. Key behavioral strategies that are often implemented by SLPs in schools include use of clear instructions, attention to motivation, and data collection and analysis representing functional use of skills.

An interesting and often useful self-study for clinicians (both SLPs and behavior analysts) is to video record a portion of an intervention session with a child and then review the video to identify their use of the ABCs of ABA (antecedent, behavior, consequence) and other behavioral principles (e.g., capitalizing on child motivation, providing contingent responses to child behavior). Many SLPs may find that they are already employing ABA principles, and

clinicians from all disciplines can learn ways to improve their skills. In addition, viewing within a team setting offers an opportunity to discuss common approaches and to share effective activities and strategies for targeting social and communication behaviors.

Using Clear Instructions

Clear instruction refers to use of an antecedent that elicits the target behavior; therefore, careful selection of the stimuli and use of developmentally and pragmatically appropriate language are key. When determining whether one is consistently using clear instruction, a video review again may be helpful; if the antecedent is unclear to the clinician, then the behavior expectation was unclear to the child. One common pitfall is the repetition or modification of the antecedent before the child has had the opportunity to demonstrate the behavior. For instance, during a pretend picnic scenario while targeting pronouns, the clinician might give a plate to the child and ask the child to give it to "him" (referring to a boy puppet or doll). However, before the child responds, the clinician might repeat, "Give it to him" or modify, "Here, give the spoon to him." Repetition or modification of the antecedent may cause confusion for the child with ASD, who may require additional processing time to respond.

Ensuring the Effectiveness of the Consequence

Another common pitfall in use of the ABCs relates to delivery of the consequence; the consequence should directly follow the behavior and serve to either reinforce or shape the target behavior. A common error is to place additional demands (antecedents) after the child demonstrates the desired behavior rather than providing an immediate consequence. For example, a child might be learning use of a gesture to greet another person (such as a hand wave). If the child performs the wave, but then is prompted to say the person's name before the communication partner responds to the greeting, the consequence does not directly follow the behavior. By adding an additional antecedent (the prompt to say the person's name) and expecting an additional behavior, it may not be clear to the child that the waving behavior was desired and appropriate. Although responses, such as waving and saying a person's name, can be combined (referred to as chaining) to increase the accuracy or complexity of the child's behavior (i.e., shaping the behavior), one should be cautious about adding such expectations prior to the child's mastery of the initial targeted behavior. The SLP can assist the team in determining when the child is reliably demonstrating the communicative intent of greeting across environments and communication partners, and advise the team on the child's readiness to add verbal language to the greeting based on the child's speech and language skill levels.

Another common error is providing a consequence that does not have the strength or value to reinforce or shape the behavior. For example, for a child who is working on following a three-part direction, use of an art activity employing the child's favorite theme and materials may serve as a natural and powerful reinforcer for completion of the three-part task. However, following a three-part direction for completion of an undesired activity or a routine task may require a stronger, perhaps artificial, consequence to reinforce the behavior. For example, if the child who has difficulty transitioning into the classroom is directed to put away his backpack, sit at his desk, and start silent reading,

he may need to receive a sticker placed on his "star chart" or some other form of tangible consequence to reinforce the behavior. Again, the SLP can assist the team in determining if the child's behavior is truly a function of the strength of the reinforcer, or if the child's receptive language skills or verbal working memory plays a role in his/her successful performance of the behavior.

Because motivation and consequences are so intertwined, it is important not to use reinforcers past their potency. For example, when a child who has been actively engaged in a bubble-blowing activity with the clinician moves away and starts to seek a different toy, the potency of the bubbles as a reinforcer must be questioned. If the child requires prompts to remain engaged in the activity, the bubbles no longer serve to reinforce the desired behavior.

Varying Task Demands

Another key principle to maintaining motivation is interspersion of skills that are easy and difficult for the child (L. K. Koegel et al., 1999). Expecting a child to constantly perform at maximum level of acquisition not only decreases his/her motivation to participate (thus, increasing the likelihood one will need to use an artificial reinforcer, such as an edible or sticker), but also does not allow the clinician to monitor the maintenance of previously acquired skills (e.g., Dunlap, 1984). There are many creative ways to increase student motivation at the antecedent level through incorporation of preferred materials. For example, using highly preferred toys such as trains to teach counting skills or writing a paragraph about a favorite superhero rather than about summer vacation may be an effective way to maintain student motivation when targeting social and communication skills. Collaboration among team members can help professionals identify motivating materials and activities.

Making Data-Driven Decisions

Data collection and analysis are key components of service provision for both SLPs and behavior analysts. Data not only inform teaching, but also determine effectiveness of intervention (Olswang & Bain, 1994; Dollaghan, 2007). Within ABA, analysis of behavior, as recorded by regular data collection, is used to ensure that one continues interventions that are effective and discontinues methods that are not (Cooper et al., 2007). Behavior analysts have extensive training in repeated measurement of behavior, consistent graphing of data, and regular analysis of progress.

Given the heterogeneous nature of ASD, data collection and analysis ensure that one's teaching aligns with each child's skill profile. Sharing data with other intervention team members allows for analysis of performance across environments and with varied communication partners. Team members can also benefit from sharing data collection and analysis methods across disciplines; determining effective and efficient data collection methods/measures facilitates ease and accuracy of repeated measurement. In addition to day-to-day progress monitoring, data also guide goal development for student Individualized Family Service Plans

(IFSPs) and IEPs.

Even within naturalistic interventions, where data collection may be perceived as interfering with the social engagement of the child, data collection and analysis are paramount. As Olswang and Bain (1994) indicated, a clinician need not take data across an entire intervention session, but rather may collect a representative sample. Regularly plotting such data on a graph for analysis is a key premise of ABA and allows intervention teams to quickly determine through visual analysis the effects of different teaching methods and the developmental appropriateness of goal selection.

Given large school-based caseloads, for many clinicians, regular and systematic data collection and analysis (outside of typical IEP procedures) may seem daunting. However, a clear responsibility of evidence-based practice for SLPs is the use of practice-based evidence (Lof, 2011), also known as internal evidence (Dollaghan, 2007), for intervention planning and progress monitoring. A primary component of practice-based evidence for SLPs is the clinician's systematic and repeated data collection on each student's individual performance. The up-front time and effort may likely result in back-end rewards, as clinicians can quickly discontinue methods that are not effective for a specific student, increasing intervention efficiency. In addition, clear data collection and analysis might be used to support discussions with school administrators with regard to caseload sizes and allocation of resources.

Additional Opportunities for Collaboration

In addition to those strategies previously described, there are many specific areas in which collaboration between SLPs and behavior analysts is necessary when serving children with ASD. Both professionals are often asked to consult with classroom teachers, work with children oneon-one, lead small groups, and conduct assessments to examine current functioning. There is often overlap between skills being addressed or measured by both types of professionals. As such, here are some more specific ideas for collaboration:

Determine the appropriate developmental level for instructions. Given their expertise in language development, SLPs are best equipped to determine the types of instructions (antecedent) a student can understand, as well as communication expectations that the team member should place on the child. Indeed, SLPs are skilled in completing highly detailed and comprehensive assessments of a child's communication skills. For example, a team member with a different background might consider a child either verbal or nonverbal. However, an SLP can discriminate with much greater sensitivity the communicative level of the child (e.g., preintentional behavior, intentional behavior, unconventional presymbolic communication, conventional presymbolic communication, concrete symbol use, abstract symbol use, language use; Rowland, 2009). Thus, coordination across service providers can ensure use of appropriate antecedents to maximize the effectiveness of intervention.

Assist in development of program targets. SLPs can guide the team in determining the types of social and communication goals for a child with ASD to ensure they are

developmentally appropriate and that they are targeted in a manner that ensures spontaneous and flexible performance. For example, behavior-based programs often focus on moving to multiple word phrases quickly when a student may not be flexibly or consistently using single words. This may lead to the use of rote phrases that the child does not fully comprehend. Additionally, prompting carrier phrases such as “More X” or “I want X” is common in some types of behavior-based therapy. However, coaching teachers and other team members to use more focused and specific language (e.g., “Throw the ball” or “Blow the bubbles”) may increase vocabulary and language flexibility while decreasing overgeneralization of carrier phrases.

Provide consistency in addressing behavioral challenges. Understanding and use of ABA principles can be particularly useful across disciplines by helping team members identify and modify challenging behaviors. A key principle of ABA is to try to determine the intent or function of the behavior in order to appropriately respond in a manner that reinforces new behaviors and provides replacement skills for challenging behaviors.

Positive behavior supports and functional behavior assessments, as described above in the section on the use of LEAP, are often used to address behavioral concerns and develop plans to support use of alternative behaviors to express the child’s intent. There are typically four possible functions of challenging behaviors: for attention, for escape/avoidance, for sensory stimulation, or to gain something tangible. The methods used to change a specific behavior will vary based on the specific function of that behavior. For example, if a child is exhibiting aggressive behavior in order to gain something (e.g., a toy car), removing toys and activities during the aggression will likely help to reduce the behavior. However, if the child is engaging in aggressive behavior to escape or avoid a teaching demand, then removing toys and activities may actually increase the behavior as it allows the child to escape the teaching demand.

Thus, a behavior plan would be developed to determine antecedent manipulations (to avoid situations the elicit the challenging behavior), consistent consequences matched to the intent of the behavior, and teaching of a replacement or alternative behavior to express the child’s intent. In the example above, this might mean teaching the

child to request either the toy or a break, depending on the intent of the challenging behavior.

Collaboration among team members in development and implementation of behavior plans is particularly important to ensure that the child is not unintentionally reinforced for a challenging behavior. If all adults interacting with a student are consistent in how they respond to specific behavioral challenges, the challenges will likely decrease more quickly. Working with a behavior analyst who is trained to determine the functions of challenging behaviors in various environments and in development of behavior plans will support implementation of the plan across providers

and school environments. As indicated above, SLPs often lead the team in determining functional communication that is appropriate to replace challenging behaviors serving a communicative function (Bopp et al., 2004). The replacement behavior must work as well, or better than, the disruptive behavior to be effective.

Without such a systematic and data-driven approach to assessment, and consistent adherence to the subsequent behavior plan, a team member could inadvertently reinforce a challenging behavior rather than decrease it. As such, careful collaboration among team members is needed to both develop the plan for reducing maladaptive behavior as well as monitor the effectiveness of the intervention over time.

Cross train. As aforementioned, SLPs have extensive knowledge about language and social development and disorders that is vital when developing programs for children with ASD and educating other team members. Similarly, the principles of ABA can help enhance speech-language therapy by maximizing motivation and reducing behavioral challenges that interfere with therapy. Training across disciplines is an excellent way to build understanding as well as to enhance intervention effectiveness. Not only can team members provide training to each other, but also within both speech-language pathology and behavior analysis disciplines there are opportunities for further cross teaching and education. ASHA offers many continuing education opportunities focused on ABA-based interventions and methods (e.g., presentations at the Autism: Supporting Social Cognition in Schools online conference: http://www.asha.org/events/autism-conf/), and the Association for Behavior Analysis International (ABAI) provides programming related to social and communication intervention, as well as specific to speech-language pathology (e.g., Speech Pathology and Applied Behavior Analysis Special Interest Group: http://www.behavioralspeech.com/).

Assess goal progress. Sharing common methods of data collection and assessment of goal mastery can help lead to more effective IFSP and IEP planning and enhance our understanding of child progress. The SLP and behavior analyst may have differing perspectives on a child's progress based on their own methods of data collection. For example, the behavior analyst may see increases in the use of three-word phrases, but the SLP may have concerns regarding flexibility and generalization of these skills. Keeping data on aspects of the child's skill acquisition deemed important by each professional can provide a well-rounded view of the child's progress. Collecting and sharing individual student data will increase mutual respect and understanding of each discipline's intervention plan and progress.

Activity planning. School-based professionals must use their time efficiently because they often support large caseloads of children with a variety of special needs. Identifying activities that most effectively promote skill acquisition and maintenance can be time intensive. Team-based planning that capitalizes on team members' activity successes and challenges will prevent intervention teams from individually "reinventing the wheel" for each student's goals.

Teams might maintain a student activity list (that could be

housed in the child's classroom), briefly documenting activities that were successful at eliciting behaviors of interest; team members can add to, and borrow from, the list to make the most of each interventionist's time with the child.

Avoid assumptions about intervention methods. One potential barrier to effective collaboration between colleagues may be a misunderstanding about each professional's methods and/or overarching philosophy (Ogletree & Oren, 2001). That is, one should not assume that because a professional subscribes to a particular methodology or intervention approach, that he/she is restricted only to that method. Professionals may (and should) employ a continuum of methods, depending upon the child's individual profile of strengths and challenges. For example, naturalistic ABAbased interventions such as the Early Start Denver Model (Rogers & Dawson, 2009) provide clear decision-making tools for when to increase supports across three areas: reinforcement, structure, and visual supports. If a child is not progressing, based on regular data collection and analysis, the clinician is instructed to add supports moving along the continuum from naturalist teaching all the way to use of massed trial practice and artificial reinforcement (e.g., edibles and unrelated toy/activity) until the child demonstrates learning progress (Rogers & Dawson, 2009). Flexibility is key.

Communicate about the level of intervention supports. In addition to flexibility, it is important to be able to individualize one's approach to each child's pattern of skill acquisition. If a child requires additional supports for one skill, it does not mean that s/he requires that same level of support for all target behaviors. Just as one approach to autism intervention for all children is not advocated, a onesize-fits-all approach to teaching for an individual child does not account for that child's unique profile of strengths and needs. Professionals can assist each other in determining what skills and in which environments a child may require greater or fewer supports. They can also complement each other's intervention methods. For example, a child learning reciprocity might receive support from one professional during a structured board game with peers, whereas another professional might target this during a less structured recess activity.

Recognize team member's training. Each professional on an intervention team serving children with ASD brings a unique set of skills and training to the collective group.

Mutual understanding and respect for this knowledge and training is paramount to successful collaboration. Speechlanguage pathology certification and licensure requirements reflect their extensive skills and knowledge related to communication and social skills, as well as their rigorous applied training. Many SLPs may have an understanding of the level of training of teachers and other related service providers on the school-based teams. However, given the relatively recent addition of "autism specialists" or behavior analysts to school-based teams, they may not be familiar with the certification process involved in becoming a Board

Certified Behavior Analyst (BCBA).
Donaldson (2014) recently described the board certification process for behavior analysts to assist SLPs in understanding the requirements of certification, as well as to provide information for SLPs who may be interested in becoming dually certified. Briefly, BCBA professionals are master's- or doctoral-level service providers who have completed 225 class hours of coursework specific to behavior analysis. They also have completed 750–1,500 supervised practicum hours (based on intensity of supervision), and have passed their Board's national exam (the overall BCBA exam pass rate for 2013 was 53% for 3,006 first-time candidates; www.bacb.com/Downloadfiles/PassRates/BCBA_ACS_pass_rates_alpha.pdf). These professionals are bound by ethical and practice guidelines, and maintain certification through ongoing professional development. For further information regarding the BCBA and assistant level behavior analyst (BCaBA) certification processes, refer to the Behavior Analyst Certification Board (www.bacb.com/index.php?page=53).

Conclusion

SLPs and behavior analysts share common ground, not only in their skills and knowledge, but also in their determination and dedication to supporting children with ASD and their families. Many of the strategies and principles of ABA are already embedded in evidence-based SLP practices, even though the strategies may be known under a different name. The specific training of a behavior analyst and an SLP may complement and supplement each other quite well, and the skills both professionals bring to an interdisciplinary school-based team are essential for serving the varied needs of children with ASD. Working together can lead to improved outcomes for children with ASD served in schools by improving the developmental appropriateness of communication goals and instructions, addressing functional use of these skills, increasing the use of evidence-based strategies, and improving challenging behaviors. Having a basic understanding of each professional's areas of expertise, clinical skills, and goals can improve collaboration and, ultimately, child outcomes.

Acknowledgments

Opinions expressed herein are those of the authors and do not represent the position of the Behavior Analysis Regulatory Board (BARB) or of any BARB member, and such endorsements should not be inferred. We express our appreciation to Teresa Cardon and Sara Vank for their influence on preliminary discussions of this topic.

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Exhibit 2

BUCKENDORF ASSOCIATES

One Lincoln Center, Suite 410 10300 SW Greenburg Rd Tigard, OR 97223 phone503-517-8555 Fax 503-517-8556

Subject: Public comment in SUPPORT of the Petition to Amend OAR 824-003-0405

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Many professionals use techniques of Applied Behavioral Analysis in their work with children with autism. This amendment allows those professionals to both use and be reimbursed for their work with this population.

Sincerely,

G. Robert Buckendorf, PhD
Speech-Language Pathologist, CCC
Buckendorf Associates, LLC
10300 SW Greenburg Rd, Suite 401
Portland, OR 97223
503-517-8555

Exhibit 3

2/12/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Laura Cook

Graduate Student Clinician
Speech and Hearing Sciences Department
Portland State University

Exhibit 4

2/13/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

As a speech language pathologist, I am a behaviorist. My goal to to shape, increase, replace and teach new communication behaviors to my clients. I have used the principles of applied behavior analysis in my practice and I have taught these principles to students and clinical fellows in speech language pathology. I strong support this petition to amend the OAR.

Sincerely,

Amy Costanza-Smith

--
Amy Costanza-Smith, PhD, CCC-SLP
Clinical Assistant Professor
Speech & Hearing Sciences
Portland State University
503.725.2218

Exhibit 5

2/12/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Jill K. Dolata, M.A., CCC-SLP
Assistant Professor, Pediatrics
Division of Speech-Language Pathology
Oregon Health & Science University

Ph.D. Candidate, Special Education & Clinical Sciences
Early Intervention Leadership Program
University of Oregon

Exhibit 6

Anna Dvortcsak, MS CCC-SLP
Dvortcsak Speech and Language Services, Inc.
818 SW 3rd Ave. #68
Portland, OR 97204
anna@dslsi.com
503-887-1130

February 17, 2015

Behavioral Analysis Regulatory Board
Department of Health Licensing
State of Oregon

Dear Members of the Behavior Analyst Regulatory Board,

Thank you for the opportunity to comment on the rules governing the registration of licensed healthcare providers with the Behavior Analyst Regulatroy Board (BARB).

I would like to express my support of the proposal but forward by Paul Terdal. As I have expressed in the past, I am concerned that the current rules put forward by BARB are too restrictive. While I appreciate and support the Boards desire to have criteria that ensure that registered individuals are competent, it is important that the rules are not so restrictive that highly qualified licensed healthcare professionals are excluded. Excessive restrictions will limit families ability to access ABA services from highly qualified licensed healthcare professionals that do not have their BCBA. It will also limit the consumer's ability to choose the ABA program and provider most qualified to serve their child. I urge the board to incorporate these changes in order to meet the needs of all children with autism within the state of Oregon.

Thank you again for your consideration and the opportunity to comment on this topic. Please feel free to contact me with questions.

Sincerely,
Anna Dvortcsak, MS CCC-SLP
anna@dslsi.com
503-887-1130

Exhibit 7

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Kim Elliott, MS, CCC-SLP, LLC
Speech Language Pathologist
Assistive Technology NW
www.AssistiveTechNW.com
2100 NE Broadway, #119
Portland, OR 97232
p. 503.708.5720
f. 503.536.6733

Exhibit 8

2/17/15
Dear Behavior Analysis Regulatory Board,

As an occupational therapist with more than 30 years of practice in pediatrics and extensive training in autism including behavioral intervention I support the petition to amend OAR 824-003-0405 submitted by Paul Terdal to simplify the registration process for qualified health care providers for whom behavioral intervention falls within their scope of practice.

The intent of the Autism Insurance Reform Law is to make autism treatment accessible to all families in Oregon while providing a reasonable range of choice of providers. As an active contributor to the discussion on insurance reform while legislation was being drafted, I fully supported the licensing of BCBAs and paraprofessional interventionists so that along with other health professionals in Oregon, BCBAs could be fully recognized and reimbursed by insurance companies for autism intervention. However in supporting such legislation it was never my understanding that the regulatory board would have the authority to determine the scope of practice of other licensed health care professionals.

As a practicing occupational therapist, my scope of practice is determined and regulated by my national association, national credentialing board and the state board that licenses me. I am bound by professional ethics to practice within the scope of my education and training and subject to the authority of these boards should I fail to do so. These boards would not presume to define the scope of practice of BCBAs and neither should a state regulatory board for BCBAs determine the scope of practice of my profession. However I recognize that there is an advantage to registration with the Behavior Analyst Regulatory Board in order to reduce confusion for insurance companies and consumers, and clarify the supervision of paraprofessional interventionists.

To resolve this conflict I would suggest that registration of qualified health care providers with the Behavior Analyst Regulatory Board consist of two items 1. An attestation by the practicing health care provider that they qualified to practice behavioral intervention that identifies the form(s) of intervention in which they are qualified and 2. A letter from the state board of the licensed health care provider that states that behavioral intervention falls within the scope of practice of their profession.

Respectfully Submitted,

Deborah Ferguson MHS OTR/L
Occupational Therapist
Play to Grow Developmental Therapy Services
8050 SW Warm Springs Rd STE 130
Tualatin OR 97062

Exhibit 9

2/17/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Until an aggressive program is put in place to increase the amount of training and licensing of people in this approved method of treatment is created to keep up with the increased amount of cases of autism this is the most sensible solution for those children and families who have already been suffering immensely for many years emotionally, financially, etc. as a result of no solutions being available that insurance companies would allow to move forward through the claim process.

We both know that the sooner a child receives therapy, the better chance of significant improvement. These kids are already a year further behind than they were when these companies were not approving anything without a court battle.

You would be making many children, families, healthcare professionals, supporters, etc. breathe an overwhelming sigh of relief knowing that a slight roadblock to a huge opportunity in improving their lives immensely was not a huge obstacle for someone like yourself if it meant helping a huge segment of the State that you represent. Probably the main reason why you took this position, right? Please do it, as a parent who has children and friends with autistic children (in and outside of Oregon) where covered therapies made a big difference. Thank you in advance!

Sincerely,

Sean Gillespie

Exhibit 10

Dear Behavior Analysis Regulatory Board,

I’m writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Our goal is to have as many children with autism to receive outstanding services. The way your registration is currently written, many very capable and experienced clinicians would be prohibited from continuing to provide ABA because of time, cost, and of the frustrations of taking redundant coursework and training. Mr. Terdal's petition allows for a more flexible, reasonable way for professionals to register. Please consider his petition, as it is an excellent course toward bringing ABA to more children by licensed professionals with coursework and training in cognition, communication, and development.

Sincerely,

Cheryl Green, MS

Exhibit 11

2/17/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Cate Read Hickman

Portland, OR

Exhibit 12

2/17/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

As a licensed psychologist with 40 years of experience in providing behavior therapy and 20 years with a focus on autism, I believe I am fully qualified to provide ABA services to our community. The advantages to our community of someone trained and experienced with a broad focus on behavior and interaction as well as insight into social, emotional, and cognitive development seems obvious . In all other states that have an insurance mandate, psychologists are considered as qualified health professionals without further registration beyond their own professional license.

Dr. Travis Thompson, one of the developers of the CPT codes for autism intervention, is quite clear that the codes were not intended for BCBAs alone but for "Qualified Health Professionals." Lets go forward to provide quality behavioral intervention in our community and meet the great and expanding need, by executing a reasonable approach to registration.

Carol

Carol Markovics, Ph.D.
dr.carol@me.com

Play2Grow Developmental Therapy
8050 Warm Springs St., Suite 130
Tualatin, OR 97062
office: (503) 563-5280
urgent (cell phone):(585) 317-4987

Exhibit 13

2/11/2015
Dear Behavior Analysis Regulatory Board:

I would like to express my support for the petition to amend OAR 824-003-045, submitted by Paul Terdal.

Mr. Terdal's approach represents a well-thought-out path forward toward registration of Health Care Professionals who already hold licenses and who also have training and experience with Applied Behavior Analysis. In order to allow patients to continue to receive medically necessary care for treatment of Autism, these capable, experienced professionals must have an appropriate path to registration with the BARB. This petition provides for that appropriate path.

Thank you for your work on behalf of professionals and patients.

Sincerely,

Andy McMillin, M.A., CCC-SLP
Clinical Associate Professor

Speech & Hearing Sciences
Portland State University
PO Box 751
Portland, OR 97207
85 Neuberger Hall
(503) 725-3653
andym@pdx.edu

Exhibit 14

2/17/15
Please distribute to the Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals who have experience in Behavioral therapies based on Applied Behavior Analysis principles. This will allow patients to continue to receive medically necessary care for treatment of autism from these capable and experienced professionals.

Sincerely,

Robert Nickel MD
Developmental Pediatrician
Professor of Pediatrics
Oregon Health & Science University

Exhibit 15

2/17/15

Dear Members of the Behavior Analysis Regulatory Board,

On behalf of the Autism Society of Oregon and as a consumer of Applied Behavior Analysis (ABA) services as the parent of two children on the autism spectrum. I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

At the Autism Society of Oregon, we were deeply involved in the legislative process that led to the formation of this Board to license ABA providers and create a pathway for payment by insurance companies for ABA therapy provided to people on the autism spectrum. The definition of "ABA" developed for the legislation was crafted to specifically include developmental and naturalistic approaches. Our goal remains to allow access to the full range of ABA therapies to those affected by autism and to make sure qualified providers with expertise in all types of ABA are allowed to continue to provide their services.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Tobi Rates

--
Tobi Rates
Executive Director,
Autism Society of Oregon
PO Box 69635
Portland, OR 97239
Phone: 503-636-1676 (Portland area) or 1-888-AUTISM-1 (toll-free)
E-mail: *Info@AutismSocietyOregon.org*

Exhibit 16

2/12/15
Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

I am an educator serving learners with autism and other developmental delays through social groups and as a Behavior Specialist with Multnomah County. I have a Masters in Education and extensive ABA training from before the BCBA certification existed. I utilize Applied Behavioral Analysis to support the learners and their families to lessen the negative impacts of Autism and help them become more independent people. The amendment proposed by Paul Terdal would allow me to continue serving these families. Without the amendment, the past 22 years of training and experience would be negated and I would be left without the ability to earn an income in Oregon by serving people with Autism.

Please consider this amendment and the effect it has of broadening the scope of ABA principles to serve these deserving families.

Sincerely,

Pam Smith, M.Ed.

(708) 955-5711
pam.smith@mundopato.com www.mundopato.com

Exhibit 17

2/17/15

Dear Behavior Analysis Regulatory Board,

I'm writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Tatiana Terdal

Exhibit 18

2/17/15

Dear Behavior Analysis Regulatory Board,

I’m writing in SUPPORT of the Petition to Amend OAR 824-003-0405 submitted by Paul Terdal.

Individuals affected by autism deserve to have therapies provided by highly qualified professionals.

This petition provides a common-sense approach to registration of those licensed health care professionals with experience in Applied Behavior Analysis that will allow patients to continue to receive medically necessary care for treatment of autism from these capable, experienced professionals.

Sincerely,

Corinne Thomas-Kersting, MS

Retired School Administrator and Speech-Language Pathologist

Director’s report

Licensing and Fiscal Statistical Reports

Health Licensing Office
Behavior Analysis Regulatory Board

Licensing Division Statistics as of March 20, 2015

2013 - 2015 Biennium

Authorizations Issued

Quarter	Behavior Analyst	Assistant Behavior Analyst	Other Health Care Professional	Behavior Analyst Interventionist	Total	
1st	-	-	-	-	-	
2nd	-	-	-	-	-	
3rd	-	-	-	-	-	
4th	-	-	-	-	-	
5th	-	-	-	-	-	
6th	-	-	-	-	-	
7th	28	2	-	6	36	
8th	-	-	-	-	-	
Total:	28	2	-	6	36	

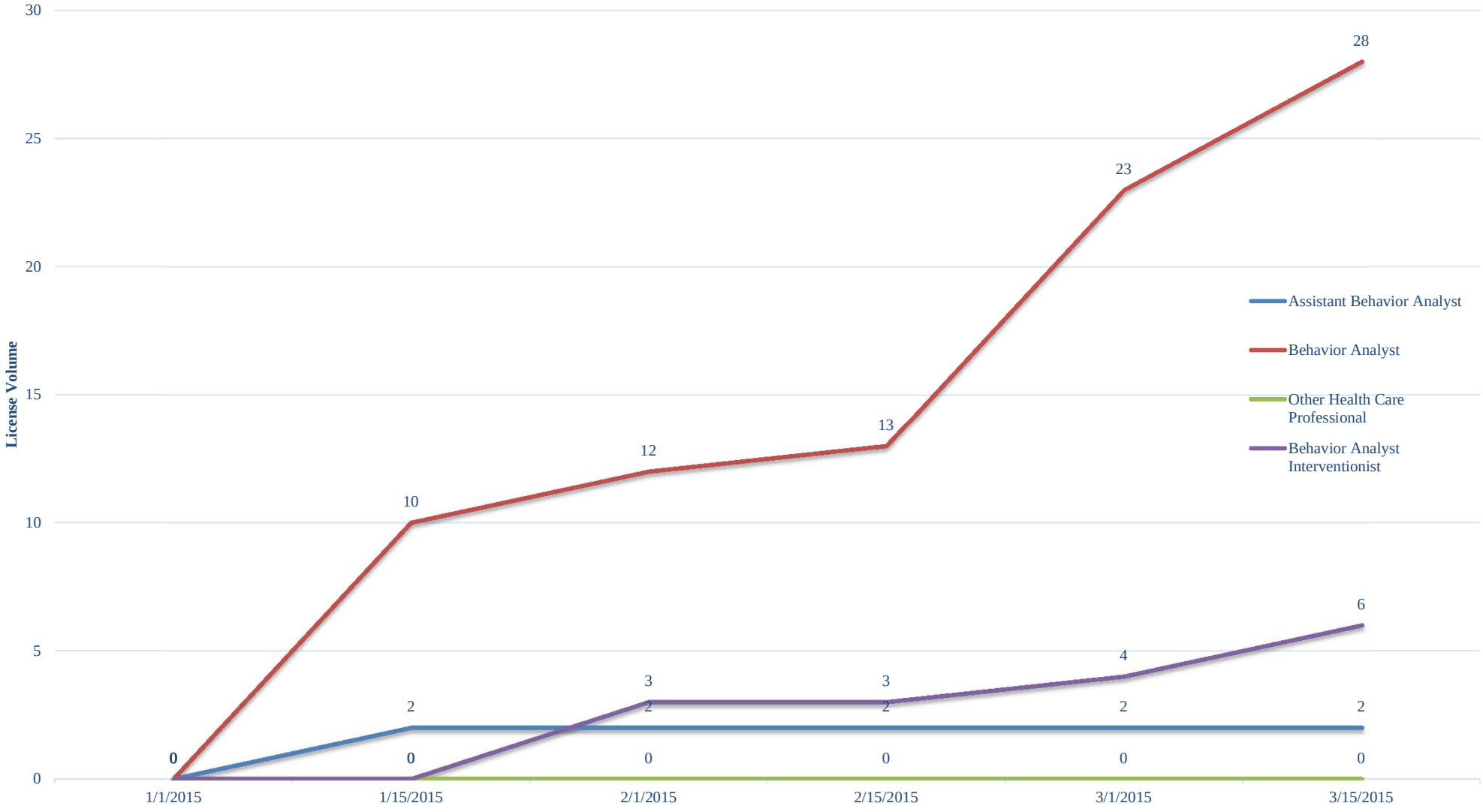
Renewals Processed

Quarter	Behavior Analyst	Assistant Behavior Analyst	Other Health Care Professional	Behavior Analyst Interventionist	Total	*% Renewed Online*
1st	-	-	-	-	-	
2nd	-	-	-	-	-	
3rd	-	-	-	-	-	
4th	-	-	-	-	-	
5th	-	-	-	-	-	
6th	-	-	-	-	-	
7th	-	-	-	-	-	*0.00%*
8th	-	-	-	-	-	*0.00%*
Total:	-	-	-	-	-	*0.00%*

Behavior Analysis Regulatory Board

Active License Trends

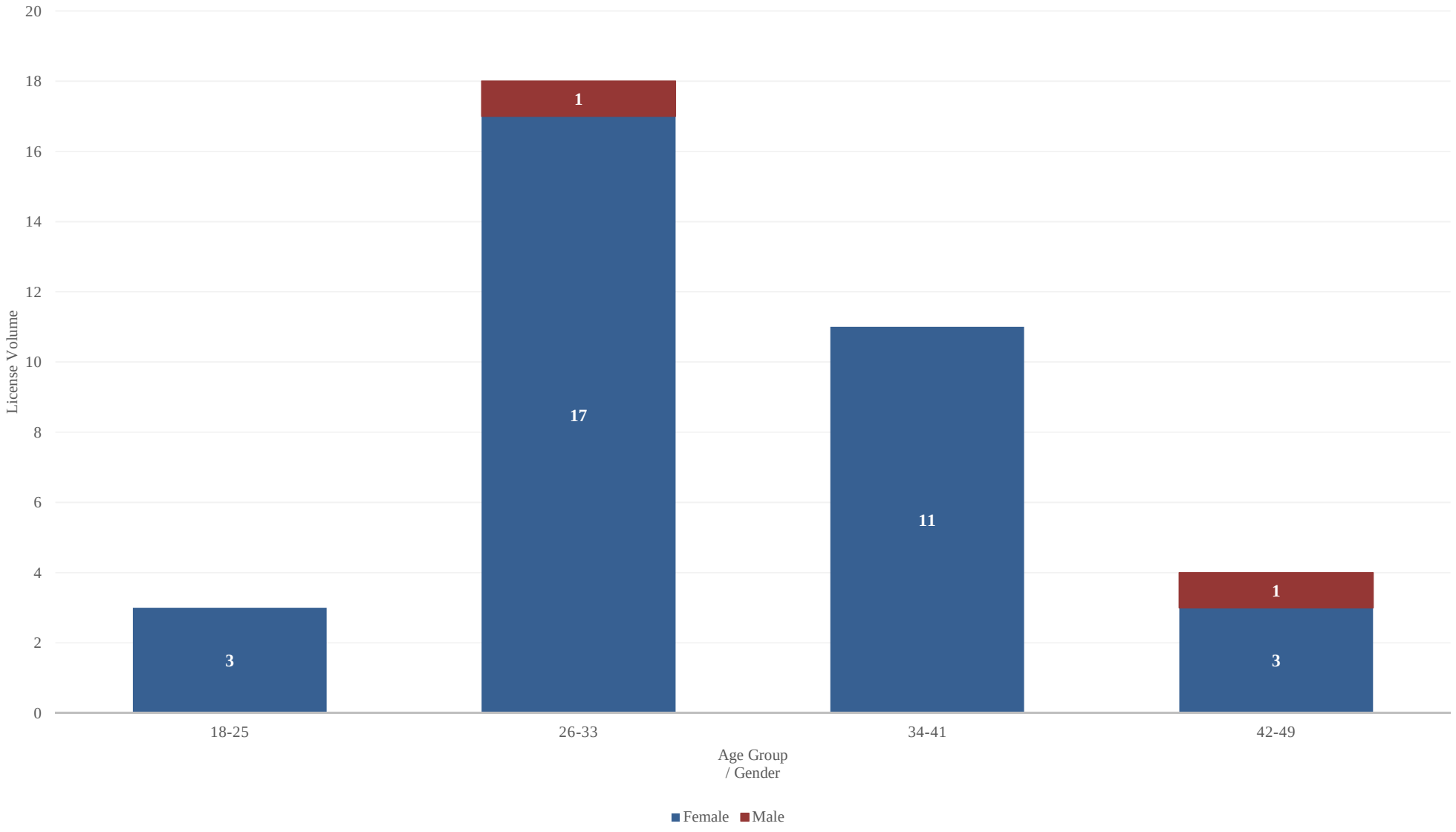
January 1, 2015 - March 15, 2015



** Note that the bi-monthly updates in this report are temporary, and will shift to the HLO-standard quarterly updates later on this calendar year.*

Behavior Analysis Regulatory Board

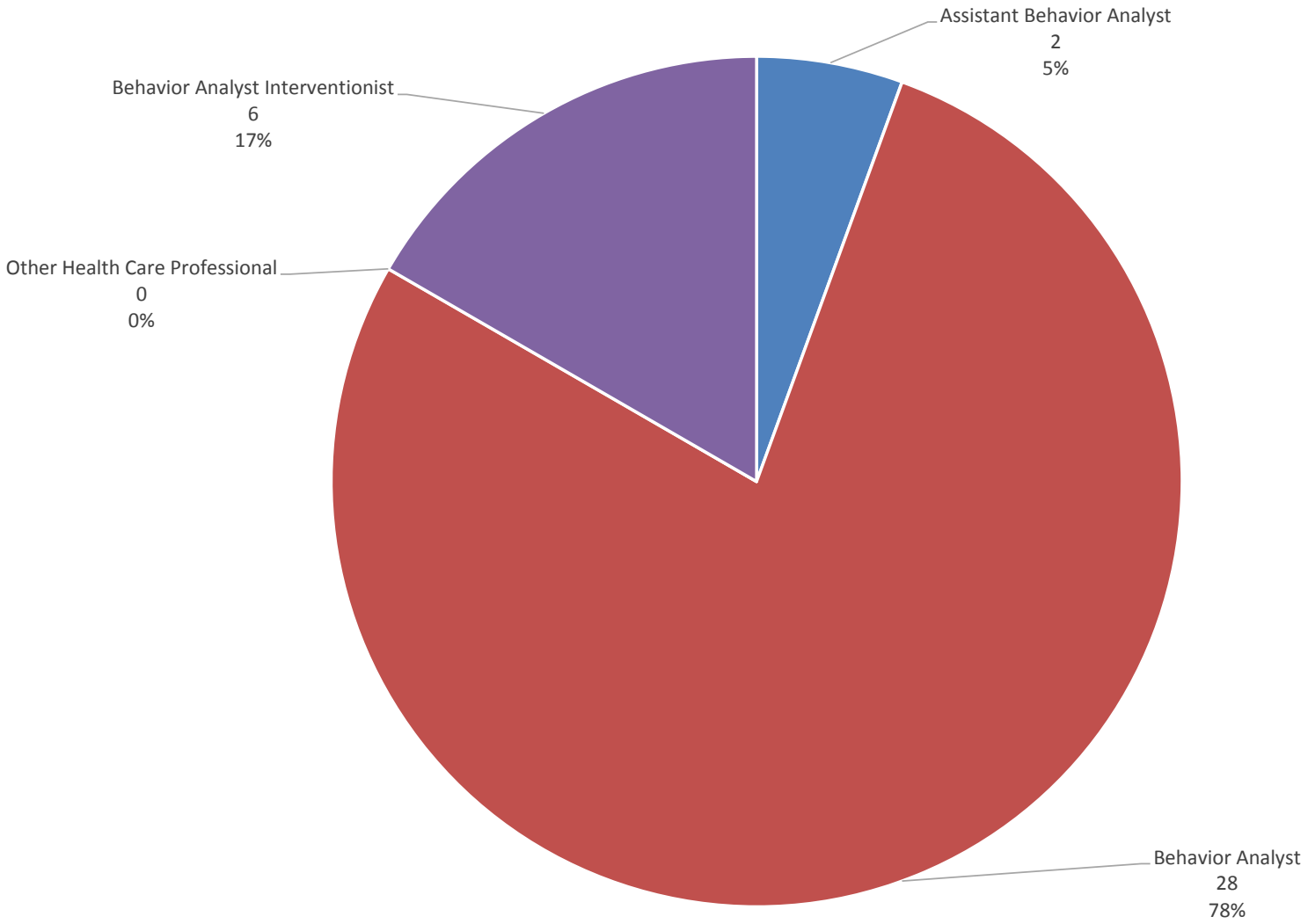
Active Licensee Volume
Statistics Grouped by Gender and Age Group as of March 20, 2015
2015-15 Biennium



Behavior Analysis Regulatory Board

License Volume by License Type as of March 20, 2015

2013 - 2015 Biennium

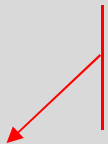


HEALTH LICENSING OFFICE
Fund 7860 - BEHAVIOR ANALYSIS REGULATORY
STATEMENT OF CASH FLOW
FOR THE PERIOD 07/01/13 - 03/20/15

		CURRENT
13-15' Beginning Cash Balance	$	-
Revenues	$	16,025.00
Expenditures	$	22,188.20
Less: Accrued Expenditures	$	-
Less: Total Expenditures	$	(22,188.20)
Subtotal: Resources Available	$	(6,163.20)
Change in (Current Assets)/Liabilities	$	-
Ending Cash Balance (Actual)	**$**	**(6,163.20)**

Indirect Charges are calculated using the following rates:
*Based on Licensee Volume as of May 20, 2013

Shared Assessment %	*0.00%*
Examination %	*0.00%*
Small Board Qualification %	*0.00%*
Inspection %	*0.00%*



Indirect charges will be assessed to the BARB fund starting July 1, 2015

Policy Report

Public/Interested Parties' Feedback

February 17, 2015

Dear Behavioral Analysis Regulatory Board Members:

I am writing to respectively provide input on the Behavioral Analysis Regulatory Board's regulatory guidelines for the licensing of behavior analysts and other licensed healthcare professionals.

We are the grandparents of a 5 year old grandson diagnosed at age 22 mos with both autism and developmental delay. When he was diagnosed at the CDRC, we were told to obtain speech therapy, occupational therapy and ABA therapy. Of note here is that each of those referrals was given a distinct service, and that all of them would be necessary. Of these we were able to retain ONLY the speech therapy.

Because we are his grandparents, and for legal reasons, also his foster parents, we were locked into OHP as our health insurance provider. As you are aware, this meant we received no ABA or occupational therapies, and limited speech therapies.

For two years we went to every possible session of the only therapy available to us, speech therapy. This service was provided by a highly qualified and compassionate speech pathologist, working in a reputable clinic. But despite all of our efforts, two years of therapy resulted in almost no gains in functional communication. Eventually we stopped participating in this level of service, as it became apparent that it was of no benefit to our grandson.

While we can appreciate that sense of urgency surrounding the shortage of qualified healthcare professionals, and in fact are experiencing this shortfall in our own lives, we are deeply concerned about the inclusion of speech pathologists, occupational therapists and other professionals as ABA therapists.

We have seen first hand, speech pathology is NOT ABA. While our speech pathologist did use some ABA techniques, it was clear to us that our service provider was NOT qualified to work with a child as profoundly autistic as our grandson. This became even more apparent once we began receiving some ABA therapies in the private sector. The difference in the approach to treatment was simply astounding. Likewise the progress our grandson has made in just a few months is leaps and bounds above anything he had achieved in 2 years of speech therapy sessions. This includes gains in his communications skills.

While we appreciate the expertise other healthcare professionals can provide, they simply do not present to us as persons able to deal with behaviors specifically.

We also have concerns as grandparents about the level of care that would be provided should the rules be changed to allow other healthcare professionals to provide ABA therapies. To be frank, there are many many parents who have been

desperate for services for a long time. With the recent changes in the insurance coverage requirements, a sort of floodgate has opened up. By allowing persons who are less than highly qualified to provide ABA services, the door is opened for less scrupulous people to try and capitalize on that rush of insurance money. We hate to be the doomsayers, but it can happen, it has happened elsewhere. Should this happen here, and outcomes for services drop to unacceptable levels, the risk then becomes returning to a place where no services are available. But most importantly, we now have perhaps hundreds or thousands of children who have received therapies that have had little or no benefit, and are now past the point of being able to be helped long term.

In summary, our feeling is that each discipline has its place in the services provided to a child with autism. Each of these children may need all or only some of those services. But those services should each be provided by a qualified professional with a deep understanding and expertise in their area. We would not take our child to a massage therapist when what is required is a neurosurgeon. Likewise, we should not be taking our children to a speech therapist for behavioral therapies, when a behaviorist is required.

We appreciate the opportunity to provide commentary on the regulations as the Board moves forward with the rules making process.

Sincerely,

Tina and Thomas Woods
Junction City, Oregon

February 27, 2015

Behavior Analysis Regulatory Board

Re: Requirements for Interventionist by State

Dear Members of the Board:

Thank you for taking the time to review the concerns expressed in my letter of February 2, 2015. In follow up to that letter, please find attached a chart of interventionist requirements by state. If I'm not mistaken, I think it shows that Oregon's requirements are among the most – if not *the* most – stringent. In most states, the only requirement is that the interventionist be supervised by a BCBA or other qualified health professional. In some states, the emphasis is on experience and training but not on formal education.

I hope you'll find the chart helpful and that you'll continue to consider removing the college coursework requirement for the interventionist level, if ony temporarily while the autism treatment benefit is in its infancy. If it would be helpful to have more information about the training that CARD interventionists receive – regardless of their education – I would be more than happy to present that information to the board.

Respectfully submitted,

/jk/

Julie Kornack
Senior Public Policy Analyst
(818) 345-2345, ext. 1070
J.Kornack@centerforautism.com

Statutory Requirements By State

State	Behavior Analyst Requirements	Therapist/Interventionist Requirements
Alabama	☒	☒
Alaska	"Autism service provider" mean an individual who is licensed, certified, or registered by the applicable state licensing board or by a nationally recognized certifying organization….	No requirements
Arizona	"Meets nationally recognized standards as determined by the board [AZ licensing board]…"	No requirements
Arkansas	Licensed physician, psychiatrist, ST, OT, PT, psychologists, and BCBA	No requirements
California	(A) A person, entity, or group that is certified by a national entity, such as the Behavior Analyst Certification Board, that is accredited by the National Commission for Certifying Agencies, and who designs, supervises, or provides treatment for pervasive developmental disorder or autism, provided the services are within the experience and competence of the person, entity, or group that is nationally certified. (B) A person licensed as a physician and surgeon, physical therapist, occupational therapist, psychologist, marriage and family therapist, educational psychologist, clinical social worker, professional clinical counselor, speech-language pathologist, or audiologist pursuant to Division 2 (commencing with Section 500) of the Business and Professions Code, who designs, supervises, or provides treatment for pervasive developmental disorder or autism, provided the services are within the experience and competence of the licensee.	(5) "Qualified autism service paraprofessional" means an unlicensed and uncertified individual who meets all of the following criteria: (A) Is employed and supervised by a qualified autism service provider. (B) Provides treatment and implements services pursuant to a treatment plan developed and approved by the qualified autism service provider. (C) Meets the criteria set forth in the regulations adopted pursuant to Section 4686.3 of the Welfare and Institutions Code. (D) Has adequate education, training, and experience, as certified by a qualified autism service provider.
Colorado	"Autism Services Provider" means any person who provides direct services to a person with ASD, is licensed, certified, or registered by the applicable state licensing board or by a national recognized organization AND meets one of the following: Doctoral degree in psychiatry, medicine, or clinical psychology, actively licensed by State Board, and 1 year of direct experience in behavioral therapies related to ASD; OR Doctoral degree in behavioral or health sciences and 1 year of direct experience in behavioral therapies related to ASD; OR Master's degree in behavior or health sciences, credentialed as a related services provider, and 1 year of direct supervised experience in behavioral therapies related to ASD; OR BCaBA or similar certification;	No requirements

Connecticut	"Behavioral therapy" means any interactive behavioral therapies derived from evidence-based research, including, but not limited to, applied behavior analysis, cognitive behavioral therapy, or other therapies supported by empirical evidence of the effective treatment of individuals diagnosed with an autism spectrum disorder, that are… provided or supervised by (i) a behavior analyst who is certified by the Behavior Analyst Certification Board, (ii) a licensed physician, or (iii) a licensed psychologist. For the purposes of this subdivision, behavioral therapy is "supervised by" such behavior analyst, licensed physician or licensed psychologist when such supervision entails at least one hour of face-to-face supervision of the autism services provider by such behavior analyst, licensed physician or licensed psychologist for each ten hours of behavioral therapy provided by the supervised provider.	No requirements
Delaware	"Autism services provider" includes licensed physicians, psychologists or their assistants, psychiatrists, speech therapists or their aides, occupational therapists or their aides, physical therapists or their assistants, practitioners with the national certification of board-certified behavior analyst or those working under their supervision, licensed professional counselors of mental health, licensed clinical social workers, advanced practice nurses.	No requirements
Florida	The agency shall recognize the certification of behavior analysts awarded by a nonprofit that adheres to national standards of boards that determine professional credentials and whose mission is to meet professional credentialing needs ….	Treatment of autism spectrum disorder through speech therapy, occupational therapy, physical therapy, and applied behavior analysis. Applied behavior analysis services shall be provided by an individual certified pursuant to s. 393.17 or an individual licensed under chapter 490 or chapter 491.
Georgia	☒	☒
Hawaii	☒	☒
Idaho	☒	☒
Illinois	Physician; a certified, registered, or licensed health care professional with expertise in treating efects of ASD when care is medically necessary and orded by a physician licensed to practice medicine in all its branches…	No requirements, except for early intervention services provided to children under 36 months: Coverage for medically necessary early intervention services must be delivered by certified early intervention specialists.
Indiana	Unclear because state's mandate is to "offer" the coverage, so health plans may potentially define provider	No requirements
Iowa	Provided or supervised by a behavior analyst certified by a nationally recognized board or by a licensed psychologist	No requirements
Kansas	"Autism service provider" means any person:(1)	"Line therapist" means an individual who:

	That provides diagnostic or treatment services for autism spectrum disorders who is licensed or certified by the state of Kansas; or (2) who is licensed by the behavioral sciences regulatory board as a licensed behavior analyst or a licensed assistant behavior analyst; "Certifying entity" means the national accredited behavior analyst certification board or other equivalent nationally accredited nongovernmental agency approved by the behavioral sciences regulatory board which certifies individuals who have completed academic, examination, training and supervision requirements in applied behavior analysis.	(1) Provides supervision of an individual diagnosed with autism spectrum disorder and other neurodevelopmental disorders pursuant to the prescribed treatment plan; and (2) implements specific behavioral interventions as outlined in the prescribed treatment plan under the direct supervision of a licensed behavior analyst.
Kentucky	BCBA + License	No requirements
Louisiana	BCBA or evidence of equivalent education, professional training, and supervised experience + license requirements which do not seem tied to BCBA but are complicated.	Registered Line Technician: Minimum of high school diploma or equivalent; proof of passing jurisprudence exam; criminal background check; proof that applicant conducts activities in accordance with accepted standards, including BACB Guidelines for Responsible Conduct.
Maine	ABA must be provided or supervised by a person professionally certified by a national board of behavior analysts	No requirements
Maryland	BCBA + License	No requirements
Massachusetts	BCBA	No requirements
Michigan	☒	☒
Minnesota	Licensed health care or mental health professional with expertise and training in autism and child development	No requirements
Mississippi	☒	☒
Missouri	"Certifying entity," the nationally accredited Behavior Analyst Certification Board, or other equivalent nationally accredited nongovernmental agency approved by the committee which certifies individuals who have completed academic, examination, training, and supervision requirements in applied behavior analysis;	No requirements
Montana	BCBA or certified by the dept. of public health and human services as a family support specialist with an autism endorsement	(ii) Applied behavior analysis covered under this section must be provided by an individual who is licensed by the behavior analyst certification board or is certified by the department of public health and human services as a family support specialist with an autism endorsement (RBT – High school plus training and experience as specified in BACB Guidelines)
Nebraska	BCBA or licensed psychologist provides or supervises, either in person or via telehealth	No requirements
Nevada	BCBA + License	Optional certification as a Certified Autism Behavior Interventionist which requires 40 hours of training provided by a licensed behavior analyst; passing score on an exam;

		background check; 3 letters of professional reference
New Hampshire	BCBA	No requirements
New Jersey	No current requirements but a recommendation of BCBA: carriers should consider behavioral interventions based on ABA and related structured behavior program services eligible for benefits if administered directly by or under the direct supervision of an individual who is credentialed by the national Behavior Analyst Certification Board as either a BCBA-D or BCBA.	No requirements
New Mexico	Prescribed by a physician	No requirements
New York	Behavior analyst certification board means…BACB OR any other entity, acceptable to the superintendent, in consultation with the Commissioners of Health and Education, that has a certification or approval process for behavior analysts.	A high school diploma or equivalent AND two years of full-time, direct, supervised work experience providing services to child with disabilities OR AA degree or higher in teaching or profession listed in Ed. Law Title VIII* OR certification as a teaching assistant OR matriculation in a specified degree program.
North Carolina	☒	☒
North Dakota	☒	☒
Ohio	Provided or supervised by a certified behavior analyst, physician or psychologist, or a mental health professional	No requirements
Oklahoma	☒	☒
Oregon	BCBA + License; options for registration as a Licensed Health Care Professional as specified	Completed application form; documentation of high school diploma or equivalent; criminal records check; AND one of the following: 30 quarter credit hours or equivalent semester credit hours with at least 3 credit hours in specified area of study AND 40 hours of training in professional and ethical issues; foundational knowledge of behavioral change principles; assessment; implementation of prescribed intervention plans; data collection and documentation OR At least 3 quarter credit hours or equivalent semester credit hours in specified area of study AND 40 hours of training as described above; AND 1,000 hours of supervised experience acquired in the last 3 years delivering ABA treatment protocols
Pennsylvania	"Autism Service Provider" means licensed or certified in this commonwealth; criteria for license requires Master's and experience but not BCBA.	No requirements
Rhode Island	Licensed applied behavior analyst; doesn't specify BCBA but "an appropriate nationally recognized accrediting organization as approved by the dept. of health for this function."	No requirements
South Carolina	Prescribed by insured's treating medical doctor	No requirements

South Dakota	☒	☒
Tennessee	☒	☒
Texas	Licensed, certified or registered by an appropriate agency of this state; OR whose professional credential is recognized and accepted by an appropriate agency of the US; or who is certified as a provider under TRICARE (BCBA or certificate or license issued by state)	No requirements
Utah	BCBA or licensed psychologist	No requirements
Vermont	Any licensed or certified person	No requirements
Virginia	License that requires "documentation that the applicant is currently certified as a Board Certified Behavior Analyst by the Behavior Analyst Certification Board or any other entity that is nationally accredited to certify practitioners of behavior analysis	No requirements
Washington	Licensed or certified with a licensure bill pending to license BCBAs or equivalent	No requirements but pending licensure bill that would require 40 hours of training, proof of ongoing supervision by licensed behavior analyst, good moral character, etc.
West Virginia	"Certified behavior analyst" means an individual who is certified by the Behavior Analyst Certification Board or certified by a similar nationally recognized organization.	No requirements
Wisconsin	BCBA + License	Must be at least 18 years of age with a high school diploma and completed a criminal background check; AND 20 hours of training that includes subjects related to autism, evidence-based treatment methods, communication, teaching techniques, problem behavior issues, ethics, special topics, natural environment, and first aid; AND at least 10 hours of training in the use of behavioral evidence-based therapy including the direct application of training techniques with an individual who has ASD
Wyoming	☒	☒

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February 18, 2015

Dear Behavior Analysis Regulatory Board Members:

I am writing to respectively provide input on the Behavioral Analysis Regulatory Board's regulatory guidelines for the licensing of behavior analysts and other licensed healthcare professionals.

I am the Executive Director of Autism Behavioral Consulting, an ABA firm with two clinics in the greater Portland and Vancouver area serving upwards of 115 families, most of them affected by autism. More importantly, I am the parent to an 18-year-old son with autism who has benefitted from ABA services from the time he was diagnosed at two. I believe I can contribute valuable input into the discussion of ABA licensing in Oregon.

I will not go into detail about the evidence of efficacy of a well-developed ABA program. I believe it is finally becoming common knowledge and the research has proven over the years that ABA is the "gold standard" for treatment of autism and related disorders. I have personal experience witnessing the benefits of ABA over the years and how the program changes and develops along with the skill set change of the individual. This is only able to occur with someone running the program with a breadth of experience and knowledge as there are so many nuances to be aware of.

I understand there has been talk about allowing the licensure to include non-BCBA personnel as long as they can show evidence of providing behavioral services. I am strongly against this position, not because I, myself, am a BCBA, but because I have seen the effects of non-certificated personnel providing the service. I have multiple anecdotes I will not share here, but I want to make it clear that I have seen the effects of "watering down" the requirements to allow other professional fields deliver ABA services.

Certified BCBAs are required to go through rigorous education AND experience requirements which then also includes continuing education requirements and oversight by a national certification board. I know that other professional fields also have high standards, but the BACB standards are *specific* to ABA and especially to autism, and that is unique to BCBAs. Our ethical standards are geared towards this specific population, and the standards are high. There is a reason for that, and not something I believe, as a provider group, we want to give up.

I know that the need is great in Oregon for BCBAs and that the number of families seeking services is high. However, I can tell you that it is not yet critical. We still have openings in our Portland office, and I know of other providers that have openings. It may be that as this legislation is put into place,

Other Board Business

that there will be a great influx of need, but I don't believe we should jump to conclusions just yet. There are new programs available all the time including one in Oregon now which is very exciting. At ABC, we are supervising a number of BCBA interns right now which will all be certified in the next 1-3 years. I believe there is time before we make a drastic decision to change the licensure requirements.

Please consider requiring BCBAs and BCaBAs only to be allowed to be certified in the state of Oregon. I strongly believe that not doing so will decrease the quality of care and oversight needed as a professional group to provide the best care for these wonderful young men and women whom we serve.

I appreciate the opportunity to provide commentary on the regulations as the Board moves forward with the rules making process.

Sincerely,

Audra Jensen, M.Ed., BCBA
Board-Certified Behavior Analyst
Executive Director
Phone: (360) 571-2440
E-mail: audra@autismabc.org

Oregon Health Authority

Health Licensing Office
Board of Direct Entry Midwifery
October 2, 2014

****PLEASE PRINT****

Name (First, Last)	Representing	Request to Comment (yes/no)
Lyn Del Osborn	consumer -	yes.
LAURIE STUEBING	Consumer	yes
Melissa Gard	ORABA	yes