



COLORADO

**Department of
Regulatory Agencies**

Colorado Office of Policy, Research &
Regulatory Reform

2018 Sunrise Review: Behavior Analysts

October 15, 2018



COLORADO

**Department of
Regulatory Agencies**

Executive Director's Office

October 15, 2018

Members of the Colorado General Assembly
c/o the Office of Legislative Legal Services
State Capitol Building
Denver, Colorado 80203

Dear Members of the General Assembly:

The General Assembly established the sunrise review process in 1985 as a way to determine whether regulation of a certain profession or occupation is necessary before enacting laws for such regulation and to determine the least restrictive regulatory alternative consistent with the public interest. Since that time, Colorado's sunrise process has gained national recognition and is routinely highlighted as a best practice as governments seek to streamline regulation and increase efficiencies.

Section 24-34-104.1, Colorado Revised Statutes, directs the Department of Regulatory Agencies to conduct an analysis and evaluation of proposed regulation to determine whether the public needs, and would benefit from, the regulation.

The Colorado Office of Policy, Research and Regulatory Reform (COPRRR), located within my office, is responsible for fulfilling these statutory mandates. Accordingly, COPRRR has completed its evaluation of the sunrise application for regulation of behavior analysts and is pleased to submit this written report.

The report discusses the question of whether there is a need for regulation in order to protect the public from potential harm, whether regulation would serve to mitigate the potential harm, and whether the public can be adequately protected by other means in a more cost-effective manner.

Sincerely,

A handwritten signature in blue ink that reads "Marguerite Salazar".

Marguerite Salazar
Executive Director



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Background

Consistent, flexible, and fair regulatory oversight assures consumers, professionals and businesses an equitable playing field. All Coloradans share a long-term, common interest in a fair marketplace where consumers are protected. Regulation, if done appropriately, should protect consumers. If consumers are not better protected and competition is hindered, then regulation may not be the answer.

As regulatory programs relate to individual professionals, such programs typically entail the establishment of minimum standards for initial entry and continued participation in a given profession or occupation. This serves to protect the public from incompetent practitioners. Similarly, such programs provide a vehicle for limiting or removing from practice those practitioners deemed to have harmed the public.

From a practitioner perspective, regulation can lead to increased prestige and higher income. Accordingly, regulatory programs are often championed by those who will be the subject of regulation.

On the other hand, by erecting barriers to entry into a given profession or occupation, even when justified, regulation can serve to restrict the supply of practitioners. This not only limits consumer choice, but can also lead to an increase in the cost of services.

There are also several levels of regulation.

Licensure

Licensure is the most restrictive form of regulation, yet it provides the greatest level of public protection. Licensing programs typically involve the completion of a prescribed educational program (usually college level or higher) and the passage of an examination that is designed to measure a minimal level of competency. These types of programs usually entail title protection - only those individuals who are properly licensed may use a particular title(s) - and practice exclusivity - only those individuals who are properly licensed may engage in the particular practice. While these requirements can be viewed as barriers to entry, they also afford the highest level of consumer protection in that they ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

Certification

Certification programs offer a level of consumer protection similar to licensing programs, but the barriers to entry are generally lower. The required educational program may be more vocational in nature, but the required examination should still measure a minimal level of competency. Additionally, certification programs typically involve a non-governmental entity that establishes the training requirements and owns and administers the examination. State certification is made conditional upon the individual practitioner obtaining and maintaining the relevant private credential. These types of programs also usually entail title protection and practice exclusivity.

While the aforementioned requirements can still be viewed as barriers to entry, they afford a level of consumer protection that is lower than a licensing program. They ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

Registration

Registration programs can serve to protect the public with minimal barriers to entry. A typical registration program involves an individual satisfying certain prescribed requirements - typically non-practice related items, such as insurance or the use of a disclosure form - and the state, in turn, placing that individual on the pertinent registry. These types of programs can entail title protection and practice exclusivity. Since the barriers to entry in registration programs are relatively low, registration programs are generally best suited to those professions and occupations where the risk of public harm is relatively low, but nevertheless present. In short, registration programs serve to notify the state of which individuals are engaging in the relevant practice and to notify the public of those who may practice by the title(s) used.

Title Protection

Finally, title protection programs represent one of the lowest levels of regulation. Only those who satisfy certain prescribed requirements may use the relevant prescribed title(s). Practitioners need not register or otherwise notify the state that they are engaging in the relevant practice, and practice exclusivity does not attach. In other words, anyone may engage in the particular practice, but only those who satisfy the prescribed requirements may use the enumerated title(s). This serves to indirectly ensure a minimal level of competency - depending upon the prescribed preconditions for use of the protected title(s) - and the public is alerted to the qualifications of those who may use the particular title(s).

Licensing, certification and registration programs also typically involve some kind of mechanism for removing individuals from practice when such individuals engage in enumerated proscribed activities. This is generally not the case with title protection programs.

Regulation of Businesses

Regulatory programs involving businesses are typically in place to enhance public safety, as with a salon or pharmacy. These programs also help to ensure financial solvency and reliability of continued service for consumers, such as with a public utility, a bank or an insurance company.

Activities can involve auditing of certain capital, bookkeeping and other recordkeeping requirements, such as filing quarterly financial statements with the regulator. Other programs may require onsite examinations of financial records, safety features or service records.

Although these programs are intended to enhance public protection and reliability of service for consumers, costs of compliance are a factor. These administrative costs, if too burdensome, may be passed on to consumers.

Sunrise Process

Colorado law, section 24-34-104.1, Colorado Revised Statutes (C.R.S.), requires that individuals or groups proposing legislation to regulate any occupation or profession first submit information to the Department of Regulatory Agencies (DORA) for the purposes of a sunrise review. The intent of the law is to impose regulation on occupations and professions only when it is necessary to protect the public health, safety or welfare. DORA's Colorado Office of Policy, Research and Regulatory Reform (COPRRR) must prepare a report evaluating the justification for regulation based upon the criteria contained in the sunrise statute:¹

(I) Whether the unregulated practice of the occupation or profession clearly harms or endangers the health, safety, or welfare of the public, and whether the potential for the harm is easily recognizable and not remote or dependent upon tenuous argument;

(II) Whether the public needs, and can reasonably be expected to benefit from, an assurance of initial and continuing professional or occupational competence;

¹ § 24-34-104.1(4)(b), C.R.S.

(III) Whether the public can be adequately protected by other means in a more cost-effective manner; and

(IV) Whether the imposition of any disqualifications on applicants for licensure, certification, relicensure, or recertification based on criminal history serves public safety or commercial or consumer protection interests.

Any professional or occupational group or organization, any individual, or any other interested party may submit an application for the regulation of an unregulated occupation or profession. Applications must be accompanied by supporting signatures and must include a description of the proposed regulation and justification for such regulation.

Methodology

During the sunrise review process, COPRRR staff performed a literature search; contacted and interviewed the sunrise applicant; reviewed licensure laws in other states; and interviewed behavior analysts and other stakeholders. To determine the number and types of complaints filed against behavior analysts in Colorado, COPRRR staff contacted Alliance Colorado, the Behavior Analyst Certification Board, the Colorado Association for Behavior Analysts, the Colorado Department of Health Care Policy and Financing, the Colorado Department of Public Health and Environment, and the Colorado Division of Professions and Occupations.

Profile of the Profession

Behavior Analysts evaluate behavior and develop treatment plans for their clients to improve their personal and professional lives. Behavior analysts may also train families and teachers. To be effective, this form of treatment requires heavy monitoring and continuous evaluation.²

Behavior analysts are often tasked with:

- Conducting behavior assessments,
- Analyzing data,
- Writing and revising treatment plans,
- Training others to assist with treatment plans, and
- Overseeing treatment.

Behavior analysts may work in hospitals, private practices, social services, clinics, laboratories and educational institutions. They may also provide treatment in homes, residential centers and community organizations.³

Applied behavior analysis may be used to improve skills, such as:⁴

- Social,
- Communication,
- Reading, and
- Academic.

Applied behavior analysis is commonly used as a therapeutic intervention for people with autism spectrum disorder.⁵

Other practitioners, such as psychologists, school counselors, special education teachers and others, may also use applied behavior analysis in their practices.

Most states require a license to practice psychology or use the title psychologist. Licensing laws vary by state, but most states require a clinical or counseling psychologist to have the following qualifications in order to be licensed:⁶

² Psychology Today. *Applied Behavior Analysis*. Retrieved March 28, 2018, from <https://www.psychologytoday.com/therapy-types/applied-behavior-analysis>

³ Psychology Today. *Applied Behavior Analysis*. Retrieved March 28, 2018, from <http://psychologydegreeguide.org/specialty/applied-behavior-analysis/>

⁴ Psychology Today. *Applied Behavior Analysis*. Retrieved March 28, 2018, from <https://www.psychologytoday.com/therapy-types/applied-behavior-analysis>

⁵ Psychology Today. *Applied Behavior Analysis*. Retrieved March 28, 2018, from <https://www.psychologytoday.com/therapy-types/applied-behavior-analysis>

⁶ U.S. Bureau of Labor Statistics. *Occupational Outlook Handbook: Psychologists*. Retrieved December 19, 2017, from <https://www.bls.gov/ooh/life-physical-and-social-science/psychologists.htm#tab-4>

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- A doctorate in psychology,
 - Completion of an internship,
 - At least one to two years of supervised professional experience, and
 - Successful completion of the Examination for Professional Practice in Psychology.

School counselors and special education teachers may have training in and use applied behavior analysis in their work, and they must be licensed in order to work in public schools.

Speech-language pathologists may also have training in and use applied behavior analysis in their work, and all states require speech-language pathologists to be licensed.

At this time, 29 states regulate behavior analysts. In many of these states, both the practice of applied behavior analysis and the title, “behavior analyst,” are protected, but a few states have only title protection.

Currently, 24 educational programs accredited by the Association for Behavior Analysis International in the United States provide bachelor’s, master’s and doctoral degrees in behavior analysis.⁷

The University of Colorado at Denver offers a master’s degree in special education with a concentration in applied behavior analysis, and it also offers an online certificate program in applied behavior analysis.⁸ Applicants for the certificate program are required to hold or be working toward a master’s degree in education, psychology or behavior analysis.⁹

The online certificate program is composed of six three-credit courses:¹⁰

- Introduction to Applied Behavior Analysis and Terminology;
- Applied Behavior Analysis Practical Applications;
- Applied Behavior Analysis Data;
- Applied Behavior Analysis Advanced Data, Behavioral Plans and Applications,

⁷ Association for Behavior Analysis International: Accreditation Board. *Accredited Programs*. Retrieved July 16, 2018, from <https://accreditation.abainternational.org/apply/accredited-programs.aspx>

⁸ University of Colorado at Denver, School of Education and Human Development. *Applied Behavior Analysis Certificate*. Retrieved June 28, 2018, from <http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/Academics/CPE/Certificates/Pages/AppliedBehaviorAnalysisCertificate.aspx>

⁹ University of Colorado at Denver, School of Education and Human Development. *Applied Behavior Analysis Registration*. Retrieved June 28, 2018, from <http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/Academics/CPE/Certificates/Pages/AppliedBehaviorAnalysisDetails.aspx>

¹⁰ University of Colorado at Denver, School of Education and Human Development. *Applied Behavior Analysis Certificate*. Retrieved June 28, 2018, from <http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/Academics/CPE/Certificates/Pages/AppliedBehaviorAnalysisCertificate.aspx>

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- Autism in Early Intervention; and
 - Ethics and Implementation in Applied Behavior Analysis.

The University of Northern Colorado (UNC) also offers an online certificate program in applied behavior analysis. The program is designed to prepare special education providers, professionals in psychology and behavior analysts with requisite knowledge and skills to work in applied behavior analysis.¹¹ UNC also offers graduate degrees in Psychology or Special Education with concentrations in applied behavior analysis.¹²

The Behavior Analyst Certification Board (BACB), a private professional credentialing organization, offers three certificates for behavior analysts:¹³

- Board Certified Assistant Behavior Analyst,
- Board Certified Behavior Analyst, and
- Board Certified Behavior Analyst - Doctoral.

In order to obtain board certification through the BACB, a candidate has three paths:

1. To become a Board Certified Assistant Behavior Analyst, a candidate must obtain a bachelor's degree in any discipline from an institution accredited by an organization approved by the Council for Higher Education Accreditation, complete specific coursework, complete supervised practical experience and pass an examination.¹⁴
2. To become a Board Certified Behavior Analyst, a candidate must obtain a master's degree with coursework in behavior analysis, psychology or education from an institution accredited by an organization approved by the Council for Higher Education Accreditation, complete supervised practical experience and pass an examination.¹⁵
3. To become a Board Certified Behavior Analyst-Doctoral, a candidate must be a Board Certified Behavior Analyst and complete an accredited doctoral program.¹⁶

¹¹ University of Northern Colorado. *Applied Behavior Analysis Certificate*. Retrieved April 20, 2018, from <http://www.unco.edu/cebs/special-education/programs/applied-bhevi-or-analysis-certificate.aspx>

¹² University of Northern Colorado. *Applied Behavior Analysis Graduate Certificate Program (Non-Degree)*. Retrieved March 28, 2018, from <http://extended.unco.edu/programs/education-special/applied-behavior-analysis-cert/index.asp>

¹³ Behavior Analyst Certification Board. *Become Credentialed*. Retrieved July 16, 2018, from <https://www.bacb.com/>

¹⁴ Behavior Analyst Certification Board. *BCaBA Requirements*. Retrieved July 26, 2018, from <https://www.bacb.com/bcaba/bcaba-requirements/>

¹⁵ Behavior Analyst Certification Board. *BCBA Requirements*. Retrieved July 26, 2018, from <https://www.bacb.com/bcaba/bcaba-requirements/>

¹⁶ Behavior Analyst Certification Board. *BCBA-D Requirements*. Retrieved July 26, 2018, from <https://www.bacb.com/bcaba-d/bcaba-d-requirements/>

There are two examinations depending on the level of certification being sought: the BCBA examination to become a Board Certified Behavior Analyst and the BCaBA examination to become a Board Certified Assistant Behavior Analyst.¹⁷

The BCBA examination consists of 150 multiple choice questions covering content related to basic behavior analysis skills and client-centered responsibilities.¹⁸

The questions addressing basic behavior analysis skills cover:

- Measurement (15 questions),
- Experimental design (11 questions),
- Behavior change considerations (3 questions),
- Fundamental elements of behavior change (26 questions),
- Specific behavior change procedures (15 questions), and
- Behavior change systems (8 questions).

The questions addressing client-centered responsibilities cover:

- Identification of the problem (14 questions),
- Measurement (9 questions),
- Assessment (12 questions),
- Intervention (23 questions), and
- Implementation, management and supervision (14 questions).

The BCaBA examination content is similar to the BCBA examination. However, the BCaBA examination consists of 130 questions.

According to the Colorado Association for Behavior Analysts (Applicant), approximately 554 behavior analysts with BACB certificates (including Board Certified Assistant Behavior Analyst, Board Certified Behavior Analyst and Board Certified Behavior Analyst - Doctoral certificates) are working in Colorado. It is unknown how many behavior analysts without BACB certification are practicing in Colorado; however, the Applicant estimates this number to be quite small.

¹⁷ Behavior Analyst Certification Board. *Examination Information*. Retrieved June 28, 2018, from <https://www.bacb.com/examination-information/>

¹⁸ Behavior Analyst Certification Board. *BCBA Examination Content and Structure*. Retrieved June 28, 2018, from <https://www.bacb.com/bcba/bcba-exam/>

Proposal for Regulation

The Colorado Association for Behavior Analysts (Applicant) submitted a sunrise application to the Colorado Office of Policy, Research and Regulatory Reform (COPRRR) in the Department of Regulatory Agencies for review consistent with the provisions of section 24-34-104.1, Colorado Revised Statutes (C.R.S.). The application identifies state licensure of behavior analysts as the appropriate level of regulation to protect the public.

The sunrise application states that licensure by the state is necessary to protect the public from incompetent or inappropriate treatment which could negatively affect the development of children. According to the Applicant, failure to provide high quality behavior-analytic treatment may result in a decreased likelihood of achieving typical educational and intellectual functioning.

Additionally, behavior analysts often work with vulnerable populations, such as children with autism spectrum disorder, who are at risk of exploitation and abuse. With licensure, the Applicant proposes that the public would be better protected against fraud, malpractice and criminal behavior.

While it is estimated by the Applicant that most behavior analysts working in Colorado are certified by the Behavior Analyst Certification Board (BACB), its authority over behavior analysts with certification is limited to those with board certification. The BACB has the ability to revoke, suspend, mandate supervision, require a corrective action, restrict certification and issue a corrective action of board-certified behavior analysts who are in violation of its standards, but it has no authority over behavior analysts without certification.

Anyone, such as clients, other behavior analysts or employers, may submit a notice of an alleged violation against a board-certified behavior analyst to the BACB. If the BACB finds sufficient evidence of a violation in the notice, it may take action against the board-certified behavior analyst. The BACB is not an investigative body, so it may only take action when the notice includes sufficient evidence of a violation.

In 2016 and 2017, the BACB received 219 notices of alleged violations nationally, and it took enforcement action based on 94 of these notices. Of these, 44 percent of the actions resulted in a corrective action and 9 percent resulted in revocation. In these two years, the BACB also required verification of competency, issued advisory warnings, restricted certification, suspended certification and invalidated certification.

The sunrise application requests that only individuals who hold professional certification through the BACB be allowed to practice applied behavior analysis.

The Applicant would require behavior analysts to maintain BACB certification, which includes continuing education requirements, as a condition of licensure. As required by statute, the Applicant submitted an application for mandatory continuing education to COPRRR.

Additionally, the Applicant proposes that candidates may be disqualified for felony convictions in order to protect patients who are vulnerable to exploitation and abuse.

Summary of Current Regulation

Federal Laws and Regulations

At this time, there are no federal laws relevant to the practice of applied behavior analysis.

The Colorado Regulatory Environment

While there are no regulatory laws specific to the practice of “applied behavior analysis,” in Colorado, anyone who practices psychotherapy must at a minimum be registered as a psychotherapist.¹⁹

Psychotherapy is defined as:²⁰

the treatment, diagnosis, testing, assessment, or counseling in a professional relationship to assist individuals or groups to alleviate behavioral and mental health disorders, understand unconscious or conscious motivation, resolve emotional, relationship, or attitudinal conflicts, or modify behaviors that interfere with effective emotional, social, or intellectual functioning. Psychotherapy follows a planned procedure of intervention that takes place on a regular basis, over a period of time, or in the cases of testing, assessment, and brief psychotherapy, psychotherapy can be a single intervention.

Behavior analysts work with individuals and groups to modify behaviors that interfere with emotional, social or intellectual functioning. Applied behavior analysis may not be a traditional form of psychotherapy, but it clearly falls under the statutory definition. Behavior analysts do not need to engage in all of the activities outlined in this definition for it to apply.

Under the mental health practice act, six boards regulate the following mental health providers:

- Addiction counselors,
- Licensed professional counselors,
- Marriage and family counselors,
- Psychologists,
- Registered psychotherapists, and
- Social workers.

¹⁹ § 12-43-226(2), C.R.S.

²⁰ § 12-43-201(9)(a), C.R.S.

The mental health boards have the authority to deny, revoke or suspend a license, certification or registration. They may also issue a letter of admonition, a confidential letter of concern or a fine, and they may place a licensee, certificate holder or registrant on probation.²¹

The grounds for discipline include, among other things:²²

- Having a felony conviction;
- Habitually or excessively using or abusing alcohol, a habit-forming drug or a controlled substance;
- Failing to notify the relevant board of a physical or mental illness or condition that affects the person's ability to treat clients with reasonable skill and safety or that may endanger the client's health or safety;
- Failing to act in a manner that meets the generally accepted standards of practice;
- Performing services outside the person's area of training, experience or competence;
- Exercising undue influence on the client, including the promotion or the sale of services, goods, property or drugs in such a manner as to exploit the client for the financial gain of the practitioner or a third party; and
- Engaging in sexual contact, sexual intrusion or sexual penetration with a client during the period of time in which a therapeutic relationship exists or for two years following the period in which such a relationship exists.

The mental health practice act provides a strong regulatory framework that protects the public against unprofessional conduct, incompetent practice, exploitation and abuse.

Many certified behavior analysts in Colorado are already licensed by at least one or several of the mental health boards, and all certified behavior analysts would qualify at a minimum to be registered as psychotherapists.

To be registered as a psychotherapist, there are no minimum educational or clinical training requirements. Additionally, there is no requirement to pass an examination to demonstrate competency in psychotherapy. In order to be registered as a psychotherapist, an individual must submit an application, pay a fee and pass an online, open-book examination demonstrating familiarity with Colorado state laws related to the regulation of registered psychotherapists. The examination costs \$20, and the registration fee is \$185.

²¹ § 12-43-223(1), C.R.S.

²² § 12-43-222(1), C.R.S.

Other practitioners may also have training in behavioral analysis and use it in their practices, including but not limited to:

- School counselors,
- Special education teachers, and
- Speech-language pathologists.

All of these practitioners are regulated by the State.

Health benefit plans in Colorado are required to provide coverage for the assessment, diagnosis and treatment of autism spectrum disorders for a child.²³ An autism treatment provider may be an individual with a:²⁴

- Doctorate in psychiatry, medicine or clinical psychology who is licensed and has at least one year of direct experience in behavior therapies consistent with best practices and research on effective treatment for people with autism spectrum disorders;
- Doctorate in behavioral or health sciences with at least one year of direct experience in behavior therapies consistent with best practices and research on effective treatment for people with autism spectrum disorders;
- Master's degree in behavioral sciences who is nationally certified as a behavior analyst by the Behavior Analyst Certification Board (BACB);
- Master's degree in behavior or health sciences who is credentialed as a physical therapist, occupational therapist or speech therapist, and has at least one year of direct experience in behavior therapies consistent with best practices and research on effective treatment for people with autism spectrum disorders;
- Baccalaureate in behavioral sciences who is nationally certified as an assistant behavior analyst by the BACB; or
- Registered Behavior Technician credential with the BACB.

The Consumer Protection Act (CPA) provides some additional protections. According to the CPA, it is considered a deceptive trade practice to claim to possess a degree or a title associated with a particular degree unless the person has been awarded the degree from a school that is accredited or otherwise authorized to grant degrees as specified in statute.²⁵ While the CPA does not prevent anyone from practicing applied behavior analysis without a degree, an individual could not pose as a graduate of a behavior analysis educational program without first having a degree.

²³ § 10-16-104(1.4)(b)(I), C.R.S.

²⁴ § 10-16-104(1.4)(a)(II), C.R.S.

²⁵ § 6-1-707(1)(a), C.R.S.

Regulation in Other States

The licensing of behavior analysts is a recent phenomenon. In 2008, Arizona and Pennsylvania became the first states to create regulatory programs specific to the practice of applied behavior analysis.

Today, 29 states regulate behavior analysts.

As part of this sunrise review, staff in the Colorado Office of Policy, Research and Regulatory Reform surveyed regulatory programs in 14 other states. Only Virginia failed to respond to the survey.

Table 1 provides some basic information about the regulation of behavior analysts in the states that responded to COPRRR's survey.

Table 1
Regulation in Other States

State Name	Year Enacted	Licensed Behavior Analysts	Licensed Assistant Behavior Analysts	Complaints 2016 & 2017	Disciplinary Actions 2016 & 2017
Alabama	2014	156	10	0	0
Arizona	2008	347	NA	1	0
Hawaii	2015	201	NA	1	0
Kansas	2014	129	15	0	0
Kentucky	2010	199	13	Did not provide	Did not provide
Massachusetts	2013	2,041	23	2	0
Mississippi	2015	48	2	2	0
Missouri	2010	402	36	11*	0
Nevada	2009	120	10	4	0
Oklahoma	2009	73	7	1	0
Tennessee	2014	345	6	0	0
Utah	2015	196	40	1	0
Wisconsin	2010	209	NA	2	0

*Missouri complaint and disciplinary data are for fiscal year 15-16 and 16-17.

Arizona, Hawaii and Wisconsin do not license assistant behavior analysts.

In 2016 and 2017, Arizona received one complaint alleging a standard of practice violation against a licensed behavior analyst. Over the same two-year period, Hawaii received one complaint regarding unlicensed practice. Although Kentucky responded

to the survey, it would not provide complaint or disciplinary data for either year. Massachusetts investigated two complaints against behavior analysts, one for substandard care and another for health-care fraud. Mississippi issued two cease and desist orders for unlicensed practice, but it did not receive any complaints against licensed behavior analysts in either year. In fiscal year 16-17, Missouri received one complaint related to a criminal conviction and two for misconduct. In 2016 and 2017, Nevada investigated four complaints against behavior analysts for inappropriate termination, unlicensed practice, unprofessional conduct and failure to report an arrest.

It should be noted that none of the states reported any complaints against licensed assistant behavior analysts.

With the exception of Missouri, there is very little complaint activity against behavior analysts in the states that responded to the survey, and none of these states disciplined any licensed behavior analysts or assistant behavior analysts.

Analysis and Recommendations

Public Harm

The first sunrise criterion asks:

Whether the unregulated practice of the occupation or profession clearly harms or endangers the health, safety, or welfare of the public, and whether the potential for harm is easily recognizable and not remote or dependent on tenuous argument.

In order to determine whether the regulation of applied behavior analysis is necessary, the Colorado Office of Policy, Research and Regulatory Reform (COPRRR) requested that the Colorado Association for Behavior Analysts (Applicant) provide specific examples of harm to the public. The Behavior Analyst Certification Board (BACB) also provided some additional cases of harm.

The examples of harm provided to COPRRR include:

- Language delay,
- Developmental delay,
- Financial harm,
- Physical harm, and
- Sexual misconduct.

Each example of harm is summarized below along with COPRRR's analysis.

Language Delay

In 2017, a five-year-old girl with autism spectrum disorder received behavioral intervention to learn early language skills in California. The behavior programs included the implementation of prompting procedures when the girl did not respond to an instructional prompt. The family decided that they would have a behavior analyst develop treatment plans and then discontinue services and hire less expensive staff for the actual implementation. When the girl's parents noticed that the data being collected no longer showed progress, they called the behavior analyst to have another assessment completed. The behavior analyst started to conduct the new assessment and quickly recognized that the failure to respond to prompts was atypical. The five-year-old was having absence seizures (previously known as petit-mal seizures), characterized by brief moments of staring or a lack of awareness, which were mistaken for failure to respond to instructional prompt. The staff members that the family had hired to implement the applied behavior analysis plans with their daughter did not have any background or training that would have prepared them to recognize when there was a change in the data that should be investigated or

reported to someone. Behavior analysts are taught, tested and ethically obligated to consider biological and medical variables that may be affecting the client during behavioral treatment.

Analysis

The five-year-old girl may have been harmed by the unqualified provision of applied behavior analysis resulting in a temporary delay in language skills. It is unknown how long the child was being treated by unqualified individuals and whether the impact on her cognitive functioning was impaired from untreated seizures and, if it was, whether this damage was permanent. However, the parents did bring in a qualified behavior analyst to assist when it became clear that the child was not progressing.

Developmental Delay & Financial Harm

In 2010, a woman was arrested in Connecticut for posing as a board-certified behavior analyst. From 2007 to 2008, the woman used forged credentials to bill the Norwalk and Weston public school districts \$400,000 for services to children with autism. A parent in Norwalk uncovered the fraud when she checked the online registry for the BACB and found that the woman posing as a behavior analyst was not certified. The parents of the children who received services from her allege that she failed to provide effective services, which resulted in stunting the development of the children. She also represented herself to school officials as having two master's degrees and a doctorate in order to work as an autism specialist although, in reality, she only held a high-school equivalency diploma. She was sentenced to eight years in prison. During the sentencing related to the Norwalk school system, the judge also reprimanded those in the school district who allowed her to pose as a certified behavior analyst. The school district failed to verify her credentials.

Analysis

The services provided by the woman may not have been effective for children with autism since she was charged with supervising applied behavior analysis and she was neither board certified nor trained in applied behavior analysis. This may have been mitigated somewhat since most of the staff in the woman's company were reportedly qualified to provide services to children with autism. However, the true impact on these children is unknown. The school districts were financially harmed since they were defrauded thousands of dollars and subjected to lawsuits by the parents of the children with autism. However, the harm would not have occurred had the school districts checked the provider's credentials. Moreover, the BACB could take action against the woman for fraudulent use of its credentials.

Financial Harm

In 2005, a woman in New Jersey was charged with stealing from families with autistic children when she used fake credentials to work as an advocate for children with autism.

Analysis

The actual harm alleged in this case is theft. However, while the woman used the fraudulent credentials to gain employment, she was not, in fact, practicing applied behavior analysis. Additionally, her certification could have easily been checked online. Having a state licensure program for behavior analysts would not have prevented this from occurring. This is underlined by the fact that this individual later posed as a nurse without having a nursing license. Moreover, the BACB could take action against the woman for fraudulent use of its credentials.

Physical Harm

In 2009, a behavior analyst certified by the BACB was indicted for criminal abuse in Louisville, Kentucky. He was conducting a functional analysis of the self-injurious behavior (head banging) of a 17-year old girl with cerebral palsy, autism and mental retardation and a history of self-injurious behavior. This is a customary procedure for determining the cause of a problem behavior. During the analysis, the client was allowed to bang her head on a concrete floor 129 times. According to the Applicant, the behavior analyst failed to take the necessary safety precautions when conducting a functional analysis of self-injury, including using a criterion to determine when to end the analysis due to extreme behavior and using safety equipment, such as padded flooring. However, the behavior analyst was acquitted of the charges.

Analysis

Although the behavior analyst was acquitted of the charges of abuse, it seems likely that the teenage girl was harmed when she was allowed to engage in self-injurious behavior during the functional analysis. If a licensing program were created, it could investigate whether the behavior analyst's functional analysis met the generally accepted standards of the profession. However, at the time, the behavior analyst was certified by the BACB, and he continues to maintain his certification today. The BACB could have revoked the behavior analyst's certification based on the facts of the case, but it did not take any disciplinary action.

Physical Harm

In September 2017, a program coordinator, with limited experience developing behavior plans, attempted to provide support to an adult individual on the autism spectrum in Lakewood, Colorado. This individual had a history of engaging in physical aggression and a history of mental illness. He was also being treated by a psychiatrist.

While interacting with the individual during an escalated state, the program coordinator exacerbated the situation and the individual became more dangerous. The program coordinator followed the plan to continue to confront the individual while already dangerous. Instead, the treatment should have been to teach appropriate ways to request a break. The individual escalated to physical aggression by throwing rocks and chasing staff with a metal rod. After the police were contacted, the individual ran away and was alone in the community without supervision while still in an agitated state. The individual was later placed in a more restrictive facility based on these events. The escalated incident was a result of the program coordinator following a behavior plan that he wrote without the proper expertise in behavior analysis. A behavior plan to reduce challenging behavior must have the correct understanding of the behavior and what is maintaining the behavior. In this example, the program coordinator did not have the skill set to develop a behavior plan.

Analysis

In this case, the harm to the individual was the increased restrictions placed on him resulting from these events. Additionally, staff and bystanders could have been harmed during the altercation. Nevertheless, while the program coordinator was providing behavior therapy, he was not representing himself as a behavior analyst. While this case may demonstrate better outcomes from the practice of applied behavior analysis, it provides insufficient evidence of harm related to the practice of applied behavior analysis. Moreover, while the program coordinator was not certified by the BACB, it is unknown whether he was otherwise qualified to develop a behavior plan.

Physical Harm

In 2015, an adult with autism and a history of wandering was put at risk due to an ineffective behavior plan developed in Aurora, Colorado. The plan was developed by a licensed professional counselor who did not properly identify the motivation of the client's wandering behavior using a functional assessment, a customary prerequisite for effective treatment in applied behavior analysis. Consequently, the intervention inadvertently increased wandering, placing the client in risky community settings without supervision. During this time, the

individual damaged property in the community resulting in police contact, and he was at risk of exploitation and victimization during the time he was unsupervised in the community. The error in the behavior plan was the failure to teach an alternative behavior for the client to obtain the desired outcome from wandering, but in a safe way.

Analysis

The individual damaged property in the community and put himself at risk of exploitation and victimization. However, the licensed professional counselor was not representing himself as a behavior analyst or practicing applied behavior analysis. While this case may demonstrate better outcomes from the practice of applied behavior analysis, it does not provide evidence of harm from the unqualified practice of applied behavior analysis. Behavior analysts are not the only practitioners who conduct functional assessments or develop behavior plans. The licensed professional counselor was likely working within his scope of practice. Therefore, regulation of applied behavior analysis would not prevent this from occurring.

Physical Harm

In 2006, a mother of two boys with autism was permitted to observe her sons' treatment at a behavioral clinic in Tennessee. As she observed a staff member work with one son, she found it hard to watch because the staff was physically pressing and manipulating her son's face when he would not follow an instruction. Her son appeared to be uncomfortable and had red marks on his face as a result of the action. She decided to record the session on video because she was not sure if she was overreacting to what she observed, or if it was typical behavioral treatment. After reporting the incident, she discovered that it was not typical. The staff member, who was working under board-certified behavior analysts, was subsequently reported for abuse and terminated from the organization.

Analysis

In this case, an autistic child was physically harmed. While the physical harm was temporary, it is unknown whether the child suffered any long-term harm resulting from physical abuse. This case demonstrates the potential for harm from incompetent treatment related to applied behavior analysis.

Sexual Misconduct

In 2016, a special education consultant in Newton, New Jersey pleaded guilty to sexually assaulting 10 children and submitting \$650,000 worth of fraudulent

insurance claims. The special education consultant advertised himself online as a life coach, a family counselor and an Applied Behavior Analysis therapist. He was not credentialed with the BACB, but he was licensed in New Jersey as a marriage and family therapist and also as a school counselor. Eight of the sexual assaults occurred while he was working as a counselor for children and families. He was later sentenced to 10 years in state prison, and both of his licenses were revoked.

Analysis

Clearly, the children and families were harmed by the acts of the special education consultant. However, this individual was already dually licensed by the state to perform the work that he was doing. It is unlikely additional regulation would protect the public in this case.

The Applicant presented eight cases alleging harm from the practice of applied behavior analysis across the nation over a 12-year period. After careful review, COPRRR found that only three of these cases demonstrate clear evidence of harm. It is, therefore, questionable whether these cases provide sufficient evidence that the unqualified practice of applied behavior analysis clearly harms the public.

It should be noted that if any of these cases took place in Colorado, a complaint could be filed with one of the mental health boards to determine whether a violation of the mental health practice act occurred, and if so, action against the individual could be taken.

In an attempt to identify harm in other states, COPRRR contacted 14 states that regulate behavior analysts, and it uncovered little complaint activity and no disciplinary activity against licensed behavior analysts.

COPRRR staff also contacted the six boards that regulate mental health providers in Colorado to determine whether they received any complaints against behavior analysts. Staff reported one complaint for unlicensed practice. In this case, the Board of Registered Psychotherapists (Board) determined that it has jurisdiction over the individual and that she was engaged in psychotherapy. Since the individual was not registered as a psychotherapist in Colorado, the Board issued a cease and desist order. Staff reported no other complaints against behavior analysts.

The Colorado Department of Health Care Policy and Financing (HCPF) oversees the state's Medicaid program. In Colorado, there are five Home and Community-Based Services (HCBS) waivers through which applied behavioral analysis is reimbursed through Medicaid:

- Early and Periodic Screening, Diagnostic and Treatment;
- Children with Autism;
- Children with Extensive Support;

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- Supported Living Services; and
 - Persons with Developmental Disabilities.

HCPF requires anyone providing applied behavior analysis to be board certified by the BACB in order to be reimbursed through the HCBS waiver program, and it did not report any cases of harm related to the practice of applied behavior analysis.

COPRRR staff also contacted the Colorado Department of Public Health and Environment (CDPHE), which regulates facilities that care for people with intellectual and developmental disabilities, and it did not report any cases of harm resulting from the practice of applied behavior analysis.

In addition to contacting HCPF and CDPHE, COPRRR staff also contacted Alliance Colorado, the association for agencies that serve persons with developmental disabilities, to determine if it had any evidence of harm by the practice of applied behavior analysis, and it did not report any cases of harm.

COPRRR staff contacted the Colorado Department of Education, but since it does not require behavior analysts to obtain an educational license, it could not provide any complaint data or evidence of harm.

Anyone, such as clients, other behavior analysts or employers, may submit a notice of an alleged violation against a board-certified behavior analyst to the BACB. If the BACB finds sufficient evidence of a violation in the notice, it may take action against the board-certified behavior analyst. The BACB is not an investigative body, so it may only take action when the notice includes sufficient evidence of a violation.

In 2016 and 2017, the BACB received 219 notices of alleged violations nationally, and it took enforcement action based on 94 of these notices. Of these, 44 percent of the actions resulted in a corrective action and 9 percent resulted in revocation. In these two years, the BACB also required verification of competency, issued advisory warnings, restricted certification, suspended certification and invalidated certification.

Many professions, such as school counselors, special education teachers, psychologists and speech-language pathologists may have training in applied behavior analysis and other forms of behavior therapy. There is insufficient evidence demonstrating that trained professionals without board certification are unqualified to provide these services.

Overall, COPRRR staff utilized a variety of sources in an attempt to identify instances where unregulated behavior analysts were harming consumers. A comprehensive review of the information did not reveal sufficient evidence of harm resulting from the unqualified practice of applied behavior analysis to warrant additional regulation by the state.

Need for Regulation

The second sunrise criterion asks:

Whether the public needs and can reasonably be expected to benefit from an assurance of initial and continuing professional or occupational competence.

Since there is insufficient evidence of harm by the unqualified practice of applied behavior analysis, an assurance of initial and continuing professional or occupational competence is unwarranted.

Alternatives to Regulation

The third sunrise criterion asks:

Whether the public can be adequately protected by other means in a more cost-effective manner.

The Applicant is seeking licensure, which is the most restrictive form of regulation. With little evidence of harm from the practice of applied behavior analysis, it is questionable what public protection would be provided through licensure.

Moreover, anyone who practices psychotherapy in Colorado must be registered, certified or licensed by one of the mental health boards in order to practice. At this time, consumers may choose a board-certified behavior analyst or a provider who is not board certified.

A degree in behavior analysis, psychology or special education and private board certification are credentials that offer consumers some assurance of professional competency.

Private certification is available to behavior analysts through the Behavior Analyst Certification Board (BACB), which is widely recognized as the national certifying body for applied behavior analysis. Only those individuals who hold this credential may represent themselves as Board-Certified Assistant Behavior Analysts, Board-Certified Behavior Analysts or Board-Certified Behavior Analysts-Doctoral, or place the initials BCaBA, BCBA or BCBA-D after their names. The BACB may pursue individuals who falsely represent themselves as having board certification through their organization, and consumers can easily verify whether an individual is certified by the BACB through its website.

The BACB does have the ability to revoke, suspend and mandate supervision of a board-certified behavior analyst who is in violation of the board standards. In 2016 and 2017, the BACB did take action against board-certified behavior analysts,

including suspension and revocation. For those who are not board certified, the chances of finding work are significantly reduced if their certification is suspended or revoked.

Typically, private certification represents a high level of professional competency, beyond what is necessary for public protection. Unlike private certification, the purpose of state regulation is to ensure practitioners have the minimum competencies necessary to protect the health, safety and welfare of the public.

Private certification provides a market advantage to those who have it. Anyone who does not have private certification must compete with those who do, and when it is important to consumers, professionals without it are at a competitive disadvantage.

This is demonstrated by two state agencies in Colorado: the Colorado Department of Health Care Policy and Financing (HCPF), which administers Colorado's Medicaid program, and the Colorado Department of Education (CDE). HCPF currently requires providers to be board-certified in order to be reimbursed for applied behavior analysis services, and CDE requires anyone without an educational license who is providing applied behavior analysis services in a public school district to be certified by the BACB.

While there is little evidence of harm from the unqualified practice of behavior analysis, there are some alternatives in place to provide consumers with some assurance of professional competency. However, none of these alternatives can entirely prevent someone without board certification from practicing applied behavior analysis or holding himself or herself out as a behavior analyst.

Collateral Consequences

The fourth sunrise criterion asks:

Whether the imposition of any disqualifications on applicants for licensure, certification, relicensure, or recertification based on criminal history serves public safety or commercial or consumer protection interests.

The Applicant proposes that applicants may be disqualified for felony convictions in order to protect patients who are vulnerable to exploitation and abuse.

COPRRR was provided one case of fraud, one case of abuse related to the practice of behavior analysis and one counselor who committed heinous acts against children.

A regulatory program to disqualify individuals based on criminal history could serve to protect consumers. However, it is questionable whether these few cases, which took place outside of Colorado over a 12-year period, are sufficient to warrant regulation

of an entire occupational group. Moreover, the counselor was already licensed as a marriage and family therapist and a school counselor in the state where he committed these crimes. It is unlikely additional regulation would have protected the public in this case.

It should be said that if regulation were imposed, considering the vulnerable population that applied behavior analysts serve, primarily individuals with autism spectrum disorder and other intellectual or developmental disabilities, it would be reasonable to disqualify individuals based on a criminal history. While felony convictions should be considered, misdemeanors involving mistreatment, abuse or exploitation of an individual who is at risk, such as a child, an elderly person or a person with intellectual or developmental disabilities, should also be considered grounds for disqualification.

That said, while there are no regulatory laws specific to the practice of “applied behavior analysis,” in Colorado, anyone who practices psychotherapy must have a license, certificate or registration from one of the six mental health boards. Under the mental health practice act, anyone who has been convicted of a felony or who engages in a fraudulent insurance act may be disqualified from licensure, certification or registration.

Conclusion

The Applicant identifies licensure of behavior analysts as the appropriate level of regulation to protect the public. The Applicant states that licensure is necessary to protect the public from incompetent or inappropriate treatment which could negatively affect the development of children. According to the Applicant, failure to provide high quality behavior-analytic treatment may result in a decreased likelihood of achieving typical educational and intellectual functioning.

Additionally, behavior analysts often work with vulnerable populations, such as children with autism spectrum disorder, who are at risk of exploitation and abuse. With licensure, the Applicant asserts that the public would be better protected against fraud, malpractice and other criminal behavior.

The sunrise Applicant proposes that only individuals who are certified by the BACB be able to practice applied behavior analysis.

In any sunrise review, COPRRR must consider the consumer harm first and then determine the appropriate level of regulation.

A comprehensive review of evidence from multiple sources revealed that the evidence of harm to the public from the unqualified practice of behavior analysis was insufficient to warrant additional regulation by the state.

The Applicant seeks to require a license in order to practice applied behavior analysis. If licensure were required, it would restrict the market, and it is unknown whether the approximately 550 behavior analysts who are certified by the BACB in Colorado would be sufficient to meet the need for these services.

Behavior analysts may be hired by a school district, a clinic, a community centered board or a facility that works with people with developmental disabilities. These employers are sophisticated consumers with the ability to determine the appropriate qualifications necessary to hire staff.

Individual consumers may also find behavior analysts from referrals. If a behavior analyst was referred by a health-care provider, an educator, a friend or a family member, then the practitioner referred most likely provides some benefit to consumers. A consumer may always request a resume outlining a behavior analyst's education, work history and references.

According to the National Institute of Mental Health, "there is no single best treatment for autism spectrum disorder," and it recommends working closely with a doctor or other health-care professional in order to find an appropriate treatment program."²⁶

The Applicant provided no evidence that non-credentialed individuals in Colorado were representing themselves as behavior analysts.

Moreover, other practitioners, such as school psychologists, special education teachers and speech-language pathologists, may have training in applied behavior analysis and other forms of behavior therapy, and use it in their work even though they may not necessarily be certified by the BACB.

While behavior analysts have successfully attained regulation in 29 other states, this report identified little evidence of harm from the practice of applied behavior analysis. Consequently, it is questionable whether there is a need to create a new regulatory program exclusive to the practice of applied behavior analysis in Colorado.

Several other mechanisms are in place in Colorado that serve to protect the public from the unqualified practice of applied behavior analysis.

The practice of applied behavior analysis falls under the definition of psychotherapy, and in Colorado, anyone who practices psychotherapy must be registered, certified or licensed by one of the six mental health boards regulating:

- Addiction counselors,
- Licensed professional counselors,

²⁶ National Institute of Mental Health. *Autism Spectrum Disorder: Treatment and Therapies*. Retrieved July 16, 2018, from https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index.shtml#part_145441

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- Marriage and family counselors,
 - Psychologists,
 - Registered psychotherapists, and
 - Social workers.

Many behavior analysts in Colorado are already credentialed by one of the mental health boards, and all behavior analysts would qualify at a minimum to be registered as psychotherapists.

Both HCPF and CDE require anyone who is practicing applied behavior analysis to be board certified by the BACB, so vulnerable individuals receiving services through Medicaid and the public school system are assured that the behavior analysts that they are working with are highly qualified.

In conclusion, COPRRR did not find sufficient evidence to warrant a unique regulatory program specific to applied behavior analysis.

Recommendation – Do not create a new regulatory program to address the practice of applied behavior analysis.