

Training for Professionals to Work with Children with Autism

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Superheroes social skills training, Rethink Autism internet interventions, parent training, EBP classroom training, functional behavior assessment: An autism spectrum disorder, evidence based practice (EBP) training track for school psychologists

US Office of Education Personnel Preparation Grant H325K12306

University of Utah School Psychology Program

Prevalence Rates of Autism Spectrum

Autism and Developmental Disabilities Monitoring (ADDM) Network Sites



■ Tracking Year 2010 Sites

The remainder have autism spectrum disorder (ASD)

Need for training in Autism

- ▶ Increase in total percent of students eligible in Special Education under Autism Diagnosis
 - ▶ 0.2 in 2000 to 0.8 in 2011 (based on total enrollment in school)
 - ▶ U.S. Department of Education, National Center for Education Statistics. (2013)
 - ▶ Proportion of children
 - ▶ Increase in need for trained professionals
 - ▶ Certifications for Special Ed Teachers vary state-by-state
 - ▶ Shortage in special education teachers
 - ▶ Results in short-cuts to obtain degree
- ▶ Coursework on ASD is frequently limited, not-required, or non-existent
- ▶ Programs that do exist vary widely in requirements and level of preparation
 - ▶ Autism is the only disability that the Council for Exceptional Children did not create standards for training on autism for special education teachers
- ▶ Klien, L.A., Houlihan, D., Jenson, W.R., & Vincent, J. (2014)
- ▶ Scheuermann, B., Webber, J., Boutot, A. & Goodwin, M. (2003)

General Characteristics of Autism Certificate Programs

	Frequency	Percent
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Certificate Level		
Undergraduate	5	7
Graduate	63	87.5
Unknown	4	5.6
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Targeted Applicants		
Educators/Teachers	15	20.8
Broad Professional	23	31.9
Professional and Non-professional	16	22.2
Non-professional	4	5.6
Not Specified	14	19.4
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Completion Time		
1 semester	2	2.8
2 semesters	12	16.7
3 semesters	15	20.8
4 semesters	2	2.8
>4 semesters	1	1.4
Not estimated	40	55.6

Certificate Requirements

	Educational Level		
	Undergraduate (n=5)	Graduate (n=63)	Both/ Unspecified (n=4)
Number of Credits			
9 to 11	2	6	-
12 to 14	-	25	2
15 to 17	-	19	1
18 to 20	1	8	1
21 to 25	1	3	-
Unspecified	-	2	-
Number of Courses			
3	2	6	-
4	-	23	2
5	1	18	1
6	1	9	-
>6	1	6	1
Unspecified	-	1	-
Final Certification Requirement			
Comprehensive Exam	-	2	-
Portfolio	-	3	-
Capstone Project	-	1	-

37.5% programs completed online

36.1% required physical attendance for some or all courses

Course Concentration

- ▶ Introduction to Autism - 65.3%
- ▶ Communication - 51.4%
- ▶ Behavioral Assessment/Intervention - 50%
- ▶ Educational Assessment/Intervention - 44.4%
- ▶ Evidenced-based practices - 5.5%
- ▶ 22.2% (16 programs) required ABA course
- ▶ 5.5% (4 programs) required more than one ABA course
- ▶ 9.7% (7 programs) include ABA within a course
- ▶ 1 program offered an ABA course as an elective
- ▶ Klien, L.A., Houlihan, D., Jenson, W.R., & Vincent, J. (2014)

Fieldwork/Practicum Requirements by Program Type

	Undergraduate	Graduate	Combined or Unspecified
Course Credit	(n=5)	(n=63)	(n=4)
0	3	42	-
1-2	-	3	-
3-4	1	16	1
>4	-	2	-

62.5% of programs don't include a practicum component

Experience Hours as part of course(s)	Undergraduate	Graduate	Combined or Unspecified
0-45	-	1	1
46-100	-	4	-
>100	-	1	-
Unspecified	1	9	-
No Experience Indicated	3	27	2

Only 1 program requires more than 100 hours

ABA Strategies in Autism Training Programs

- ▶ The longer an autism training program was in existence, the less taught ABA strategies
- ▶ BCBA programs covered ABA topics more in depth than Autism specific training programs
 - ▶ Autism training programs cover ABA topics in a depth between knowledge and comprehension (median)
 - ▶ BCBA programs cover to a depth of comprehension (median)
 - ▶ Barnhill and colleagues (2014)

Teacher's views of Professional Training

- ▶ Lower confidence does not equal higher interest in training
- ▶ Special Education expressed more confidence and interest in training than general education
- ▶ Teachers with more experience teaching had less interest in training but did not have higher confidence with techniques
- ▶ Teachers did not prefer to receive training through college courses, national conferences, online courses, study groups or coaching
 - ▶ Only rated things like workshops, websites, or printed materials as helpful
 - ▶ Research shows one-day training does not have impact on behavior
- ▶ Rural teachers were less interested in all avenues of training
 - ▶ Brock and colleagues (2014)

Need for Standardized Training

- ▶ Research shows education level (i.e. Bachelor's, Master's) nor years of experience predicted if special education teachers would use evidence-based practices
 - ▶ Brock et al. (2014)
 - ▶ Morrier, Hess, & Heflin, 2011
- ▶ Majority of school interventions utilized with students with ASD are not empirically supported
 - ▶ Klien et al.(2014)
 - ▶ Barnhill et al. (2014)
- ▶ Research demonstrates, that school personnel rely on workshops and in-services for autism training
 - ▶ Brock et al. (2014)
 - ▶ Morrier, Hess, & Heflin (2011)
- ▶ Due to most states not endorsing or offering an Autism Certificate, there is no regulation on the standards and curriculum of the programs
 - ▶ Klien et al. (2014)

What is the Behavior Analyst Certification Board?

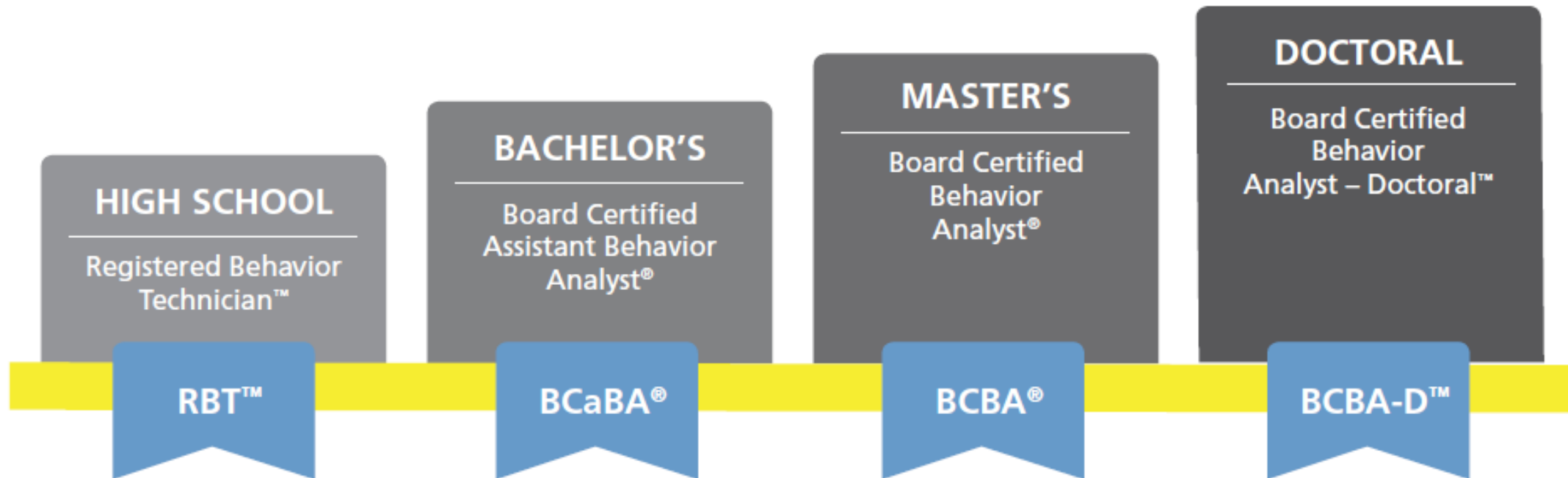
- ▶ Founded in 1998
- ▶ **The Global Mission**
 - ▶ We protect consumers of behavior analysis services worldwide by systematically establishing, promoting, and disseminating professional standards.
- ▶ **The Global Vision**
 - ▶ Solve a wider variety of socially significant problems by increasing the availability of qualified behavior analysts around the world
- ▶ **The Core Values**
 - ▶ As an international nonprofit, standard-setting organization, the BACB is responsive, data-driven, and accountable.

Four Core Characteristics of Applied Behavior Analysis

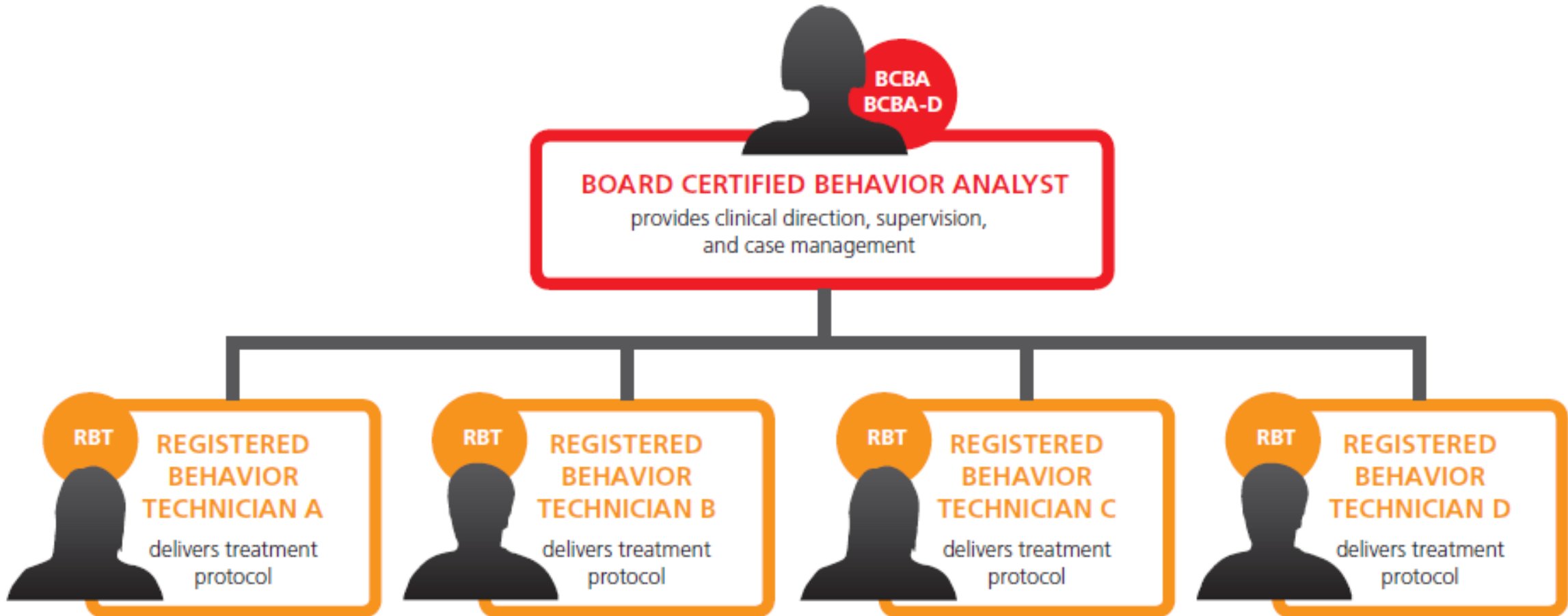
1. An objective assessment and analysis of the client's condition by observing how the environment affects the client's behavior, as evidenced through appropriate data collection
2. Importance given to understanding the context of the behavior and the behavior's value to the individual, the family, and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

[Click Here for the Complete BACB Guidelines for Working with Individuals with Autism](#)

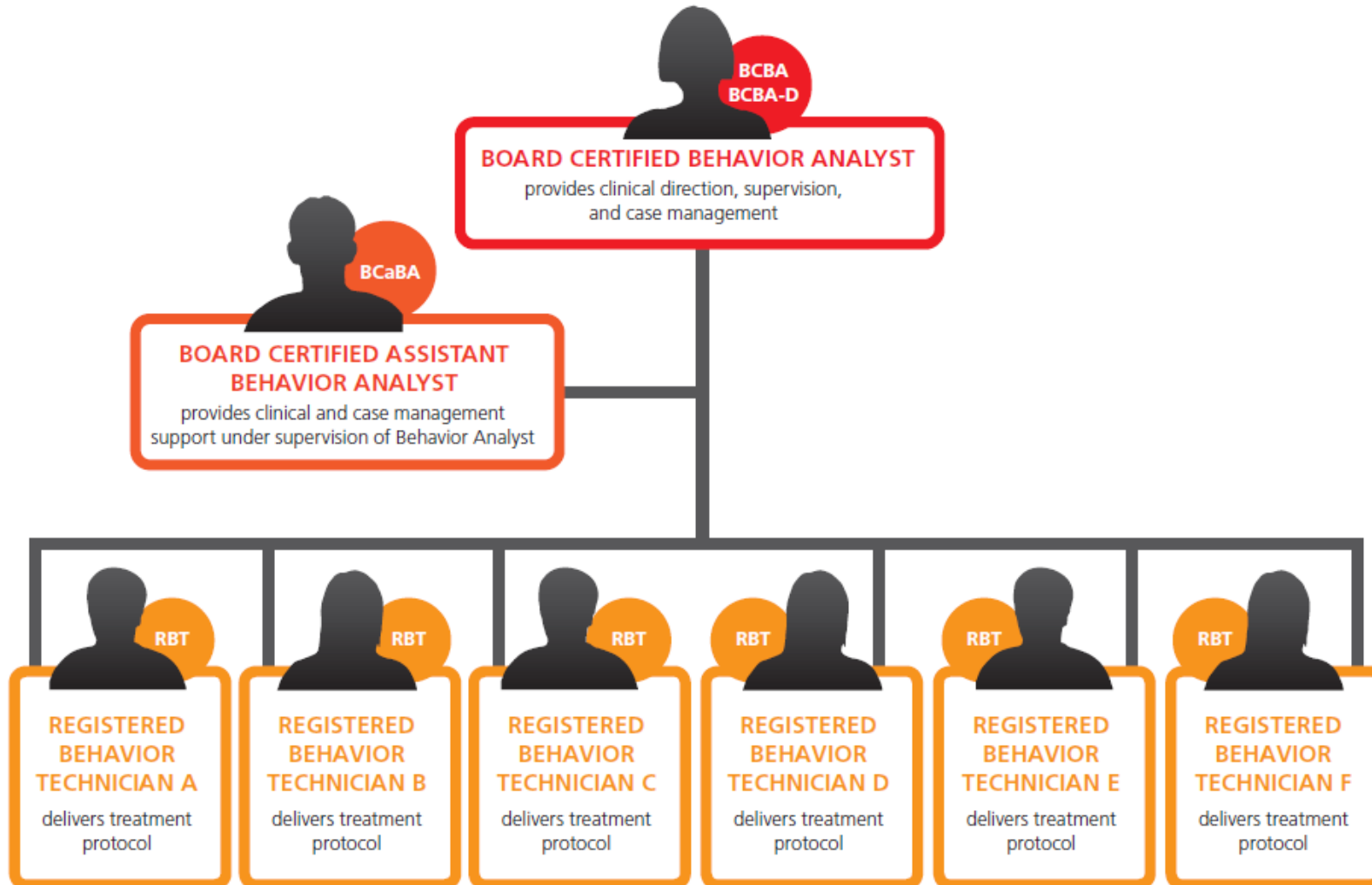
Various Levels of Training Through the Behavior Analyst Certification Board



Tiered Service-Delivery Model



Tiered Service Delivery Model



BCBA Programs by State

State	Number of Programs	State	Number of Programs	State	Number of Programs
Alabama	2	Louisiana	1	Oklahoma	2
Alaska	0	Maine	1	Oregon	1
Arizona	3	Maryland	3	Pennsylvania	9
California	16	Rhode Island	1	South Carolina	1
Colorado	2	South Dakota	0	Tennessee	2
Connecticut	2	Texas	8	US Virginia Islands	0
Delaware	0	Utah	2	Vermont	1
District of Columbia	0	Virginia	7	Washington	2
Florida	8	West Virginia	1	Wisconsin	3
Georgia	2	Wyoming	0		
Hawaii	1				
Idaho	0				
Illinois	6				
Indiana	1				
Iowa	1				
Kansas	0				
Kentucky	2				

Massachusetts 14

8 States with no BCBA Program

Number of Certified Individuals Per State

State	Number of Certified	State	Number of Certified	State	Number of Certified
Alabama	152	Louisiana	122	Oklahoma	53
Alaska	29	Maine	121	Oregon	50
Arizona	163	Maryland	248	Pennsylvania	949
California	2937	Massachusetts	1356	Puerto Rico	4
Colorado	294	Michigan	281	Rhode Island	97
		Minnesota	114	South Carolina	173
		Mississippi	38	South Dakota	18
Florida	2111	Missouri	285	Tennessee	337
District of Columbia	36	Montana	24	Texas	931
Florida	2111	Nebraska	73	Utah	93
Georgia	261	Nevada	110	Vermont	67
Hawaii	107	New Hampshire	11	Virginia	578
Idaho	13	New Jersey	955	Washington	334
Illinois	483	New Mexico	29	West Virginia	55

California 2937

Puerto Rico 4

Florida 2111

Utah 93

North Dakota 11

Wyoming 6

BCBA Programs by Country

Country	Number of Programs
Canada	4
China	1
England	1
France	2
Greece	2
Iceland	1
India	1
Ireland	8
Israel	1
Italy	3
Lebanon	1
New Zealand	2
Norway	1
Russian Federation	2
South Korea	1
Spain	1
Sweden	1

BCBA Programs by Departments

Department	Number of National Programs	Number of International Programs
Psychology	49	15
Special Education	40	3
Counseling Psychology	6	0
School of Education/College of Education	9	1
Applied Behavior Analysis	8	0
School Psychology	3	0
Educational Psychology	4	0
Education	27	2
Other	23	6

Level of Program and Requirements

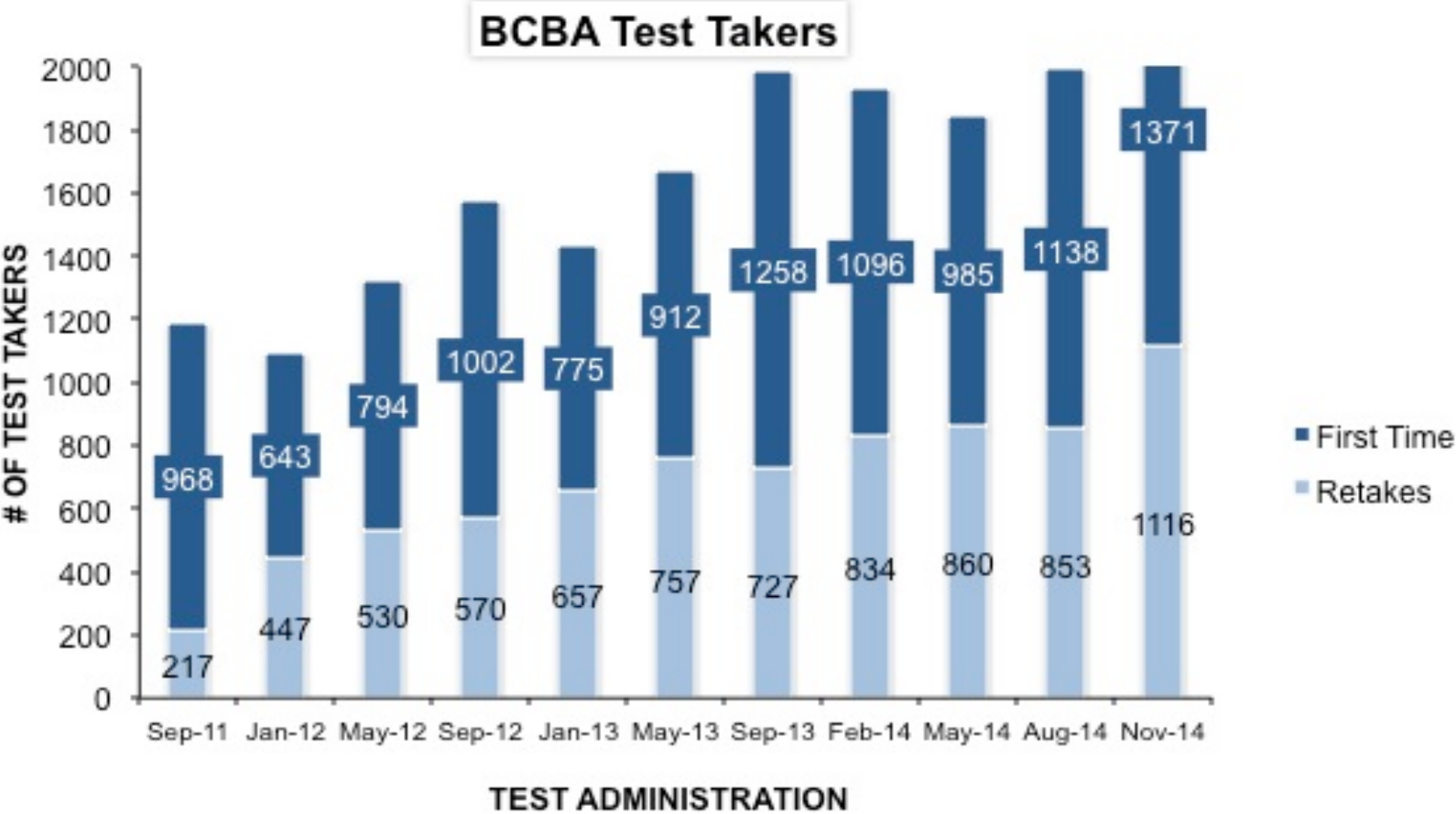
	National	International
BCBA Certification Program	109	14
Master's Program	81	17
Doctoral Program	10	1

	National	International
Practicum Required	47%	50%
Supervision Provided	58%	63%

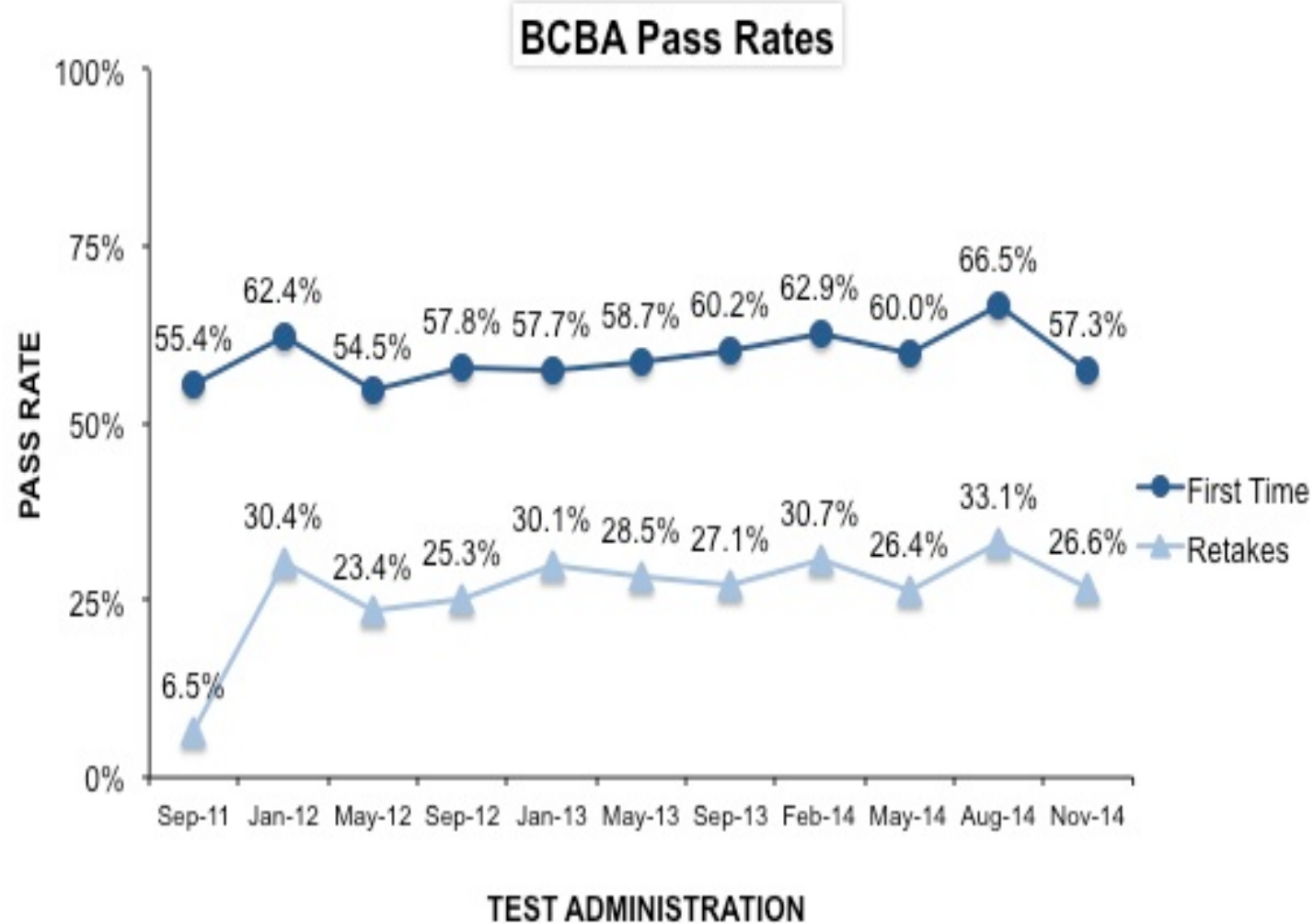
Type of Delivery and Pass Rates

	National	International	Pass Rate National	Pass Rate International
On Campus	112	25	60.36%	83.5%
On Campus /Online (Hybrid)	16	5	48.78%	71%
Online	46	1	54.94%	-----
Face to Face	0	3	-----	-----

Number of Test Takers Per Year



BCBA Exam Pass Rates



Required Coursework

- ▶ Ethical and Professional Conduct (45 hrs)
- ▶ Concepts and Principles of Behavior Analysis (45 hrs)
- ▶ Research Methods in Behavior Analysis (45 hrs)
 - ▶ Measurement and Data Analysis (25 hrs)
 - ▶ Experimental Design (20 hrs)
- ▶ Applied Behavior Analysis
 - ▶ Identification of the Problem and Assessment (30 hrs)
 - ▶ Fundamental Elements of Behavior Change and Specific Behavior Change Procedures (45 hrs)
 - ▶ Intervention and Behavior Change Considerations (10 hrs)
 - ▶ Behavior Change Systems (10 hrs)
 - ▶ Implementation, Management, and Supervision (10 hrs)
- ▶ Discretionary

Types of Courses in BCBA Programs

		Percentage of Programs (International)
Introduction to Applied Behavior Analysis	91	100
Advanced Applied Behavior Analysis	53	48
Verbal Behavior	8	30
Behavioral Assessment	48	0
Functional Behavior Assessment/Functional Analysis	13	70
Experimental Design	16	4
Single Subject Research Design	31	48
Behavior Change Systems/Behavioral Interventions	66	17
Elective Course	66	17
		87
		91
		61

*Data available on 128 national programs and 23 international Programs

Number of Faculty per BCBA Program

- ▶ Number of faculty teaching the BCBA curriculum varies from 1 to 44 Nationally and 1 to 12 Internationally
 - ▶ Mean number of faculty nationally is 5.7
 - ▶ Mean number of faculty internationally is 4.2

State	Insurance Requires BCBA	Insurance Reform	Year of Reform	State	Insurance Requires BCBA	Insurance Reform	Year of Reform
Alabama	N/A	No		Montana	Yes	Yes	2009
Alaska	Yes	Yes	2012	Nebraska	Yes	Yes	2014
Arizona	Yes	Yes	2008	Nevada	Yes	Yes	2009
Arkansas	Yes	Yes	2011	New Hampshire	Yes	Yes	2010
California	Yes	Yes	2011	New Jersey	No	Yes	2009
Colorado	Yes	Yes	2009	New Mexico	No		
Connecticut	Yes	Yes	2009	New York	Yes	Yes	2011
Delaware	Yes	Yes	2012	North Carolina	N/A	In Progress	2013
District of Columbia	No	Yes	2013	North Dakota	N/A	No	
Florida	Yes	Yes	2013	Ohio	N/A	Possible	2015
Georgia	N/A	In Progress	2014	Oklahoma	N/A	No	
Hawaii	N/A	In Progress	2014	Oregon	Yes	Yes	2013
Idaho	N/A	No		Pennsylvania	Yes	Yes	2008
Indiana			2001				
Kansas	Yes	Yes	2010	Tennessee	N/A	In Progress	2013
Kentucky	Yes	Yes	2010	Texas	No	Yes	2007
Louisiana	Yes	Yes	2008	US Virginia			
Maine	Yes	Yes	2010	Utah			2014
Maryland	Yes	Yes	2014				
Massachusetts	Yes	Yes	2010	Washington	N/A	Yes	2014
Michigan	Yes	Yes	2012	West Virginia	Yes	Yes	2011
Minnesota	No	Yes	2013	Wisconsin	Yes	Yes	2009
Mississippi	N/A	In Progress	2014	Wyoming	N/A	No	
Missouri	Yes	Yes	2010				

Click [here](#) for information on each state autism reform law

Autism Reform

- ▶ 40 States/Territories (includes Virgin Islands and Washington D.C.)
 - ▶ Indiana
 - ▶ First
 - ▶ South Carolina
 - ▶ Second
 - ▶ 7 of these State's insurance policies do not require BCBA service providers
- ▶ 6 States "In Progress"
 - ▶ Georgia, Hawaii, Mississippi, North Carolina, Tennessee
 - ▶ Possibly Ohio
- ▶ 5 states have no progress towards reform
 - ▶ Alabama, Idaho, North Dakota, Oklahoma, Wyoming

Future for BCBA's

▶ Connecticut

- ▶ 2012
- ▶ Must provide ABA services as designated in IEP
 - ▶ LP
 - ▶ BCBA
 - ▶ Or supervised by LP or BCBA

▶ South Carolina

- ▶ Centers for the Re-Education and Advancement of Teachers in Special Education and Related Services Personnel
- ▶ Free university courses to obtain BCBA
 - ▶ 773 participants
 - ▶ Click [here](#) for research on the effectiveness of this program

▶ Massachusetts

- ▶ State Office of Education in process of Autism Endorsement
- ▶ Takes effect in 2016
- ▶ IEP teams must have an individual with this endorsement

Applied Behavior Analysis Throughout Europe

▶ Germany

- ▶ 10 BCBA's and 3 BCBA-D's

▶ Ireland

- ▶ 5 BCBA's

▶ Italy

- ▶ 40 ABA professionals

▶ Spain

- ▶ A leading country in ABA internationally
- ▶ Behavior Analysts only work with 1% of the 7000 new cases of autism each year

▶ Greece

- ▶ First BCBA to offer services in 2009

▶ Iceland

- ▶ 5 BCBA's (all educated in the United States)

▶ Sweden

- ▶ 250 psychologists, special educators, social workers and speech language pathologists taken the approved BCBA coursework in Sweden

Problems with Dissemination of Research in Europe



BCBA Specialization in Autism?

- ▶ 2005
 - ▶ Invested gated whether there was a need for a Behavior Analyst Specialization in Autism
 - ▶ Expert panel determined that the behavior strategies did not differ for this population
- ▶ Created an Autism Task List of Non-behavioral Skills
 - ▶ Understanding the history of intervention in Autism
 - ▶ Diagnostic Procedures
 - ▶ How to tailor interventions to those with autism
 - ▶ Implementing safe and effective emergency procedures
 - ▶ Weiss & Shook (2010)

Why are BCBA's better qualified?

- ▶ ABA is the recommended evidenced based treatment for Autism
- ▶ The training programs have a standardized required curriculum
- ▶ An examination to assess an individual's competency
- ▶ Requirement of Continuing Education Credits
- ▶ Tiered System of Support to provide cost effective evidenced based practices
- ▶ Strong ethical code of conduct to protect the children with autism

Questions and
Comments?

References

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