



# One year of practice-embedded research.

Real studies. Real findings.

01

A NOTE FROM OUR CHIEF CLINICAL OFFICER

## It all starts with a pebble.

One year ago, we formally launched **PEBBL** as our practice-embedded research engine. What began as a commitment to learning in public has grown into something real: **active studies, findings presented at national conferences, a team of contributors, and a growing network of university and community partners** who want to build with us.

This inaugural issue of the **PEBBL** Research Update is our first step toward a quarterly cadence of transparency. It is a recap of what we have been working on, what we have learned, and where we are headed.

Thank you to the clinicians who contributed their time and questions, the families who trusted us with their children's data, and the partners who saw potential in what we are building.

**Dr. Chrissy Barosky, BCBA-D, LABA (MA, TX, UT), LBA (RI, NC, IN)**  
Chief Clinical Officer

**Dr. Lauren D'Amato, BCBA-D, LBA (NJ, NY, RI), LABA (MA)**  
Vice President, **PEBBL**



### AT A GLANCE — YEAR ONE

**17**

Posters Presented  
Regional & national conferences

**9**

Monthly Webinars  
Research Spotlights with free CEUs

**6**

External Associates  
Alumni, grad students, external BCBA's

**5**

Active Research Areas  
Grounded in clinical questions



## Research built inside the sessions, not alongside them.

**PEBBL** (Progress through Evidence-Based Behavior Lab) is Bierman's practice-embedded research program. Instead of treating research and clinical care as separate pursuits, we embed inquiry directly into everyday therapy sessions.

The data our clinicians collect while working with children becomes the raw material for studies that **improve care, develop clinicians, and advance the field.**

The name reflects the philosophy. A pebble is what a penguin offers to build an enduring nest — one small, consistent action laid down with intention. That is how we approach research: one well-placed observation at a time, compounding into something that lasts.



### REASON 01

#### Bridge observation & outcome

Close the gap between what clinicians see today and measurable gains tomorrow.

### REASON 02

#### Shorten the translation gap

The ABA field takes years to translate research into practice. We compress that distance.

### REASON 03

#### Empower our clinicians

Mentorship and authorship opportunities that treat clinicians as thinkers and researchers.

### REASON 04

#### Provide transparent proof

Payers, schools, and families gain clear evidence of treatment effectiveness.

**Real sessions power real science, and real science powers better sessions.**

## What we have been working on.

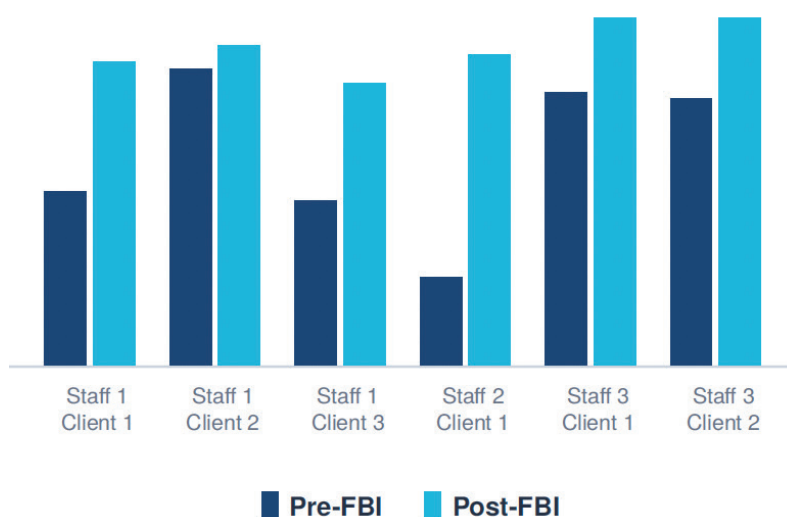
Our first year of formal PEBBL activity covered three primary areas of inquiry, each grounded in questions that emerged from clinical practice. Here is a plain-language summary of each.

### 01 Fluency-Based Instruction for Staff Training

When clinicians learn new programs, the quality and speed of their learning matters for children's outcomes. Behavior technicians who implement therapy procedures more accurately, and more fluently, create more high-quality learning moments per session, less re-teaching, and more momentum.

We explored whether short, timed practice sprints could accelerate staff learning of new Behavior Support Plans. The approach, called **Fluency-Based Instruction (FBI)**, focuses on building both accuracy and speed together rather than accuracy alone.

#### Procedural fidelity before and after FBI across staff and clients



*Procedural fidelity (% correct implementation) measured before and after brief daily fluency-based instruction across unique staff–client–Behavior Support Plan combinations.*

#### WHERE WE ARE

After introducing brief daily fluency practice, **staff implementation accuracy improved steadily across learners and procedures**. Supervisors spent less time re-teaching foundational steps and more time shaping higher-level clinical skills. This is a single-case example. We are continuing to replicate and refine.

**LEARN MORE:** <https://www.biermanautism.com/pebbl/fluency-based-instruction/>

# 02 Curriculum Architecture & Scope and Sequence Validation

Most ABA curricula present skills as lists. A child either has a skill or doesn't. What those lists often miss is the **architecture beneath them**: which skills build on each other, in what order, and why. When practitioners are left to figure that out by intuition, sequencing decisions vary across clinicians and centers in ways that are hard to measure or improve.

This work focuses on developing and empirically validating a comprehensive scope and sequence across early learning domains, including **imitation, joint attention, early language, and play**.

## WHAT SEQUENCING ACTUALLY DOES

Same instructional effort. Dramatically different outcomes.

<p><b>APPROACH 01</b></p> <p><b>Flat Checklist</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Imitate actions – clap hands</li> <li><input type="checkbox"/> Imitate actions – wave</li> <li><input type="checkbox"/> Respond to joint attention bid</li> <li><input type="checkbox"/> Label common objects</li> <li><input type="checkbox"/> Initiate joint attention</li> <li><input type="checkbox"/> Request preferred item</li> </ul> <hr/> <p><b>1 skill taught → 1 skill gained</b></p> <p>Sequencing depends on clinician intuition. Steady, limited rate.</p>	VS	<p><b>APPROACH 02</b></p> <p><b>Developmental Scope &amp; Sequence</b></p> <p style="text-align: center;"><b>Expressive Language</b></p> <p style="text-align: center;"><b>Listener Response</b></p> <p style="text-align: center;"><b>Joint Attention</b></p> <p style="text-align: center;"><b>Foundation Imitation</b></p> <hr/> <p><b>Skills compound, gains accelerate</b></p> <p>Each layer rests on the one beneath it. Prerequisites establish momentum.</p>
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## WHERE WE ARE

Early findings are shaping how we think about **prerequisite relationships across domains**, particularly in the development of joint attention and early verbal operants. This work will be presented at the **New Jersey Association for Behavior Analysis conference in 2026**.

**LEARN MORE:** <https://www.biermanautism.com/pebbl/scope-and-sequence-in-aba/>

## 03 Early Outcome Patterns & Predictive Modeling

We have nearly **20 years of therapy data**. The question we are asking now: what does that data tell us about early signals that predict longer-term outcomes like graduation and transition to less restrictive settings?

This work is in development, and we are transparent about that. We are exploring patterns related to attendance consistency, programming update frequency, therapy intensity, and initial learner profiles.

### PREDICTIVE MODELING PREVIEW

#### How does our tool predict school readiness?

We compared an AI model's predictions to the judgement of trained clinicians. Here is how well they agreed.



#### Overall Agreement

This means the model and clinicians gave the same answer about school readiness **nearly 9 out of 10 times**.

#### Agreement by decision type

##### "Yes — ready to graduate"



**66%**

agreed the child was ready for school transition  
2 out of 3 predictions matched

##### "Not yet — keep going"



**92%**

agreed the child needed more time in therapy first  
Nearly 1 in 1 predictions matched

### WHERE WE ARE

Early analysis suggests patterns worth tracking, including potential relationships between **weekly programming update cadence** and **six-month outcome markers**. We are in the replication phase and will share plain-language findings as they become reliable. This work does not make individual predictions or promises. It is about building better decision-support tools for clinical teams.

**LEARN MORE:** <https://www.biermanautism.com/pebbl/early-outcome-patterns/>

## Designed for clinicians at every stage.

PEBBL is designed for clinicians at every stage of their career. You do not need prior research experience — you need curiosity and a question worth exploring.

### Clinician Research Pathway

#### PATH 01

##### Contributor

Flexible hours. Data collection and literature review. A great starting point for any clinician who wants to engage with research without committing to a full project.

- 2–5 hours/week
- No prior experience needed
- Mentorship from team leads

#### PATH 02

##### Manager

Designed for BCBA's who are established in their clinical work and want to expand into research. Mentorship and guidance. Manage a research project from development to discussion.

- Lead project end-to-end
- Structured mentorship
- Authorship opportunities

#### PATH 03

##### Fellowship

Protected time leading a pragmatic study aimed at peer-reviewed publication. Opportunities for established researchers who seek collaboration.

- 6–12 month term
- For established researchers
- Lead publication & presentation

#### PATH 04

##### Advisory Group

Senior clinicians and external experts who meet quarterly to vet study ideas, mentor Fellows, and help shape the research roadmap.

- Quarterly cadence
- Senior clinicians & experts
- Shape the roadmap

### FREE MONTHLY CEUS

## Research Spotlight Webinars

Each month, PEBBL hosts a Research Spotlight Webinar featuring current studies, early data, and practical takeaways. **BCBA's earn free CEUs for attending.**

RSVP FOR THE  
NEXT SESSION



## 07 ————— FOR UNIVERSITIES &amp; RESEARCH PARTNERS

## A teaching hospital for pediatric therapy.

We operate like a teaching hospital for pediatric therapy, which means **research and clinical training are not afterthoughts. They are infrastructure.**

We partner with university programs to offer:

- Practicum and fieldwork placements with structured supervision
- Guest lectures and case-based learning opportunities
- Collaborative inquiry through **PEBBL**

Our harmonized measurement approach across clinicians and centers makes our data particularly well-suited to questions requiring **real-world scale and replicability.**

### Programs we're currently building with:

Arizona State University	Ball State University	Bay Path University	Bridgewater State University	Emerson College
Montclair State University	Northeastern University	New York University	Purdue University	Quinnipiac University
Regis University	Rutgers University	Seton Hall University	Simmons University	University of Dayton

## 08 ————— BIERMAN RISING CLINICIAN SCHOLARSHIP

## Investing in the next generation of ABA clinicians.

Bierman awards multiple **\$2,000 to \$3,000 scholarships** per year to emerging ABA clinicians in graduate programs nationwide. Recipients receive cash awards, mentorship touchpoints with our clinical leadership team, and resume-ready recognition.

Applications are open to external candidates in **all 50 states** who have completed at least **8 graduate credits** in an ABA master's program.

**Our next round opens in late May.**

**Scan to QR code to sign up to be the first to know.**



## Our research priorities are expanding.

As we head into year two, here is a preview of the questions driving our next phase of inquiry.

### CAREGIVER TRAINING

#### Parent partnership & caregiver training

How training intensity relates to skill generalization across home and community settings.

#### WHAT WE'RE ASKING

Does higher-dose caregiver training translate to faster skill generalization outside the center? We're examining training frequency, session duration, and caregiver confidence scores against home-setting skill data.

### INTERDISCIPLINARY

#### Cross-disciplinary care

Co-authoring AAC goals with SLPs and examining outcomes when ABA and speech targets are formally aligned.

#### WHAT WE'RE ASKING

When ABA and speech teams formally align AAC goals, do children acquire functional communication faster? We're piloting co-authored goal sets and tracking generalization across providers.

### MODELING

#### Predictive modeling refinement

Continuing to build and replicate early outcome pattern analysis with a growing dataset.

#### WHAT WE'RE ASKING

Can early session-level signals reliably predict six-month outcome markers? We're expanding the dataset, testing replication, and developing decision-support tools for clinical teams.

### STAFF DEVELOPMENT

#### Fluency-based training expansion

Expanding FBI applications across more program types and staff experience levels.

#### WHAT WE'RE ASKING

Does fluency-based instruction scale beyond Behavior Support Plans? We're testing FBI protocols across new program types and comparing outcomes between BTs at different experience levels.

## GET INVOLVED

It all starts **with a pebbl.**

#### For Clinicians

Apply to a research track, RSVP for the next Spotlight webinar, or explore how PEBBL fits into your career.

#### Join PEBBL:

<https://www.biermanautism.com/pebbl/>

#### For University Partners

Collaborate on studies, offer practicum placements, or co-author with our clinical team.

#### Start a Conversation:

<https://www.biermanautism.com/education-partnerships/>

#### For Students

Apply for the Rising Clinician Scholarship or explore research opportunities through our External Associate program.

#### See Opportunities:

<https://www.biermanautism.com/rising-clinician-scholarship/>