# Introduction to the National Autism Conference 2016

August 1, 2016
National Autism Conference
Mike Miklos

# Welcome to the National Autism Conference!

# This session

- Will provide a review of some basic information to define common technical terminology that you may hear across many sessions

- Will provide a review of the conference schedule and highlights related to areas of interest

- * = beginner **I** = Intermediate **A** = advanced

Video

# What is Autism?

- Let's look at the definition found in DSM V

- That's DSM 299.00 in case you were wondering!

- Keep in mind that no child is "autism": each child is an individual

- "You've met one child with autism, you've met one child with autism" P. Gerhardt

# What Are Autism Spectrum Disorders? (DSM V Summary)

- Social-Communication deficits and Repetitive Behaviors:
  - responding inappropriately in conversations
  - misreading nonverbal interactions
  - having difficulty building friendships appropriate to their age
  - may be overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items

- The symptoms fall on a continuum (from mild to severe)

- Variations in symptoms and behaviors from person to person

- Symptoms occur from early childhood, even if those symptoms are not recognized until later

- Adapted from: http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf

# What are Autism Spectrum Disorders?

- Developmental Disability
- Diagnosis derived from behavior
  - No brain scan or blood test
  - Assumed biological disorder most likely of genetic origin characterized by qualitative differences in:
    - Social communication
    - Repetitive and stereotyped behaviors

# What does the literature say about effective instruction and autism?

- National Autism Center Standards Reports (2009; 2015) probably provides the most thorough and relevant summary

# National Autism Center Standards Report Phase 2:

- "The National Autism Center has adopted the definition of evidence-based practice offered by David Sackett and his Colleagues: evidence based practice as 'the integration of best research evidence, professional judgment, and values and preferences of clients.'" p.80

- "The combined results of NSP1 and NSP2 include data from more than 1000 studies. This is the largest review of its kind for individuals with ASD." p. 80

- The report and evaluation methods can be retrieved from: http://www.nationalautismcenter.org/national-standards-project/phase-2/

# Evidence-Based Interventions by Quantity of Findings



SMRS Research Findings
Interventions by Quantity
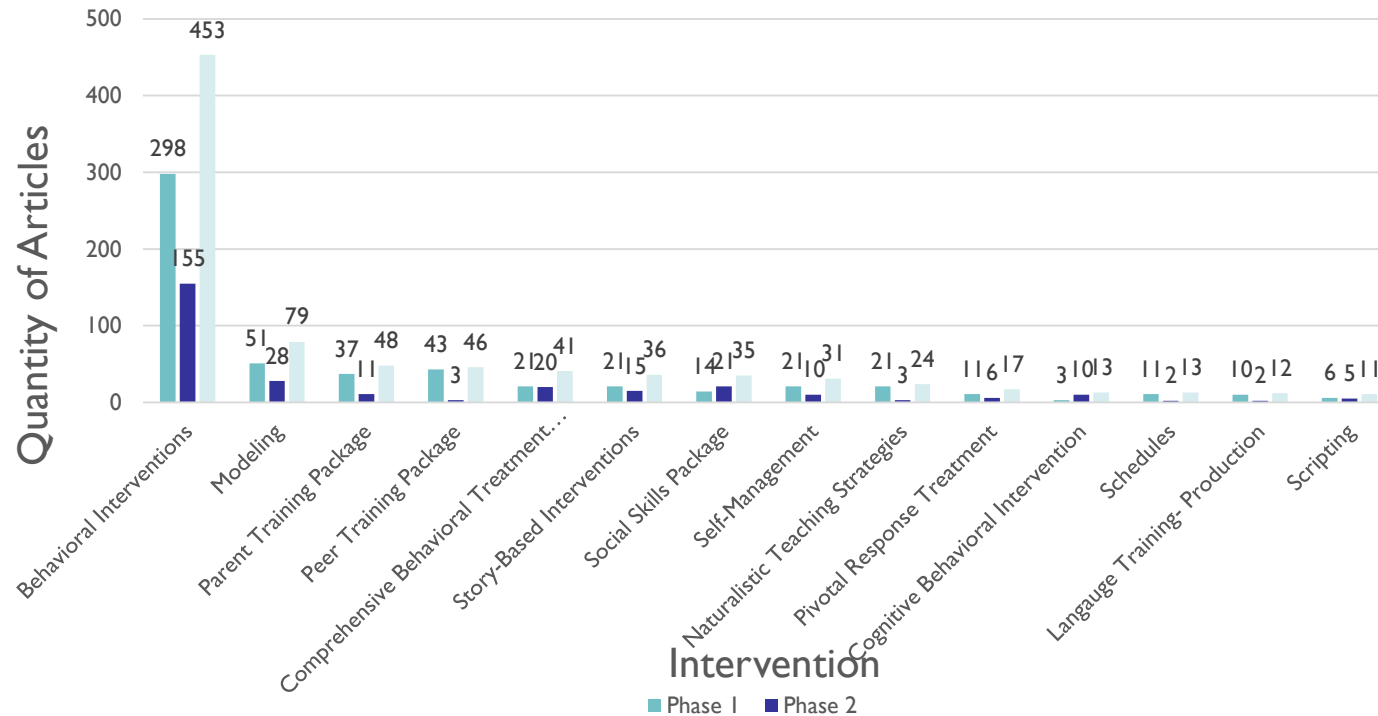
# NAC Standards Report Conclusions (2009):

- Approximately two-thirds of the Established Treatments were developed **exclusively** from the behavioral literature (e.g., **applied behavior analysis**).

- Of the remaining one-third of the Established treatments studies are derived **predominantly** from the behavioral literature.

- This pattern of findings suggests that treatments from the behavioral literature have the strongest research support at this time

- PATTAN Autism Initiative focuses primarily on interventions derived from or relying on principles of ABA

# Further Evidence for ABA and Autism Treatments

- National Autism Center Standards Report
- Maine Administrators Report
- Missouri Autism Guidelines
- Numerous research articles published in a wide range of behavioral, educational and disability focused peer reviewed journals
- Student level data: probably the strongest argument for ABA

# Autism "A fad magnet" (Metz and Mulick, 2005)

- Be wary of quick fix interventions: some examples..
  - Sensory Integration
  - Facilitated communication
  - Vaccines/Mercury cause Autism
  - Rapid prompting
  - Certain biomedical interventions (chelation; diets)
  - And on and on….

# Sessions on Evidence and Implications

- Session 18: Francesco DiSalle: fMRI Data and Verbal Operants **A**

- Session 19 Alice Shillingsburg: Ethical Considerations *

- Session 24 Perry Zirkel; Legal Updates **I**

- Session 36: Various presenters Evaluation/Reevaluation reports and Increasing Graduation Rates *

- Session 37: Anniversary Panel *

# Sessions on Evidence and It's Implications

- Session 51: Jose Martinez Diaz, Motivation and its relation to response variability ❙

- Session 78: A. Banzhaf, Ensuring effective school-based interventions *


- Also: website PSU archives…

http://legacy.wpsu.org/live/archive/

# Quality Educational Programs: Key Features

- Focus on addressing core deficits of autism
- Provide high rates of active student responding
- Build Skills: explicit instruction
- Use of positive reinforcement/skill building
- Honor student interests, personality and skills
- Data driven
- Collaborative! Video Harrisburg case studies

# Sessions on Quality Instruction

- Session 27: Ashley Harned, Effective Group Instruction and Direct Instruction *

- Session 31: M. Ampuero &j. Jackson, Generalization and Natural Environment Training *

- Session 33: K. Collins, Tactics for Classroom Management *

- Session 38: A. Foor, Instruction Basics *

- Session 55: T. Foust and team, An integrated approach to teaching *

# Sessions on Quality Instruction

- Session 68: Aimee Miller, Setting the stage for success *

- Session 69: Jared Campbell, Skill sequences in Mathematics Instruction *

- Session 70 (full day): Amiris DiPuglia, Programming Considerations ▌

- Session 84: Tina Sidener: Establishing Natural Reinforcers ▌

- Session 85: Jared Campbell, The Language of Mathematics, Math Concepts *

# A Brief Review of ABA

- ABA is not a thing or a procedure
- It is a system of evaluating how the behavior of individuals systematically changes in relation to the ongoing and past situations in which the person behaves.

# So What is ABA?

- The application of science of learning to socially significant human behavior
  - Applied: socially significant
  - Behavior: relation between environmental events and what people do
  - Analysis: uses scientific methods to establish and evaluate applications
  - It is a process, not necessarily a procedure
- Any intervention/method can use ABA; however, not all interventions do!

# ABA and Board Certification

(Behavior Analysis Certification Board)

- What is a BCBA?

- What is a BCaBA?

- What is a RBT?

- Why are they helpful?

Session 13: Iser DeLeon, Recent Developments at the Behavior Analyst Certification Board Immediately after this session. I

# Applied Behavior Analysis

- Builds skills to help people be more independent

- Helpful across:

*education, business, health practices* (e.g. smoking cessation, weight loss, reducing obsessions, etc), **animal training** (e.g. pouched rats and land mines), *environmental sustainability* (e.g. towel reuse in hotels and litter reduction), *occupational safety, gun safety, transportation safety,* and *more*….

# ABC Analysis

- A  =Antecedent (before behavior)
- B  = Behavior (what a person does: observable and measureable)
- C = Consequence (after behavior)

video ABC analysis

# Behavior Analysis Key Terms

- Antecedent
  - Motivating Operation
    - Unlearned (UMO)
    - Transitive (CMO-T)
    - Reflexive (CMO-R)
  - Discriminative stimulus (Sd)
    - Stimulus control
    - Instructional control
  - Prompt

# Behavior Analysis Key Terms

- Consequence
  - Reinforcement
  - Positive Reinforcement
  - Negative Reinforcement
  - Punishment
  - Extinction
  - Schedules of Reinforcement (for instance, continuous, variable ratio, interval)

# Why an ABC Analysis is Helpful

- It avoids having to guess about un-observable events (what is going on "inside the person")

- It is optimistic!

- It allows for checking to see that interventions really work!

# Some Educational Applications of ABA

- Mand Training
- Discrete Trial Training
  - Errorless Teaching
  - Error correction
- Direct Instruction
- Social skill building
- Altering a school culture

# Social Communication and Autism

- The Basic Verbal Operants

- Speaker Skills
  - Mand
  - Tact
  - Intraverbal
  - Echoic
  - Imitation (with sign language)

- Listener Skills
  - Listener Responding (Receptive)

- And Complex Skills
  - Multiple control
  - Atomic repertoires!!! (Palmer, 2012)

  Videos 5-11

# Sessions on the Analysis of Verbal Behavior and Complex Language

- Session 15 Mark Sundberg : Teaching Intraverbal Behavior ▌
- Session 16: Laura Yates: Intro to Sign Language for ASD *
- Session 21 Josh Pritchard: Stimulus Equivalence and Complex Language ▌
- Session 23 John Esch: Fun Group Games for Language Development *

# Sessions on the Analysis of Verbal Behavior and Complex Language

- Session 39: John Bernard, Executive Functioning **I**

- Session 42: Charles Catania, ABCs of Verbal Behavior **I**

- Session 34 and 46: Francesca degli Espinosa, Teaching children to talk about private events **A**

- Session 47: S. Lechago, Emergent Responding and Training VB **I**

# Sessions on the Analysis of Verbal Behavior and Complex Language

- Session 49: Vince Carbone Alternative communication methods **I**

- Session 71 C. Sundberg: Teaching Sign Language **I**

- Session 77: J. McElwee & S. Ming, Derived Relational Responding and Generative Responding **I**

- Session 82: A. Dunn-Nacarelli & H. Forbes, The VB-MAPP, an Overview *

# What is a mand? Common terms:

- Request
- Asking for something
- A question
- Demanding
- Inquiring
- Commanding

# Mand Videos

- ## Mand Training

  Introduction to Mand Training

  "Video Sharae and Mike"

# Sessions on Mand Training

- Session 14: M. Miklos, Mand Training Basics *
- Session 25 David Roth, Advanced Mand Training ▌

# A Functional Approach to Language

Mand: Asking for something (A preferred toy, activity, information, etc.)

Tact: labeling what you see, hear, smell, taste, or touch

Echoic: repeating what has been said

Intraverbal: responding with words to things that have been said (conversation, answering questions, word associations)

# A Functional Approach to Language

Listener responding/receptive: Following directions, selecting things named or otherwise behaving as a listener without speaking

Motor Imitation: Doing the same thing someone else does.

Match to Sample: Putting an item or picture in proximity of something with shared characteristics.

# Some Words About Data

- Key aspect of ABA: understanding some of this may help you at this conference!

- Human memory is quite fallible

- Data helps us remember what happened

- Data helps us see patterns of performance and behavior change

- One might not need data on every behavior, but without data people often end up guessing

- Data systems should not interfere with instruction, rather they should support teaching and learning

# Types of Data

- Counts
- Timings
- Continuous
- Sampled
- Skill Probes
- Cumulative responses or skills acquired

# The Analysis: Functional Relations

- Graphs are very valuable
  - They allow a quick check of how a program or intervention is working

- Tests to determine if things are working:
  - If I change the way I teach, does it consistently change what the student does?
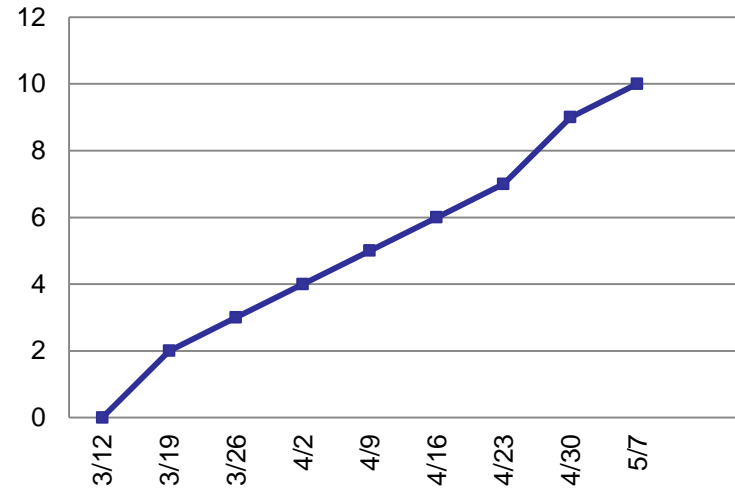  - Does the intervention function to change behavior?

# Interpreting Data and Graphs

- Graphs: Y axis; X Axis
- Graphs: Level, Trend; Variability

- Types of studies:
  - Reversals (AB; ABA, ABAB, ABAC, etc)
  - Multiple baseline
  - Changing Criteria

- Intergroup Design
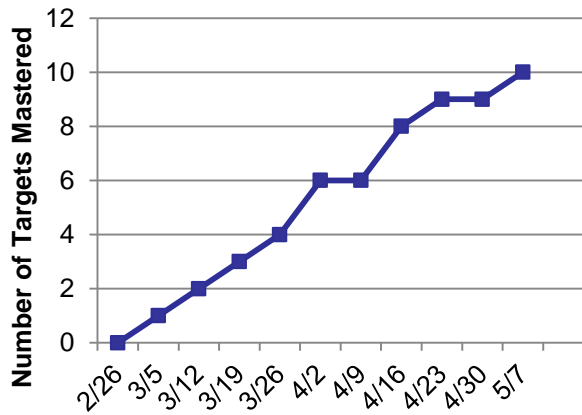  - N (number of participants)
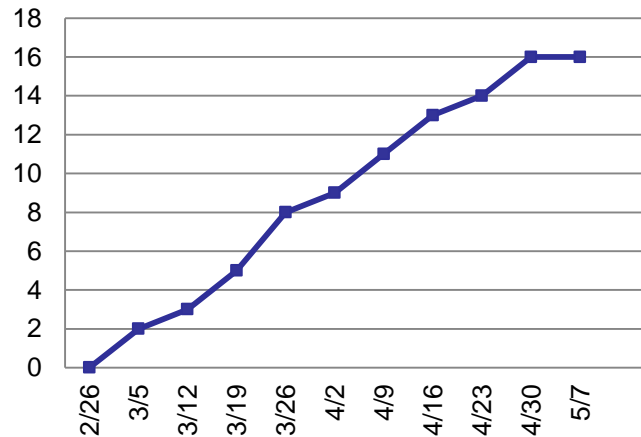  - Statistical analysis (significance)
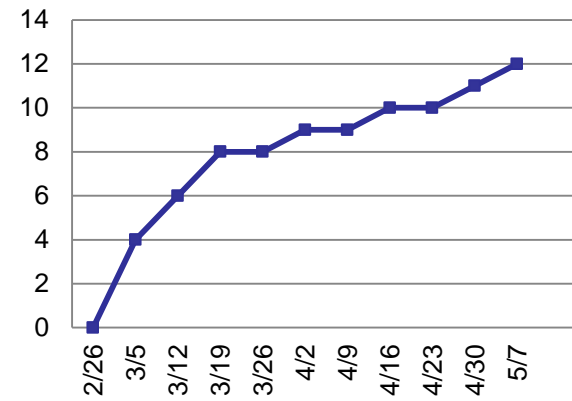
# Dylan: Cumulative Mands
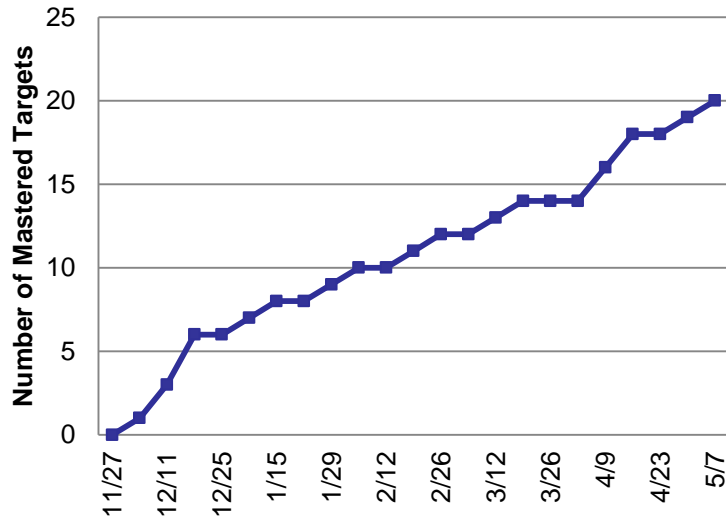
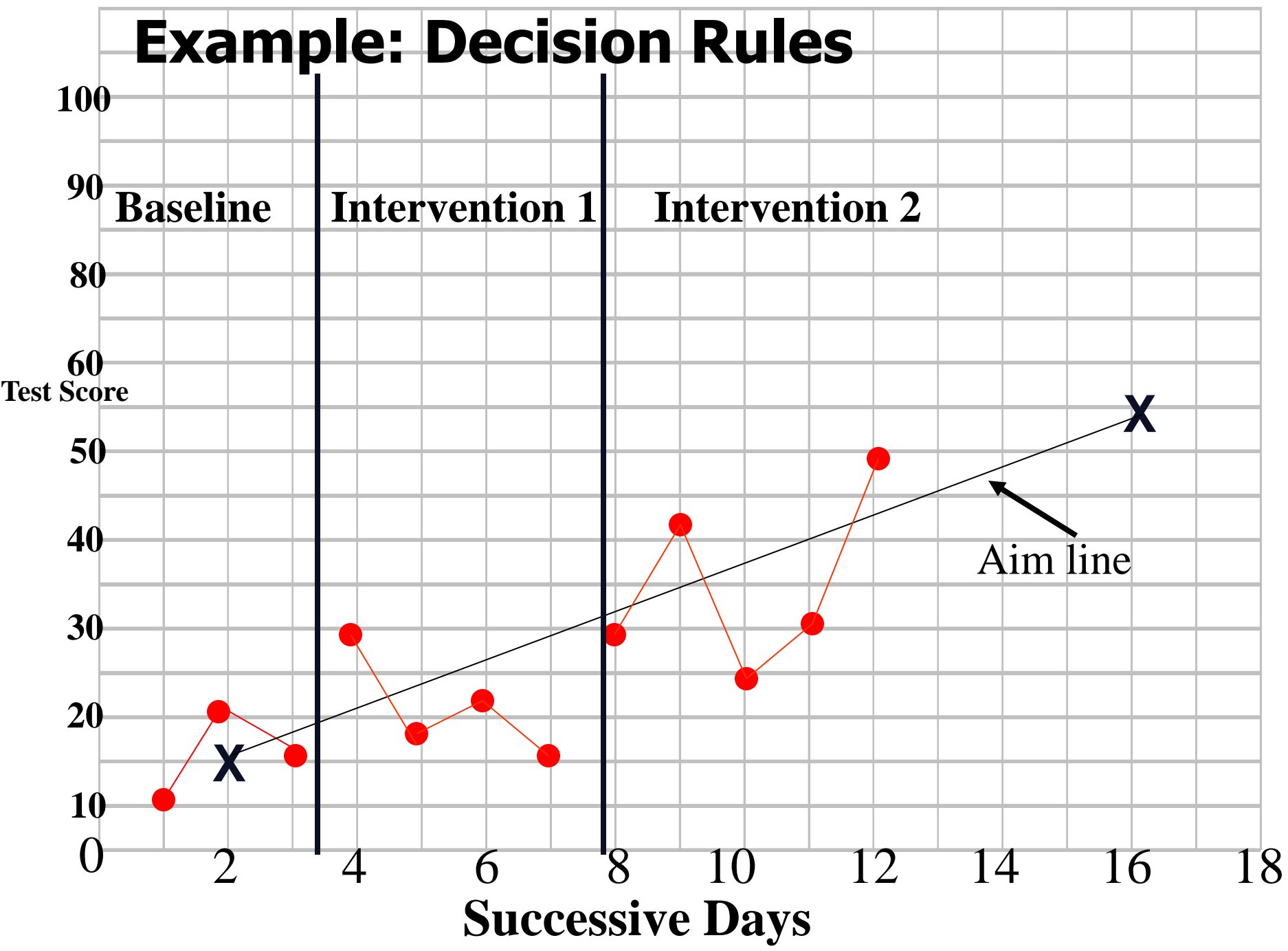# Dylan: Cumulative Tacts

# Dylan: Cumulative Echoic Skills

# Dylan: Cumulative MTS Skills

# Dylan: Cumulative Imitation Skills

**Total Cumulative Skills in 20 weeks: 68 (20 Mands)**

Example: Decision Rules

Baseline | Test Accommodation

Subject/Setting/Behavior ONE

Percent/Rate Correct

Subject/Setting/Behavior TWO

Percent/Rate Correct

Subject/Setting/Behavior THREE

Percent/Rate Correct

Successive Days
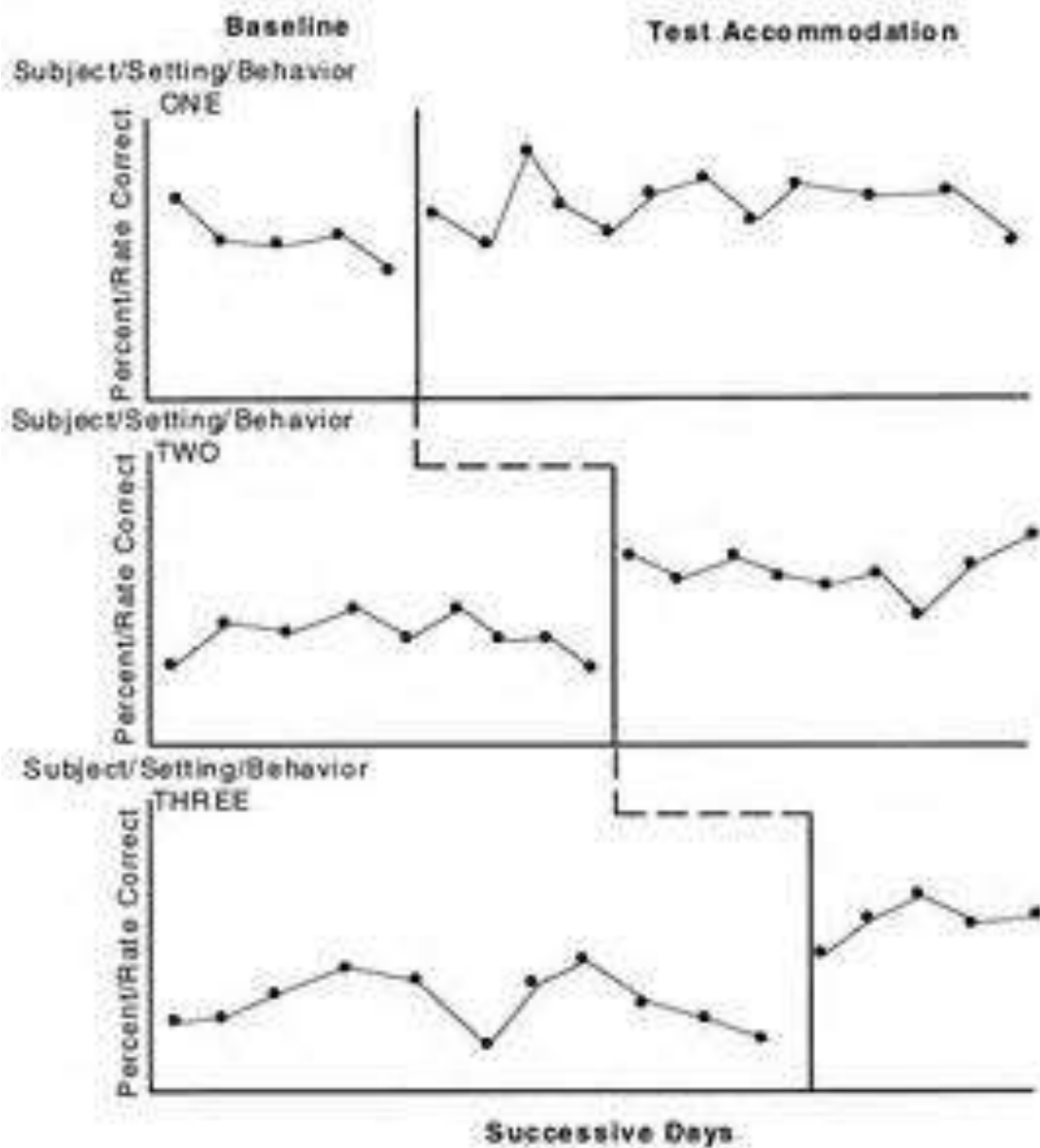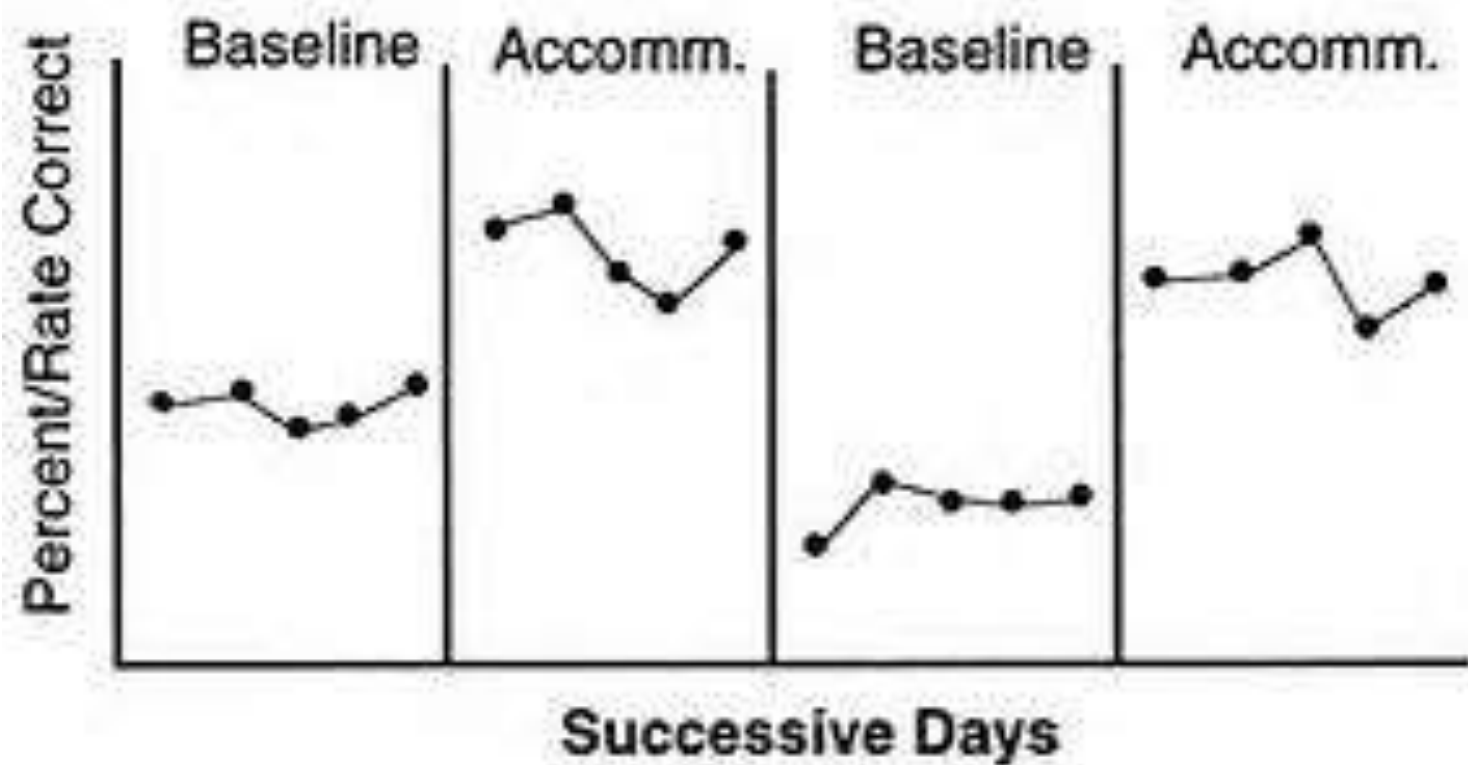
# Treatment Fidelity and Staff Training

- Instruction and data will only result in good outcomes if interventions are implemented with fidelity

- Fidelity of implementation is accomplished through:
  - Competency-based training
  - On site guided practice/feedback
  - Verification of treatment fidelity

# Motor Imitation Procedural Fidelity Checklist

Date: _____ Instructor: _____ Student: _____

Observer 1: _____ Observer 2: _____ IOA% _____

| | | YES | NO | N/A |
|---|---|---|---|---|
| Organization | 1. Is instructional area neat and sanitized? | | | |
| | 2. Does instructor have all materials needed for instruction organized and ready? | | | |
| | 3. Does instructor have a variety of valuable reinforcers available? | | | |
| Teaching Procedures | 4. When teaching, does instructor present the $S^D$ and prompt the correct response? | | | |
| | 5. Once the student complies with the prompt, does the instructor re-present the $S^D$ with no prompt or a faded prompt (transfer trial)? | | | |
| | 6. Is transfer trial followed by distractor(s)? | | | |
| | 7. Following distract trials, does the instructor re-present the $S^D$ with no prompt or a faded prompt as presented in transfer trial (check trial)? | | | |
| | 8. Does instructor model the action to be performed for the prompt, transfer and check trials? | | | |
| | 9. Does instructor reinforce at set VR schedule? VR:_____ | | | |
| | 10. Does instructor use a prompt that results in correct response? | | | |
| | 11. Does instructor differentially reinforce (better reinforcement) target responses? | | | |
| Error Correction | 12. Does instructor end the trial and ensure student is in neutral position (use ready hands if needed)? | | | |
| | 13. Does instructor re-present the $S^D$ and prompt the correct response? | | | |
| | 14. Does instructor prompt student if no response occurred within 2 seconds for a previously mastered item? | | | |
| | 15. Does instructor model the action to be performed for the prompt, transfer and check trials during error correction? | | | |

Notes:

___ /15

Percentage of Y's:

# Social Skills

- Most social skills involve communication
- Language instruction is social skill training
- Peer to Peer manding often a place to start
- Evidence based methods of addressing complex social skills is important
- Look for interventions that avoid rote learning.

# Sessions on Social Skill Training

- Session 17; Justin Leaf Designing and implementing behaviorally based social skills*

- Session 22 Amy Wetherby Early Social Interaction Project *

- Session 23: John Esch Games and social skills *

-  Session 48: Rachel Kittenbrink, Building functional social skills *

- Session 72: Tammy Kasper, Friends and fitness ▌

# Behavior management

- FBA
- PBSP
- Function Based
  - Motivation
  - Competing skill
  - Making PB ineffective and inefficient

  - Video 13

# Sessions on Behavior Management

- Session 28: Dave Wilder, Establishing rule-following in home, school & community ❚

- Session 41: Brian Iwata, Functional analysis of problem Behavior ❚

- Session 44: William Ahearn, Reducing stereotypic vocalizations ❚

- Session 50: Brian Iwata, Problem behavior maintained by automatic reinforcement ❚

- Session 79: Chris Skinner, Procedures to prevent and remedy problems for individuals with high functioning autism *

# Life skills and Activities of Daily Living

- Functional Approach
- These are critical skills: becoming toilet trained, for instance, alters likely trajectory
- Safety skills in this day!

# Sessions on Life Skills and Activities of Daily Living

Session 29: William Ahearn, Feeding Problems*

Session 73: Sandy Jin, Addressing sleep problems*

Session 74 & 83:  (all day) F. Cicero, Promoting appropriate sexual behaviors ▌

Session 81: Barry Morgenstern, Teaching Functional Skills*

# Transition Programming

- As children enter middle and high school it is critical to begin planning for the transition to life, career and education opportunities beyond public education.

- Programming for these opportunities remains rooted in evidence base.

# Sessions Related to Transition and Career and College Ready

- Session 20: J. T. Brown and P. Garland Transition to College*

- Session 32: T, Regli; P. Monoghan & J. Velasco Preparing Transition age youth for employment *

- Program 40: Willow Hozella, Programming for Secondary Students: Employment and Life Skills considerations *

- Session 48A: L. Ackles & J. Rinco College students in Animation/Technology *

- Session 59: A. Cash & A. Banzhaf, Teaching Functional Skills to High School Students *

# Sessions on Early Intervention

- Session 22: Wetherby, Early Social Interaction Project *

- Session 35: Ilene Schwartz, EI/ECSE and ABA Ethics I

- Session 52: K. Herb & M. Mikus, Early intervention: your first steps *

- Session 56: J. Deitz & K. Bene, Flow of Quality Instruction in Early Childhood Class *

# Sessions on Teaming and Training

- Session 45: April Kissamore, Innovations in Parent and Staff training *

- Session 53: N. Verbos & A. Adnopoz, Motivate this! training staff *

- Session 54: L. Johnson & M. MacCrory, Analyze this! motivating and training Staff *

- Session 55a: J. Bennet 7 team, It Takes a Village *

- Session 83: Laura Turner, Effective Behavior Analytic Supervision I

# Teaching Speech and Articulation Skills

- Session 81: Tammy Kaspar, Evidence based speech production training *

# Don't Forget!!

- Session 37: Anniversary Panel! *

- Session 67: Posters! *

- Session 86: Closing Keynote! *

# Remember: PATTAN staff are here to help! If you have any questions or concerns, please ask!

- Thank you for attending this session and hope you have a productive and enjoyable conference experience!

# Contact Information        www.pattan.net

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