Organized Knowledge and Organized Life

How the science of behavior analysis provides the philosophy and technology to provide the most effective treatment for individuals with Autism Spectrum Disorders

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“Science is organized knowledge. Wisdom is organized life.”

Will Durant

Organized Knowledge and Organized Life

Training Objectives

- Organized Knowledge - What is effective treatment?
  - Science and Evidenced Based Practice
  - Applied Behavior Analysis
- Organized Life - How do I implement effective treatment?
  - Implementing ABA Based Treatment
  - Lifelong developmental perspective
  - Supporting all elements of care
- Case Studies

Necessity of Science in Treatment

Science - a systematic approach to the understanding of natural phenomena as evidenced by description, prediction, and control (Cooper 2007)

Attitudes of Science

- **Determinism** – there is an underlying order to how events occur and effect each other
- **Empiricism** – objective observation of phenomena
- **Experimentation** – parts of the environment are systematically controlled, manipulated, and studied
- **Replication** – the effect of an experiment must be able to be reproduced
- **Parsimony** – simple logical explanations must be ruled out before more complex explanations are examined
- **Philosophic Doubt** – continual questioning of what is assumed factual

Cooper 2007

Necessity of Science in Treatment

Major societal issues/advancements solved through science

- Advancements in understanding and curing diseases
  - Small pox, polio, measles, malaria, tuberculosis, chicken pox
- Heart, liver, kidney, etc… transplants
- Replacements for missing arms, legs, etc…
- Nutrition, hygiene, exercise, mental wellness
- Electricity, transportation, communication
- Technology to perform dangerous or physically taxing tasks

Much, much more

Why would we not demand science as the centerpiece of treatment for ASD?

Evidence Based Treatments

National Standards Report (NAC 2009)

- "approximately two-thirds of the Established Treatments were developed exclusively from the behavioral literature"
- "of the remaining one-third, 75% represent treatments for which research support comes predominantly from the behavioral literature."

Autism Evidenced-Based Practice Review Group (Wong 2013)

- 17 out of 27 EBP's are directly from Behavioral Analytic research
- The additional 10 EBP's have components of behavioral practices and there is behavioral research aligning these practices with ABA

Odom 2010

- 15 out of 24 EBP's are directly from Behavioral Analytic research
- The additional 9 EBP's have components of behavioral practices and there is behavioral research aligning these practices with ABA

Non-Evidence Based Treatments

- Academic Interventions
- Auditory Integration Training
- Facilitated Communication
- Gluten and Casein Free Diet
- Sensory Integrative Package

ABA vs. Eclectic Treatment

Howard (2005)
Young children with autism or PDD-NOS who received intensive behavior analytic treatment (IBT) for about 14 months outperformed comparable children who received ‘‘eclectic’’ intervention services for the same period of time on virtually every follow-up measure. In most cases the differences in mean scores were substantial and statistically significant.

Eikeseth (2002)
At a 1-year evaluation, 13 children who had received intensive behavioral treatment made significantly larger improvements than a comparison group of 12 children who had received intensive, eclectic intervention

Hess (2007)
Found that less than 10% of interventions utilized for students with ASD in a public school setting were evidenced based

What is Effective Treatment? - Organized Knowledge

Applied Behavior Analysis

The scientific study of how behavior is learned and the application of that knowledge to increase learning of behaviors that will improve individual lives

Endorsement of ABA

National Institute of Mental Health	Autism Spectrum Disorders Pervasive Developmental Disorders, NIH Publication No. 08-5511, 2008
National Academy of Sciences	Educating Children with Autism, Committee on Educational Interventions for Children with Autism, National Research Council, ISBN: 0-309-51278-6, 2001
Center for Medicaid and Medicare Services	IMPAQ International, LLC, Final Report on Environmental Scan, Autism Spectrum Disorders (ASDs) Services Project, March 9, 2010
American Academy of Pediatrics	Scott M. Myers, MD, Management of Children With Autism Spectrum Disorders, Pediatrics, 2007
American Psychological Association	Autism Treatment Options, American Psychological Association www.apa.org
United States Surgeon General, U.S. Department of Health and Human Services	Department of Health and Human Services. Mental Health: A Report of the Surgeon General. Rockville, MD: Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institute of Mental Health, 1999.

Some Current Dimensions of ABA

Baer, Wolf, & Risley (1968)

- **Applied**: Focus on socially significant behaviors that improve the lives of the individual
- **Behavioral**: Focus on observable events (what behavior changed and whose behavior changed)
- **Analytic**: Focus on establishing a functional relationship or non-relationship between the factors in the environment and the behavior they change
- **Technological**: Focus on defining interventions clearly and objectively
- **Conceptually Systematic**: Focus on utilizing interventions that are developed out of the principles of science and behavior analysis
- **Effective**: Focus on interventions creating socially significant changes in behavior
- **Generality**: Focus on behavior extending or changing over time, setting, or other behaviors

ABA Treatment – Parent Rating Form

Designed to help parents identify and rate the components of their child's treatment that align with the science of Applied Behavior Analysis

25 question short version

100 question long evaluation
- Dimensions of ABA subtest

Both are scored on a 100 point scale

Based on the research and conceptualization of ABA treatment by
Baer, Wolf, & Risley 1968 and Sundberg 2013

ABA T-PRF: Treatment

See ABA Treatment – Parent Rating Form (Long)

Assessment of Skill Deficits

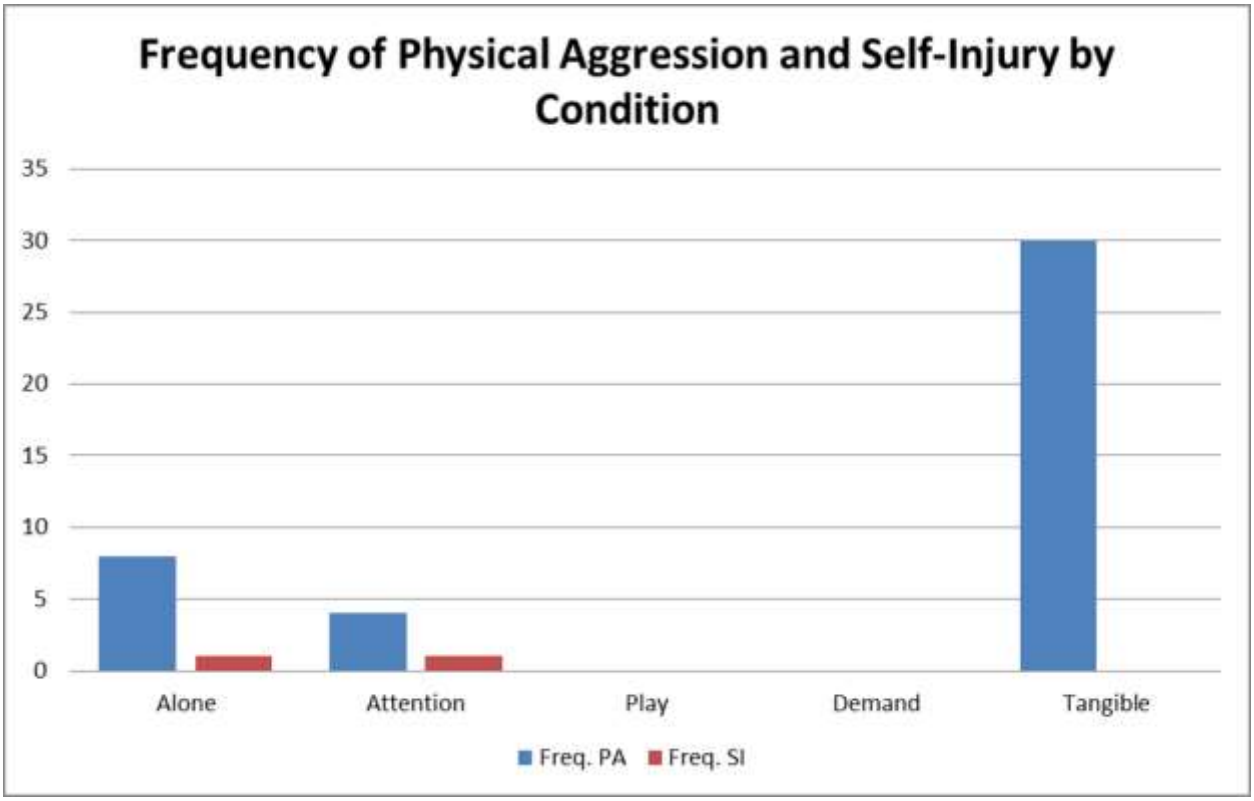
VB-MAPP, ABLLS, AFLS, Essential 8

Observation
- What skills do peers have that the individual is lacking
- What skills will allow the greatest amount of independence, success, and happiness

Assessment of Problematic Behavior

Functional Behavior Assessment
- Interview of parents, caregivers, teachers
  - Identification of medical or physiological causes
- Antecedent-Behavior-Consequence data
  - Patterns of stimuli before the behavior which trigger
  - Patterns of stimuli after the behavior which increase
  - Identification of other setting events which may increase the value of the behavior
- Hypothesis statement of function
- Function based interventions

Assessment of Problematic Behavior



Defined and Measurable Behavioral Goals

Behaviors to teach and increase

- Communication
  - Vocal request for a desired item with a specific word or approximated word for each different item
  - Non example: telling us what he wants

- Social skills
  - Giving a compliment: a vocal statement about a positive attribute or talent of another person

    Examples of positive attributes or talent: good at a sport or hobby, good at art or music, having a high level of knowledge in a subject area, clean and neat appearance, clothes that fit well and are clean

    Non-examples of positive attributes or talents: change in appearance that is viewed as a negative (gaining weight, losing hair), difficulty with a skill or task, statements about physical appearance that are sexual in nature

Defined and Measurable Behavioral Goals

Behaviors to reduce

- Self-injury
  - Stomping feet on the floor with toes facing down, striking thighs or the side of body with finger extended or fist, pushing down on hands to bend fingers in opposing direction of their normal movement
  - Non-example: hurting himself

- Unsafe behavior
  - climbing on furniture, tables, and other tall objects or licking or placing his tongue on non-edible objects

  Examples: climbing on the TV stand, licking the hot water pipe
  Non-examples: climbing on play equipment in the yard, licking straws being used as a replacement item

Systematic Manipulation of Environmental Variables

Designed from the philosophy of science and ABA

Defined research based treatment procedures

Consistent application across intervention managers, settings, schedule

Limiting the number of interventions occurring at the same time

Utilizing Research to Design Treatment

Examining the behavioral research literature to design an intervention

- Ongoing interaction with research
- Specific studies related to individual issues

Example: Hanley (2014)

- Delay and tolerance training
- Manding (requesting) for removal of younger brother crying
- Tolerance training to wait to mand

Coping with Aversive Stimuli

Manding for removal – request for an aversive stimuli to stop or be removed (negative reinforcement)

Tolerance Training – presentation of progressively more intense or longer duration of an aversive stimuli along with a reinforcing contingency for not removing oneself from the aversive stimuli and not engaging in problematic behavior to remove the aversive stimuli

Procedure:

- Manding for removal statement – "please stop" , "stop doing that"
    - Echoic prompts can be delivered to bring about mand for removal
    - Present low intensity aversive stimuli for a short period of time
        - Low volume recording of brother crying
        - Prompt mand for removal statement
        - Reinforce by turning off recording
        - Ignore problematic behavior and continue prompting until mand for removal occurs without problematic behavior
    - Fade up intensity (volume) gradually as she successfully displays success in manding for removal without problematic behavior
    - When she is able to mand for removal of aversive stimuli without problematic behavior at natural level of intensity (volume for crying) move to tolerance training
- Tolerance training
    - Utilize a progressive time schedule of delay starting at variable time (VT) 3 secs.
        - After designated time according to VT3, prompt to mand for removal can be provided (echoic prompt or vocal, i.e. tell me if you want the crying to stop)
        - Gradually increase the VT schedule with each 10 minute session she is able to engage in without problematic behavior
            - Ignore attempts to mand for removal prior to the end of the VT schedule
            - Ignore problematic behavior (utilize count and mand procedure with the time before a mand will be accepted being the highest point of the current VT schedule, i.e. VT 10 secs. would mean they have to go 10 secs. before a mand would be accepted
            - Ensure that some sessions allow for reinforcement through removal after the mand with no delay, i.e. if she asks right away or is prompted and mands right away the aversive stimuli can be removed right away
        - After maintaining non-response during aversive stimuli and manding when prompted for at least 15 secs. begin introducing easy tasks while aversive stimuli is occurring

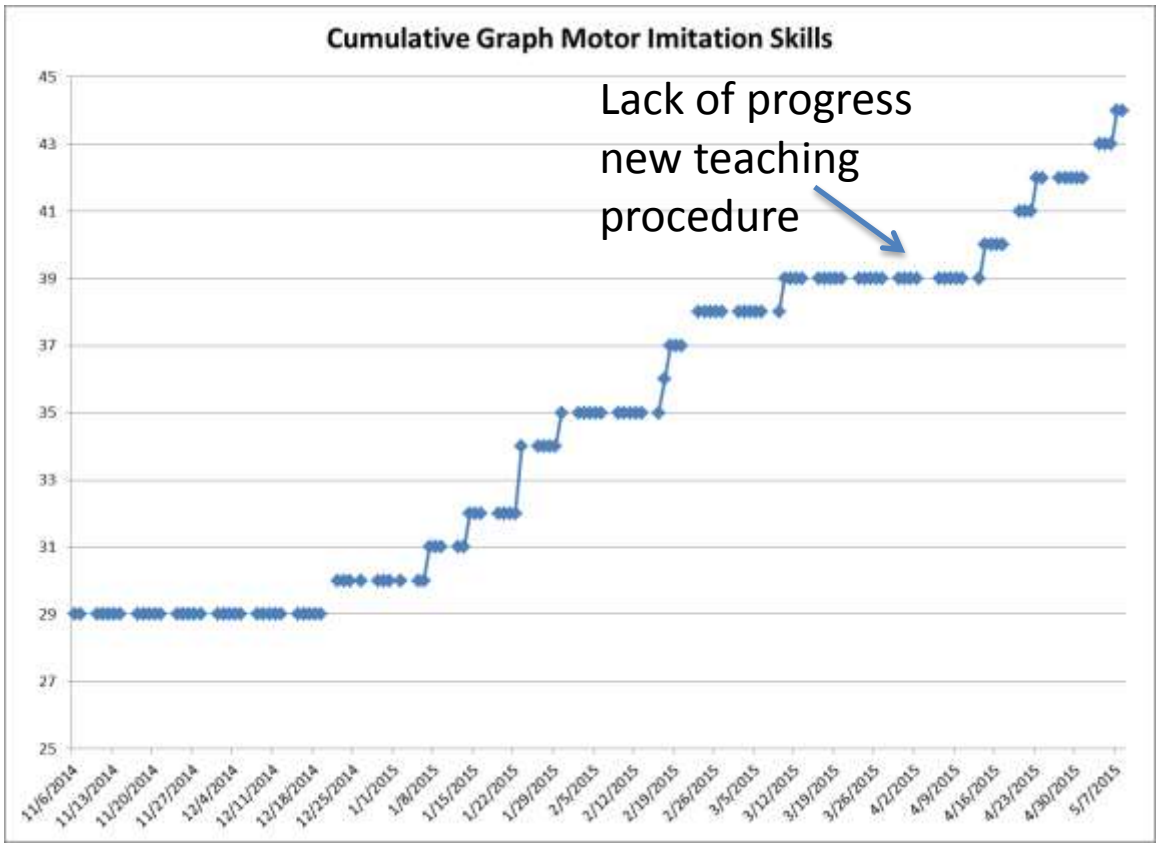
Data Collection and Analysis

Identifying effectiveness of interventions

- Efficiency of intervention is essential
- Science as a methodology of evaluating treatment
- Baseline vs. treatment
- Research design

Data based decision making

- Data provides an objective long term view
- Decisions should be made through analysis over time



How Do We Implement Effective Treatment? - Organized Wisdom

Parent/Caregiver Engagement

- Involvement in assessment and planning
- Discussion of schedule, family life, and other barriers
- Regular access to data and involvement in decision making
- Training on terminology and interventions

ABA T-PRF: Parent/Caregiver Engagement in Treatment

See ABA Treatment – Parent Rating Form (Long)

Preventing Unwanted Behavior: Antecedent Methods Application

Operational definition of the target behavior to increase: _____

_____

Operational definition of the target behavior to decrease: _____

_____

Is this a problem that needs to be targeted? ☐ Yes ☐ No

Antecedent stimuli that typically evoke (bring about) target behavior: _____

_____

Consequence stimuli that typically reinforce (increase) target behavior: _____

_____

Antecedent intervention(s) that will be utilized: _____

_____

Skill repertoire of the individual that will allow the antecedent intervention to be successful:

_____

_____

Prompts (specific words or actions): _____

_____

Data collection method (specific type of data and method for collection): _____

_____

Data based determination that intervention is being effective (specific rate or amount of change):

_____

_____

Specific criteria for fading/removal of antecedent interventions: _____

_____

Consequence interventions that will be paired to increase or decrease behavior:

_____

_____

_____

Antecedent Interventions

Antecedent manipulations that increase the likelihood of a desired response:

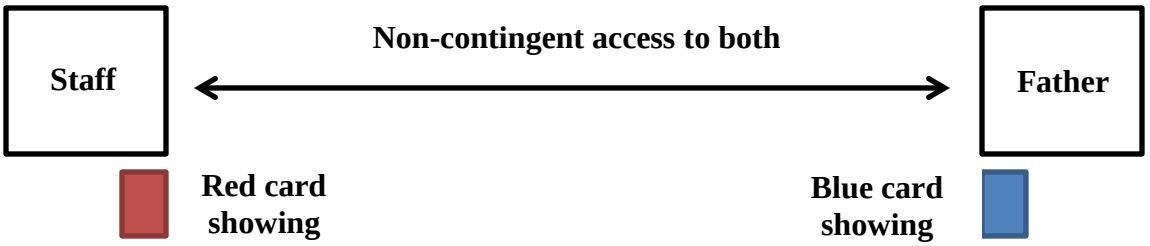
a. Presenting discriminative stimuli that signal reinforcement (S^{Dr})
b. Removing discriminative stimuli that signal punishment (S^{Dp})
c. Decreasing the necessary response effort for the desirable behavior
d. Presenting or arranging a motivational operation that heightens the reinforcing value of the desirable behavior
e. Setting up rules
f. Activity schedule
g. Greeting clients
h. Behavioral momentum or high probability requests
i. Providing choice
j. Promoting success
k. Choral responding
l. Response cards

Antecedent manipulations that decrease the likelihood of a problematic response:

a. Adding a discriminative stimulus that signals punishment (S^{Dp})
b. Removing the discriminative stimuli that cue the problematic behavior (S^{Dr})
c. Reducing or eliminating motivational operations (MO)
d. Combining or using packages of antecedent control strategies
e. Distracting with preferred events
f. Reducing response effort

Access to Attention Procedure Visual Chart

Phase 1: Pairing

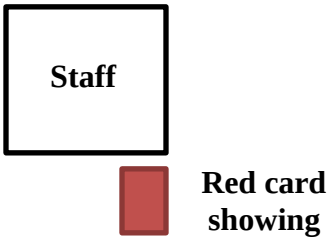


Edible reinforcer delivered upon initial engagement and on VI 30 schedule thereafter

Move to Phase 2 upon displaying 3 consecutive sessions with more than 5 minutes engaging with staff.

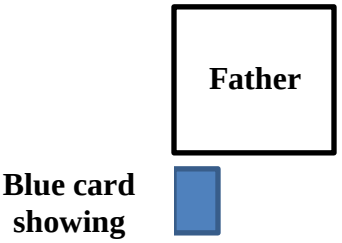
Phase 2: Skill Acquisition

Non-contingent access throughout

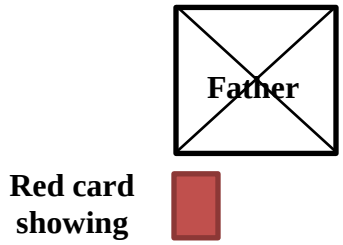


Edible reinforcer delivered upon initial engagement and on VI 30 schedule thereafter

Non-contingent access first 30 secs. and alternating 30 secs.



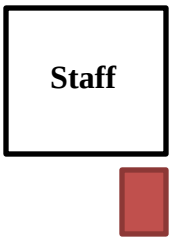
No access to attention second 30 secs. and alternating 30 secs.



Move to Phase 3 upon displaying 3 consecutive sessions with more than 5 minutes engaging with staff and at least two minutes engaging with father along with zero occurrences of physical aggression and self-injurious behavior.

Phase 3: Fading

Non-contingent access throughout



Red card showing

Edible reinforcer delivered upon initial engagement and on VI 30 schedule thereafter

Non-contingent access first 30 secs. and alternating 30 secs.

Blue card showing

No access to attention second 30 secs. and alternating 30 secs.

Red card showing

Fading: After every two consecutive sessions without physical aggression and self-injurious behavior the time father spends out of the room can be increased by increments of 30 seconds.

ABA T-PRF: Treatment Effectiveness

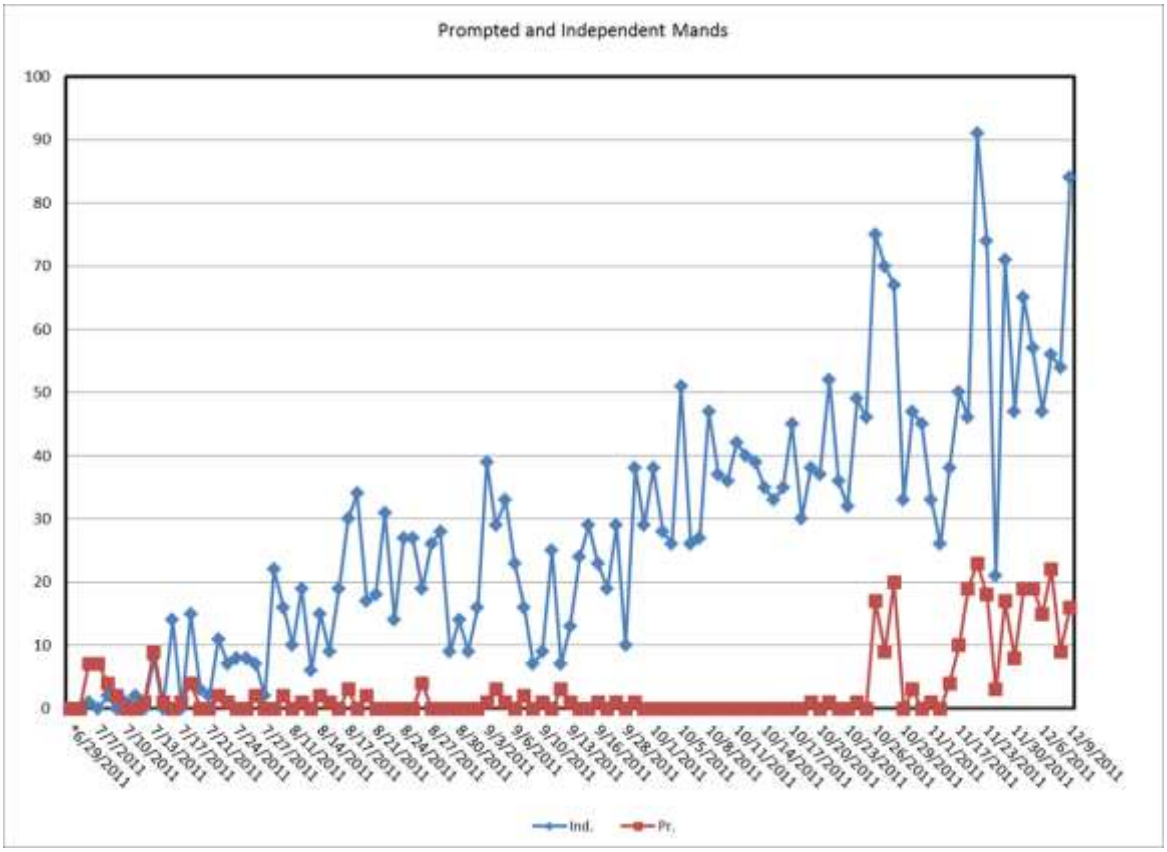
See ABA Treatment – Parent Rating Form (Long)

Data Collection

Mand Data

Date	Session Length	Mand Duration	Mand Frequency	
			Prompted Mands	Unprompted Mands
Mon __/__/__				
Tues __/__/__				
Wed __/__/__				
Thurs __/__/__				
Fri __/__/__				

Session Length – duration of time you provided service that day
Mand Duration – duration of time you collected mand data
Prompted Mands – tally number of mands (vocal or sign), in which echoic, imitative, or physical prompts were used
Unprompted Mands – tally number of mands (vocal or sign) that did not require prompts

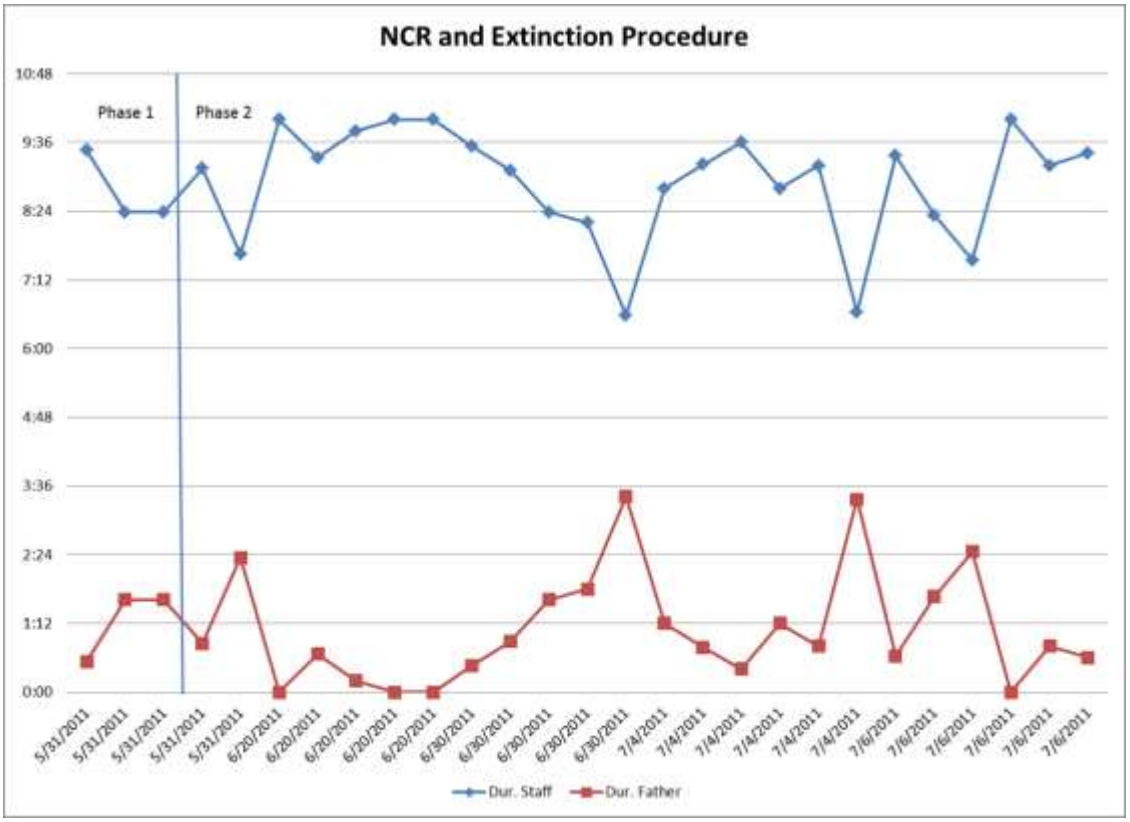


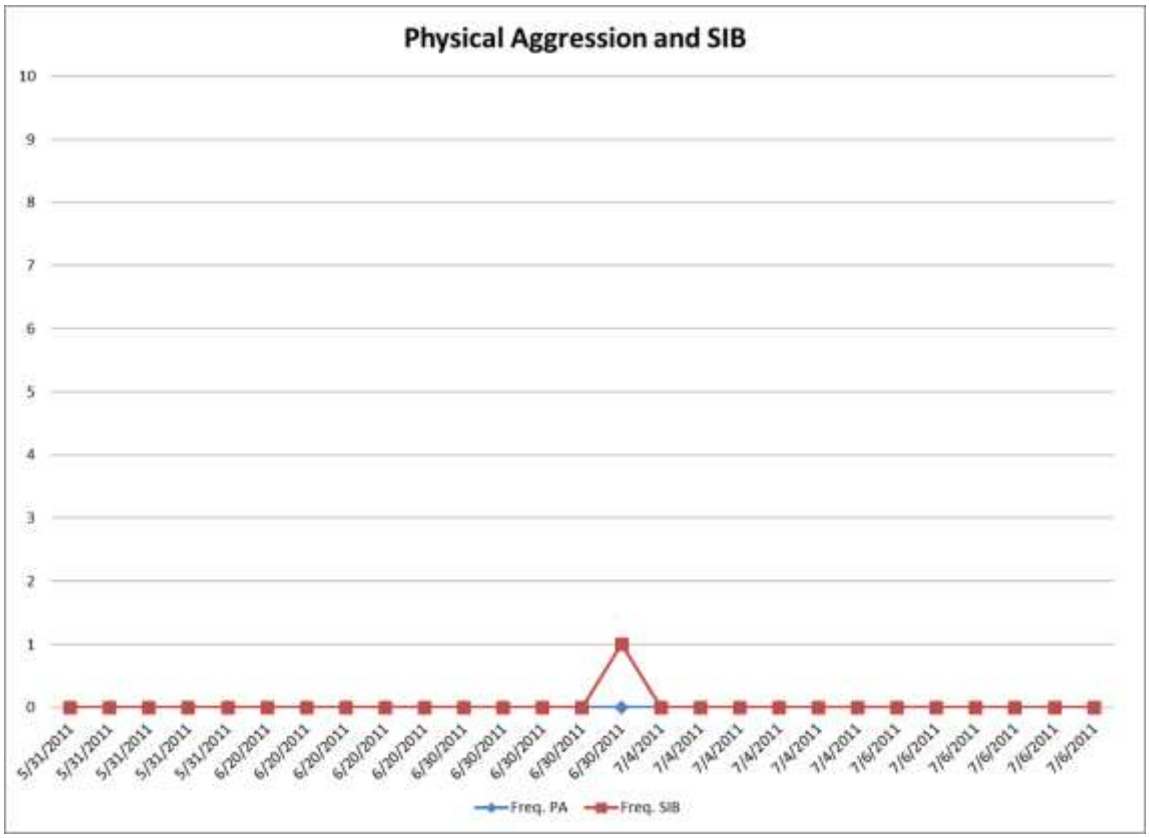
Data Collection

Access to Attention Procedure Data Sheet

	Pairing		Skill Acquisition				Fading and Generalization		
Trial #	Dur. Staff	Dur. Father	Freq. Edible	Dur. Stop	Freq. PA	Freq. SIB	Edible Sch.	Father Sch.	Staff
1							VI		
2							VI		
3							VI		
4							VI		
5							VI		
6							VI		
7							VI		
8							VI		
9							VI		
10							VI		
11							VI		
12							VI		
13							VI		
14							VI		
15							VI		
16							VI		
17							VI		
18							VI		
19							VI		
20							VI		

Dur. – Duration; Freq. – Frequency; Stop – time stopped during physical intervention; PA – Physical aggression, SIB – Self-injurious behavior; Sch. – Schedule; Father's Sch. – amount of interval duration of access to father's attention; Staff – Staff initials recording




Physical Aggression and SIB
10
9
8
7
6
5
4
3
2
1
0
5/31/2011
5/31/2011
5/31/2011
5/31/2011
5/31/2011
6/20/2011
6/20/2011
6/20/2011
6/20/2011
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7/4/2011
7/4/2011
7/6/2011
7/6/2011
7/6/2011
7/6/2011
7/6/2011
7/6/2011
Freq. PA
Freq. SIB

Parent Data Collection

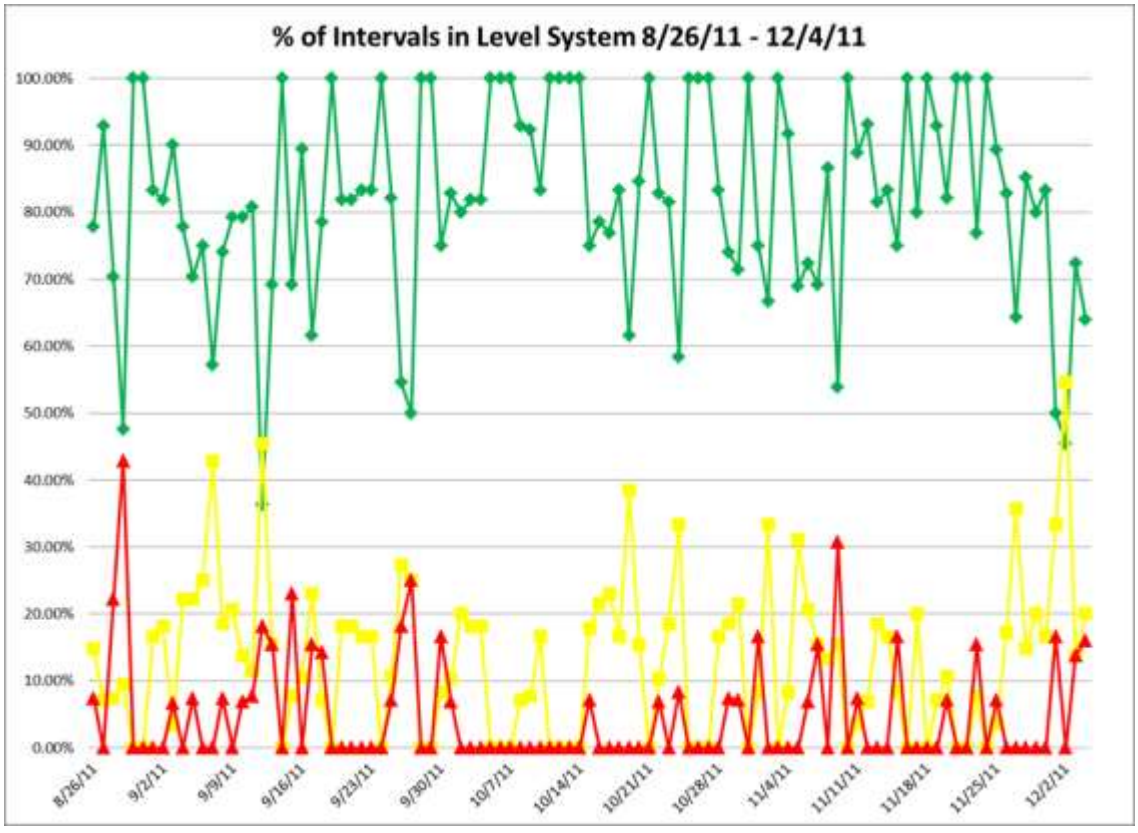
Home Behavioral Data Sheet

Date: _____ Data Collected By: _____ Child: _____

7:00 am	7:30 am	8:00 am	8:30 am	9:00 am	9:30 am	10:00 am	10:30 am
G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R
11:00 am	11:30 am	12:00 pm	12:30 pm	1:00 pm	1:30 pm	2:00 pm	2:30 pm
G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R
3:00 pm	3:30 pm	4:00 pm	4:30 pm	5:00 pm	5:30 pm	6:00 pm	6;30 pm
G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R
7:00 pm	7:30 pm	8:00 pm	8:30 pm	9:00 pm	9:30 pm	10:00 pm	10:30 pm
G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R	G Y R

If on multiple levels within a time interval, score on lowest level during the interval

Total Green: _____ Total Yellow: _____ Total Red: _____



Training and Supporting Intervention Managers

Staff Training – initial and ongoing

- Luiselli (2008), Luiselli (2010)

Supervision/Feedback – 2 hours for every 10 hours of direct service, BCBA, on-site

- BACB (2014) ABA Treatment for ASD: Practice Guidelines

Parent/Caregiver Training

- Smith (2000)
- Bearss (2013)

ABA T-PRF: ABA Program Staff

See ABA Treatment – Parent Rating Form (Long)

Ensuring Fidelity of Treatment

Core Competencies – Behavior Technician

Criteria	Y	N	Method of Assessment
Treatment (ABA) Skills for working with Individuals with ASD or ID			
1. Establishes & maintains therapeutic relationship by pairing self as a reinforcing entity and building the value for client of social interaction with the BT.			
2. Prompts safe and socially acceptable replacement behaviors in order to build a repertoire of communication, social interaction, and problem solving skills.			
3. Fades prompts appropriately to promote both successful and independent responding.			
4. Increases the frequency or duration of safe and appropriate replacement behaviors by providing access to reinforcers (desired items/actions, attention, or removal of demands/aversive situations).			
5. Provides access to reinforcers within the parameters most likely to increase future behavior (value, effort required, rate, magnitude, intensity, immediacy)			
6. Limits or removes access to reinforcers within limits of safety when client engages in inappropriate or unsafe behaviors.			
7. Accurately collects behavior data including: A-B-C, count, frequency, duration, latency, inter-response time, event, and interval based recording.			
8. Models correct use of behavior interventions for parents and professionals and provides prompting for parents and professional to engage in behavior interventions independently.			

Ensuring Fidelity of Treatment

Core Competencies – Behavior Technician

Preparation for data collection:

Time sampling of TSS having data sheet available (1 min. intervals)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Trials of latency from behavior to data recording (mark if less than 20 seconds)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Data collection: (this should be completed on at least 2 different behaviors and averaged)

Supervisor Frequency: _____ TSS Frequency: _____ IOA: _____

Supervisor Duration: _____ TSS Duration: _____ IOA: _____

Supervisor Intervals w/Bx: _____ TSS Intervals w/Bx: _____ IOA: _____

Parent Training

Reinforcement is an environmental change which follows a behavior which increases or maintains the future frequency of that behavior

A consequence is only reinforcement if the behavior is increased or maintained

Reinforcement is determined by the effect on the behavior and not the consequence itself

Lifelong Developmental Perspective

Case Study 1 - Steve

- Asperger's diagnosis in 1st grade
- Limited social skills, scripted communication
- High anxiety, frequent escape behavior

Lifelong Developmental Perspective

Elementary School Stage: 6 to 12 Years Old (Fueyo and Caldwell 2010)

Issues within this stage of development:

- Transition from Early Intervention into Elementary School setting
- Determining placement in Elementary setting and continued development of IEP
- Increase in educational and social demands (increase of averseness in the environment which may lead to problematic behaviors or social isolation)
- Building a trained and cohesive treatment team with Elementary school staff, medical staff, community based staff (BHRS)
- Educational instruction that meets the needs of the individual (social skills, communicative skills, daily living skills, adaptations to instruction, IEP)
- Separation of communicative and social abilities in typically developing peers
- Physical size in relation to aggression and self-injury behaviors
- Balance of resources (time, money, energy) for all members of the family

Elementary School Stage: 6 to 12 Years Old (Fueyo and Caldwell 2010)

Communication:

- Teaching communication skills to request, make statements, ask and answer questions, conduct conversations,
- Teaching non-verbal communication skills (facial gestures, body language, non-literal language, paralanguage, pragmatics, etc…)
- Teaching receptive language skills (following multi-step directions, verbal processing of language)

Socialization:

- Teaching social connection and understanding of the value of social interaction
- Teaching social skills (social boundaries, personal space, social rules, social language, theory of mind/perspective
- taking, social dynamics of the classroom)
- Fostering ongoing friendships/social interactions with peers

Elementary School Stage: 6 to 12 Years Old (Fueyo and Caldwell 2010)

Educational/Vocational:

- Teaching daily living skills to promote independence (organization, attending, safety awareness, routines and expectations in the classroom, etc…)
- Teaching academic skills (visual vs. verbal instruction, concrete vs. abstract concepts)
- Development of Elementary School placement and Individualized Education Plan

Mental Health:

- Teaching replacement behaviors (communication, coping skills) for maladaptive behaviors (tantrums, yelling, physical aggression, self-injurious behaviors)
- Teaching attention/impulse control skills (reinforcement of successful attending skills, processing potential consequences, problem solving)
- Teaching self-regulation skills (coping, requesting help, problem solving)
- Teaching disability awareness and self-advocacy skills

Elementary School Stage: 6 to 12 Years Old (Fueyo and Caldwell 2010)

Medical:

- Identifying co-morbid medical issues and seeking appropriate treatment
- Teaching independent health routines (diet, exercise, cleaning, & sleep)
- Connect with psychiatric services (potential use of medication if deemed beneficial)

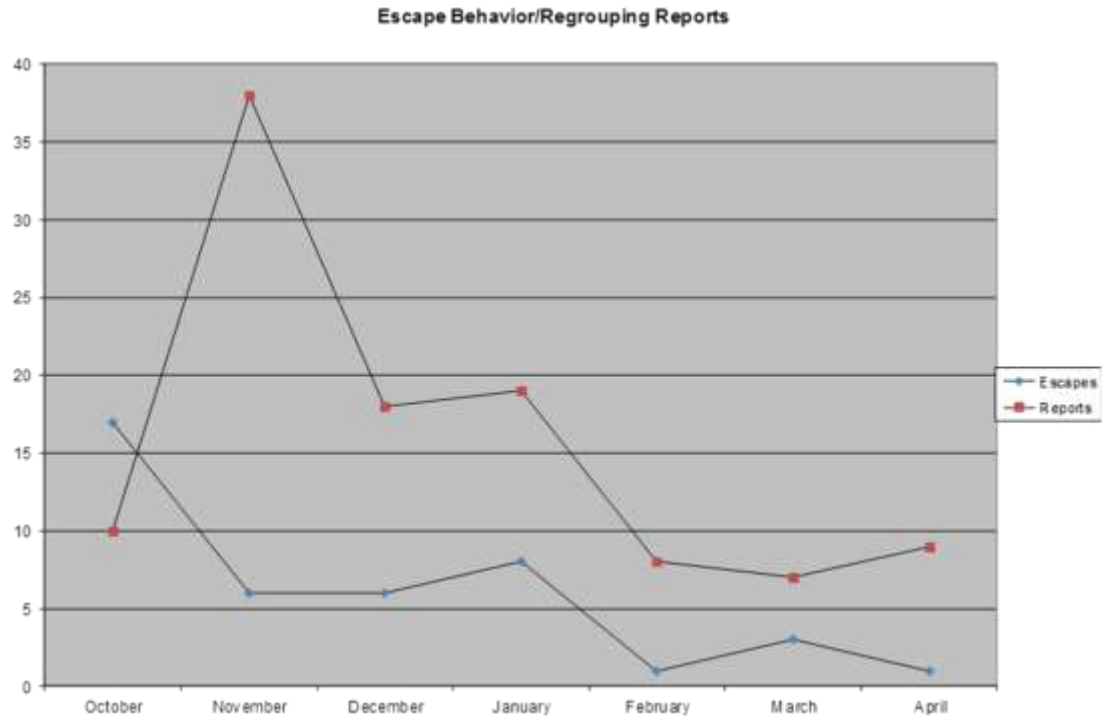
Family Development:

- Continue education on Autism Spectrum Disorders
- Becoming educated on treatment systems including: Education system & law, Individualized Education Plans, BHRS
- Becoming educated on treatment methodology: Applied Behavior Analysis
- Continuing plan/method for balance within the family structure (time for other siblings, time for parents to have a break, routines within the home which promote consistency and follow through of treatment)
- Continuing to build/maintain support system (family, friends, church congregations, community organizations)

Regrouping Report

- How to identify and label signals inside and outside of their body to alert him that he was feeling angry or frustrated
- How to identify and label the situations or events which are causing him to feel anger and frustration
- How to select and engage in a replacement behavior to reduce or remove the anger or frustration

Practice and Reinforcement!!!
(contrived and removal/reduction of anger or frustration)



Regrouping Report

Date: _____
Time: _____

Before Answering Take A Moment To Relax And Clear Your Thoughts

1. **How does my body feel? (tense, cold, hot, tight, tired etc.) _____**

   _____

2. **How do I feel inside? (I feel …) _____**

   _____

   _____

   _____

3. **What happened that made me want to leave? _____**

   _____

   _____

   _____

4. **What could I have done instead of leaving?**

   Ask For Help **Use Squeeze Ball** **Write In Journal**

   Take Deep Breaths **Other (Your Choice)**

   How would I use this method, and how would it help me to feel better? Ex. What would I say if I asked for help?

   _____

   _____

   _____

   _____

Lifelong Developmental Perspective

Secondary School Stage: 13 to 18 Years Old (Fueyo and Caldwell 2010)

Issues within this stage of development:

- Continuation of issues from previous stages
- Transition from Elementary School setting into Secondary School setting Determining placement in Secondary setting and development of transition IEP (14)
- Increase in educational, social, and daily living demands
- Continuing to create a trained and cohesive treatment team despite transitions
- Educational instruction that meets the needs of the individual (social skills, communicative skills, daily living skills, adaptations to instruction, IEP)
- Separation of social abilities in typically developing peers (exclusion of peer relationships may lead to anxiety and depressive symptoms)
- Puberty and sexual behavior presents high potential for problematic situations
- Physical size in relation to aggression and self-injury behaviors
- Balance of resources (time, money, energy) for all members of the family
- Working towards independence as family members progress in their lives

Secondary School Stage: 13 to 18 Years Old (Fueyo and Caldwell 2010)

Communication:

- Teaching communication skills for conducting conversations (staying on topic, asking and answering questions, transitioning between topics, non-perseverative topics, obtaining pertinent information, boundaries of conversational topics)
- Teaching non-verbal communication skills (facial gestures, body language, non-literal language, paralanguage, pragmatics, etc…) and how they display meaning
- Teaching receptive language skills (sequencing and following multi-step directions and/or long term projects, verbal processing of language, non-literal language)

Socialization:

- Teaching social skills (social boundaries, personal space, social rules, social language, theory of mind/perspective taking, social dynamics of the community)
- Teaching functional use of socialization (job skills, interacting with service providers)
- Fostering ongoing friendships/social interactions with peers

Secondary School Stage: 13 to 18 Years Old (Fueyo and Caldwell 2010)

Educational/Vocational:

- Teaching daily living skills to promote independence (paying bills, balancing a check book, cooking, cleaning, routines and expectations in home/job/community settings)
- Teaching academic skills (individualized skills based on work and community living)
- Teaching safe and appropriate relationship and sexual behavior
- Development of transition plan within Individualized Education Plan at age 14

Mental Health:

- Teaching replacement behaviors/strategies (communication, coping skills, problem solving skills, therapy, safe adults) for maladaptive behaviors, anxiety, and depression
- Teaching independence or supported utilization of mental health services for issues with depression, anxiety, self-esteem, social skills support (age of consent 14)
- Teaching self-regulation skills (coping, requesting help, problem solving)
- Teaching self-advocacy skills (understanding diagnosis, strengths, advocacy)

Secondary School Stage: 13 to 18 Years Old (Fueyo and Caldwell 2010)

Medical:

- Identifying co-morbid medical issues and seeking appropriate treatment
- Teaching independent health routines (diet, exercise, cleaning, meds., & sleep)
- Teaching independence in utilization of medical and psychiatric services

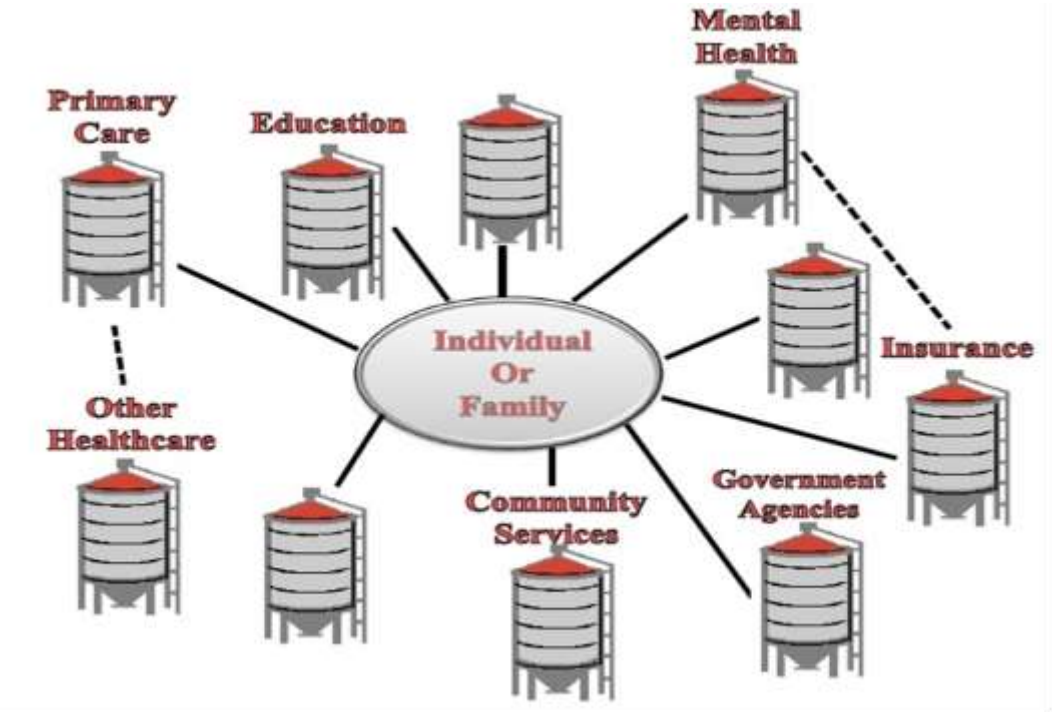
Family Development:

- Continue education on Autism Spectrum Disorders
- Becoming educated on post-secondary education & treatment systems including: college, technical schools, work programs, job coaching, adult supports/programs
- Begin planning for life after secondary school (job, residence, transportation, etc…)
- Continuing plan/method for balance within the family structure (siblings leading more independent lives/moving out of the home, parental aging, long term financial planning, parents/siblings separating from individual if they move out of home)
- Continuing to build/maintain support system (family, friends, church congregations, community organizations) and moving towards direct use by individual

Steve Today

- 22 years old
- Has a job at a local restaurant
- Lives in his own apartment
- Supported by Outpatient Therapist

Supporting All Elements of Care



Support for the Individual

ABA – skill development

- Communication
- Social Interaction
- Functional skills training (job, home living, transportation)
- Physical health care (hygiene, sleep, diet, medical care)
- Safety skills
- Self-advocacy training

Support for Parents/Caregivers

Support systems

- Family/friends
- Parent support groups

Therapy to grieve
Therapy to reduce anxiety, stress, frustration
Physical health care
Hope – empowering parents/caregivers to make a difference

- Training to implement programming
- Advocacy

Barker 2010

Stress Defined Activity

Stress warning signs: List in each area description of your *early* signs of being stressed (in any situation).

What are your physical signs ?(what is your body telling you? Ex: body aches, tired easily, increase heart rate, easily sick)

_____
_____
_____
_____
_____

What are your emotional signs ?(what feelings do you have? Ex: easily annoyed, disheartened, sad, frustrated, can't relax)

_____
_____
_____
_____
_____

What are your cognitive signs ? (thoughts that start to pop up in your mind Ex: "I hate my life, I can't believe this always happens to me, Is everyone against me; also forgetfulness, lack of concentration)

_____
_____
_____
_____
_____

What are your behavioral signs ? (what types of behavior do you do? Ex: procrastinate, boss others around, disorganized)

_____
_____
_____
_____
_____

Developed by: Jennifer Lyristis, MSS, LSW

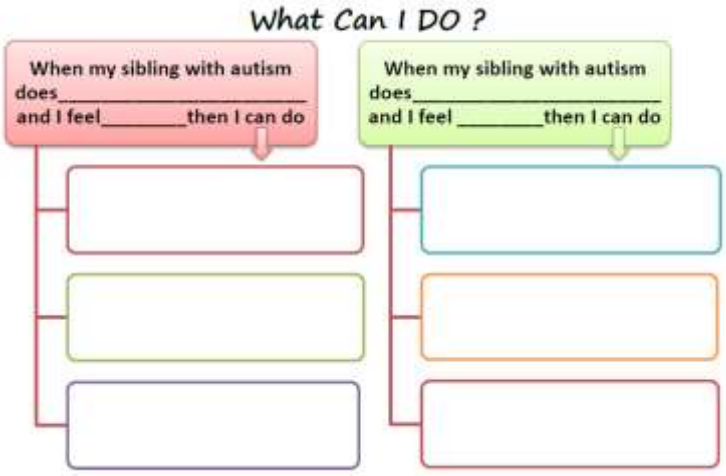
Support for Siblings

Support systems
- Honest discussion from parents/caregivers

Therapy to support understanding
ABA skill development
- Coping
- Interacting with siblings
- Advocacy
- Assisting with treatment

Orsmond (2007), Hastings (2003)

Sibling Training Materials



Developed by:
Jennifer Lyristis, MSS, LSW
Jennifer Brands, BA

CADD as a Behavioral Health Home

Philosophy of care
- ABA and skill development as underlying methodology

Support across the lifespan
- Developmental based service system

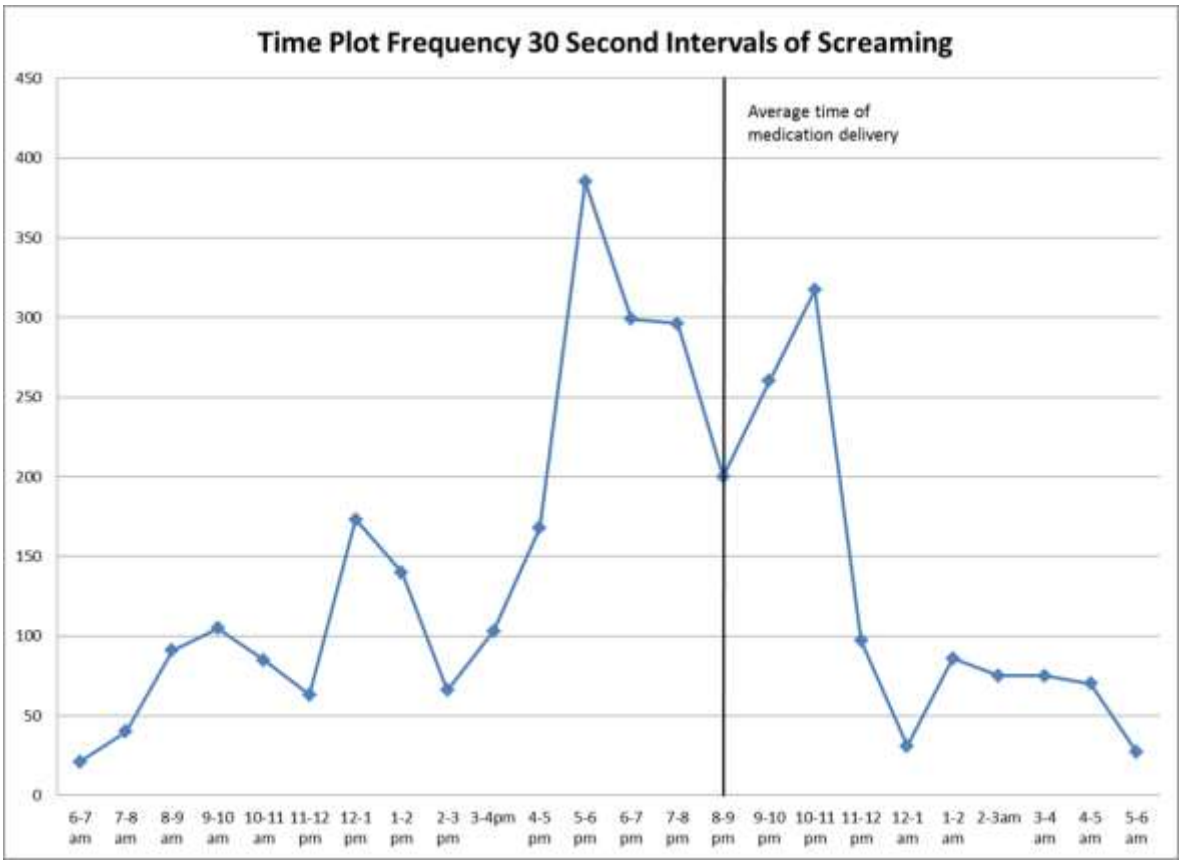
Meeting multiple areas of need

Reducing “Silos” of care
- Coordination of care
- Patient registry

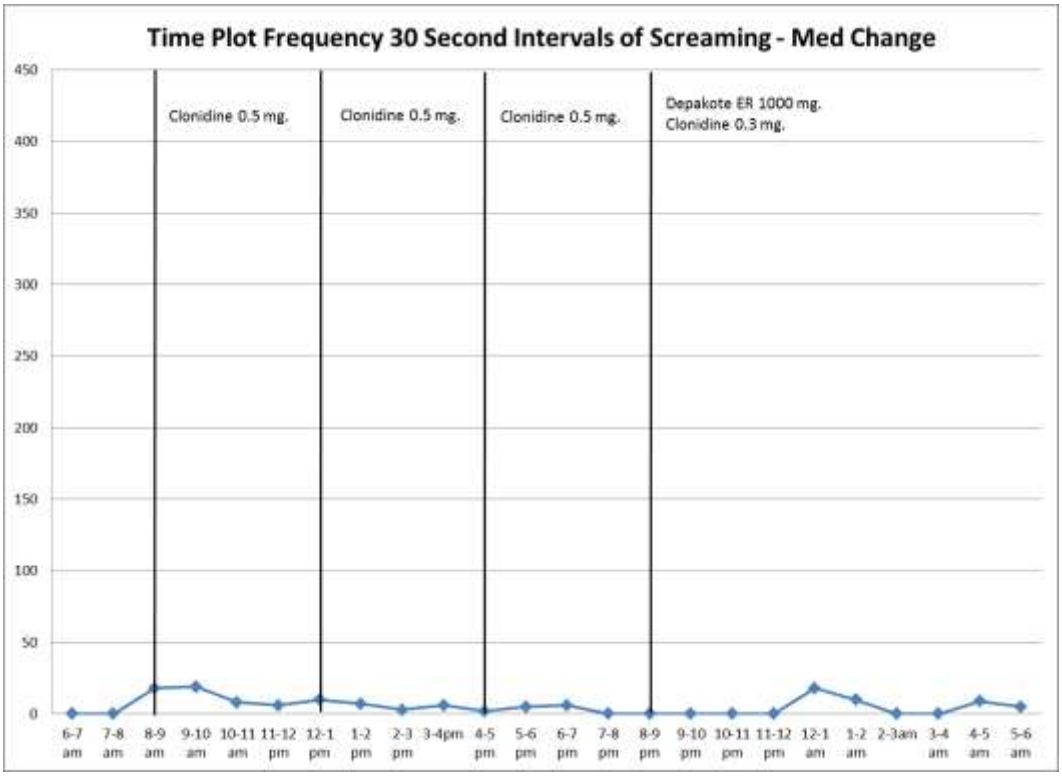
Vision for CADD as a BHH- Fueyo (2015)

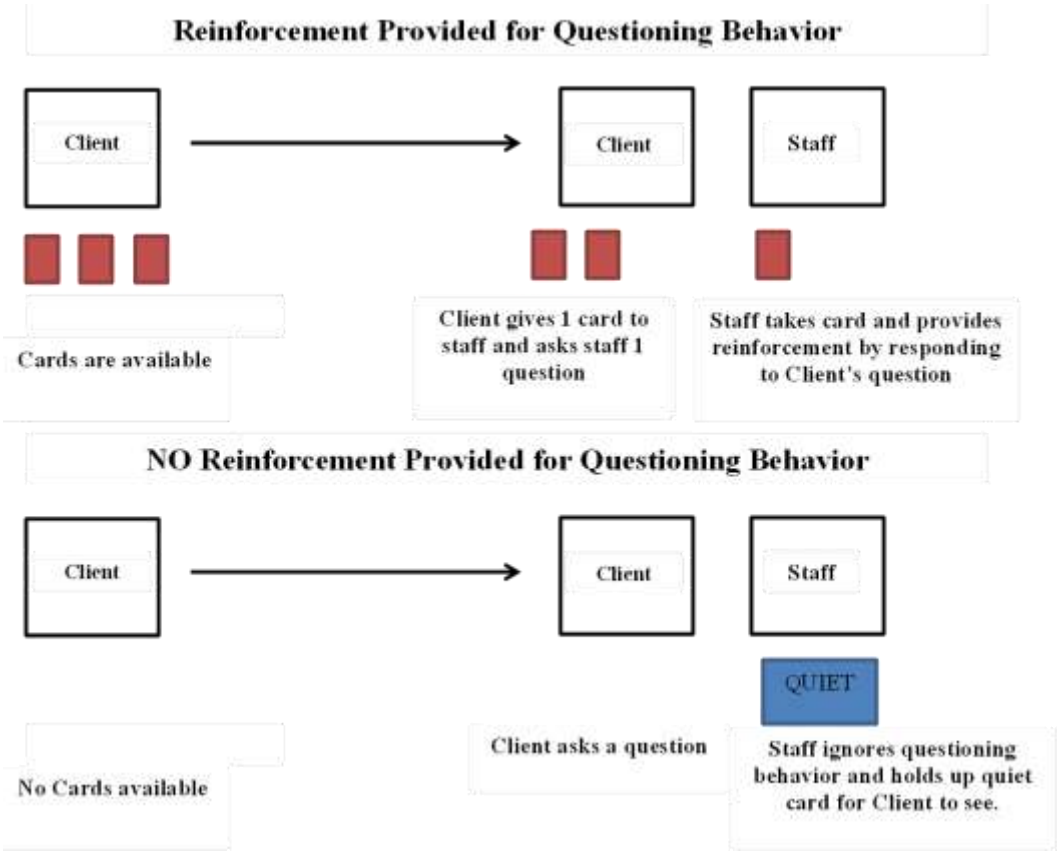
Case Study 2

Mary
- 28 year old female with ASD and ID
- 4 hospitalizations in previous 6 months
  - Physical aggression and self-injury
- Limited communication and social skills



Case Study 2


Time Plot Frequency 30 Second Intervals of Screaming - Med Change
Clonidine 0.5 mg.
Clonidine 0.5 mg.
Clonidine 0.5 mg.
Depakote ER 1000 mg.
Clonidine 0.3 mg.
450
400
350
300
250
200
150
100
50
0
6-7 am
7-8 am
8-9 am
9-10 am
10-11 am
11-12 pm
12-1 pm
1-2 pm
2-3 pm
3-4pm
4-5 pm
5-6 pm
6-7 pm
7-8 pm
8-9 pm
9-10 pm
10-11 pm
11-12 pm
12-1 am
1-2 am
2-3am
3-4 am
4-5 am
5-6 am

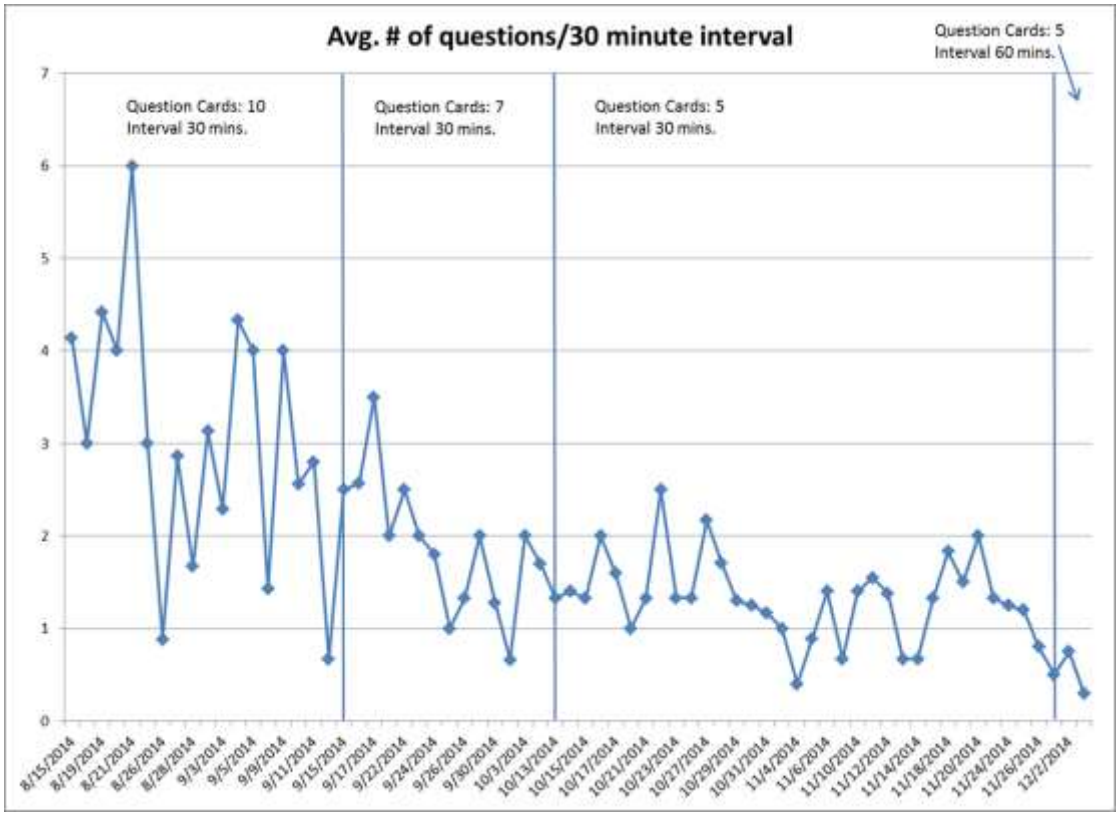

Reinforcement Provided for Questioning Behavior
Client
Client
Staff
Cards are available
Client gives 1 card to staff and asks staff 1 question
Staff takes card and provides reinforcement by responding to Client's question
NO Reinforcement Provided for Questioning Behavior
Client
Client
Staff
QUIET
No Cards available
Client asks a question
Staff ignores questioning behavior and holds up quiet card for Client to see.

Case Study 2

Level	Length of Interval	Question Cards Per Interval
1	10 minutes	10
2	10 minutes	9
3	10 minutes	8
4	10 minutes	7
5	10 minutes	6
6	10 minutes	5
7	10 minutes	4
8	10 minutes	3
9	10 minutes	2
10	10 minutes	1

Client will be provided with a designated number of Question Cards per 10 minute intervals based on her current level.

Client will move to the next level when she has asked no more than the designated number of questions in 3 out of 3 consecutive intervals.
i.e. if she is working on level 1 and asks no more than 10 questions during 3 consecutive intervals, she would be moved up to level 2 for her fourth interval and would be given only 9 question cards



Case Study 3

Michael

- 5 year old with ASD
- Significant deficits in communication and social interaction
- Significant verbal aggression and self-injury
- Early intervention 10 hours per week

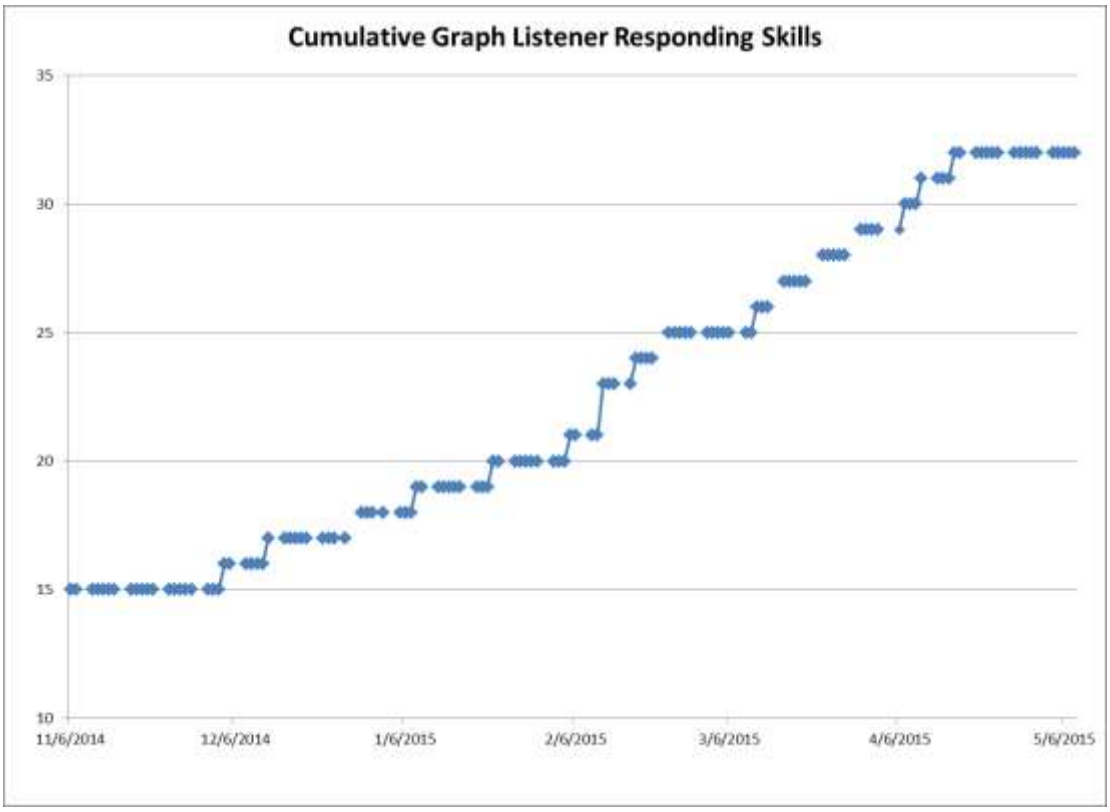
Verbal Behavior Programming

- Discrete trial and natural environment training
- Utilizing PaTTAN, Sundberg, Carbone et al. procedures
- Teaching the following skills
  - Manding (requesting)
  - Motor Imitation (imitating behavior)
  - Listener Responding (following directions)
  - Match to Sample (matching)

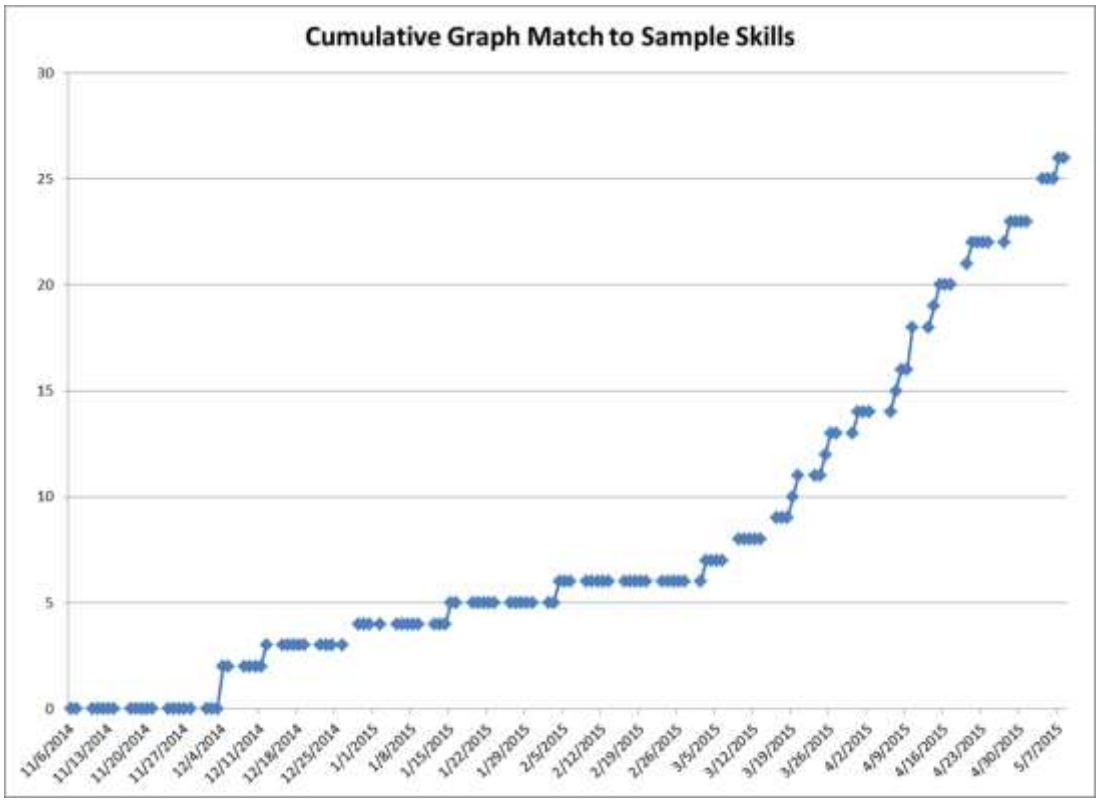
Schedule

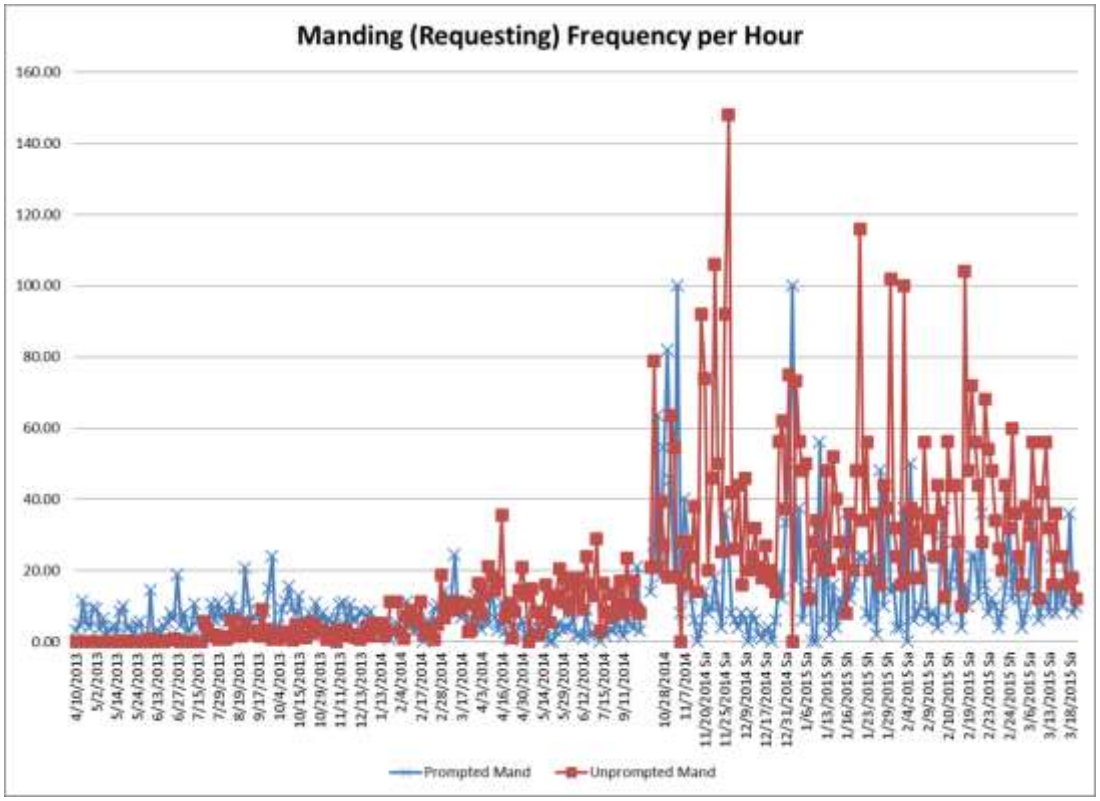
Time	Duration	Activity
3:45 – 4:00 pm	15 min.	Prep for session, report on the day from mom, pairing (liquids)
4:00 - 4:15 pm	15 min.	Pairing at table, probe data collection session
4:15 - 4:30 pm	15 min.	Toileting session, free time
4:30 - 4:45 pm	15 min.	Mand session (liquids)
4:45 – 4:55 pm	10 min.	Intensive teaching session
4:55 – 5:00 pm	5 min.	Toileting session
5:00 – 5:05 pm	5 min.	Free time
5:05 – 5:15 pm	10 min.	Mand session (mom) (liquids)
5:15 – 5:30 pm	15 min.	Intensive teaching session
5:30 – 5:40 pm	10 min.	Toileting session
5:40 – 5:45 pm	5 min.	Pairing, clean up

Case Study 3 - Data

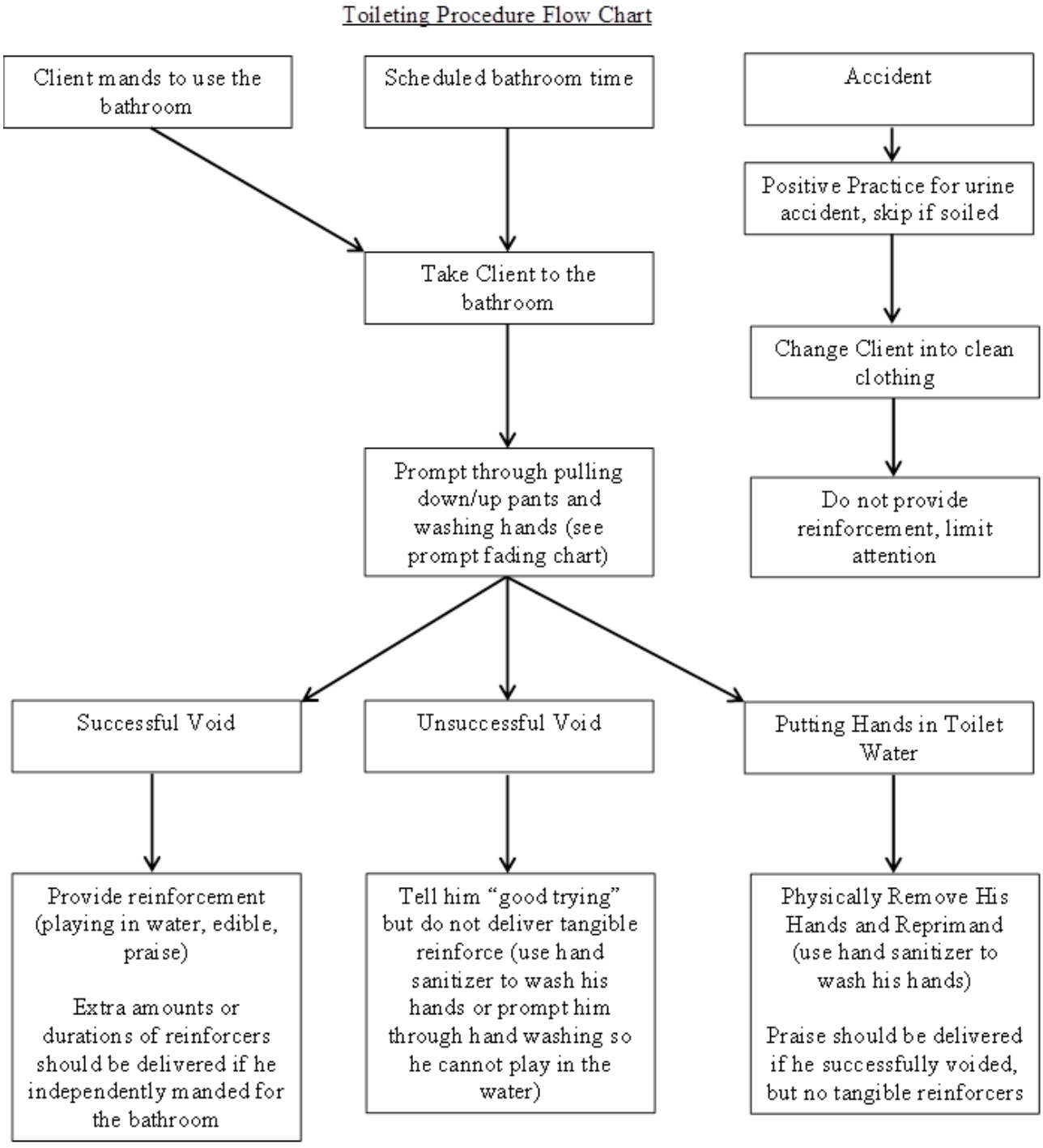


Case Study 3 - Data





Case Study 3 - Procedure



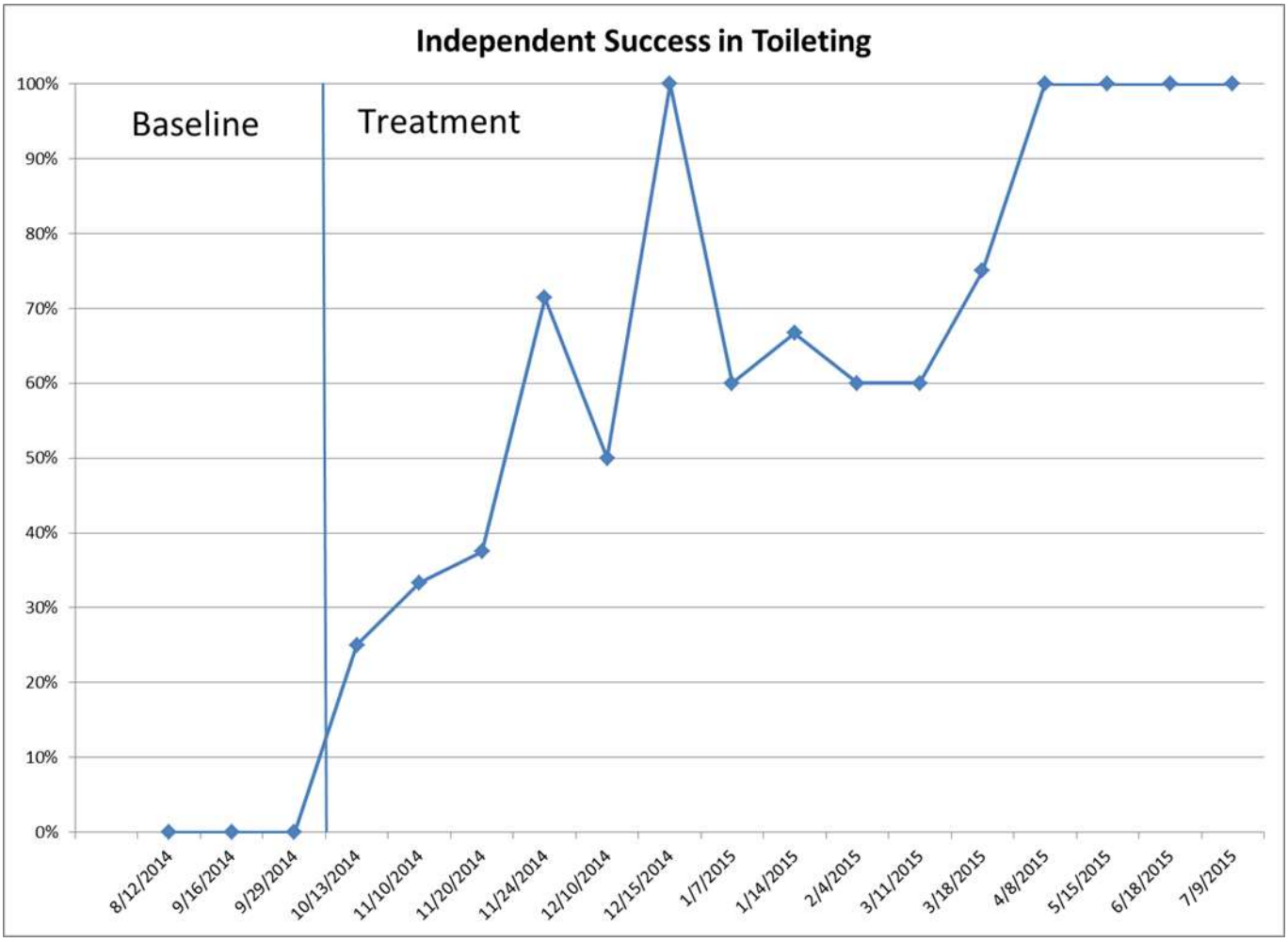
Modified from Foxx and Azrin (1973)

Case Study 3 – Prompting

Prompt Levels and Fading (utilize least to most hierarchy with each prompt being delivered 2 times before moving to a lower level)

- **Vocal Prompt** – "pull down pants" "pull up pants" "turn on water" "rub soap" "put hands under water" "dry hands"
- **Light Physical Prompt** – slightly tug on pants down or up, nudge arms at the back of the elbow too faucet knob, soap, and towel (vocal prompt should be delivered as well)
- **Medium Physical Prompt** – tuck Client's thumbs inside pants and tug down/up on pants, guide at forearms too faucet knob, soap, and towel (vocal prompt should be delivered as well)
- **Full Physical Prompt** – take Client's hands and guide him to complete that task (vocal prompt should be delivered as well)

Case Study 3 – Data



Rights and Responsibilities

Individuals and families have the right to effective, empirical based treatment
(Houten 1998)

Providers have the responsibility to provide effective, empirical based treatment

Applied Behavior Analysis meets both needs

abainpa.org

Thank you

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Questions

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