Welcome to Special Learning's Webcast Training Series September 27, 2012

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Topic: Severe Problem Behavior

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and Amanda Yeager, M.A., BCBA

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Professional Training Series

Severe Problem Behavior

Presented by: Jen LaLuzerne, MSW, LSW and Amanda Yeager, M.A., BCBA

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Speaker Bios

Amanda Yeager is a Board Certified Behavior Analyst and has been serving children with autism-spectrum disorders since 2006. She currently serves as a Program Manager at Step by Step Academy Inc. in the adolescent center. Amanda oversees the academic, pre-vocational, and daily living skills treatment of consumers and designs and monitors behavior plans.

Amanda graduated with her bachelors and masters degrees from The Ohio State University. She conducted and presented several research studies with The Ohio State University and has served children and adolescents with a variety of developmental disabilities and mental health disorders in home, school, and community settings.

Jennifer LaLuzerne, MSW, LSW has been a Clinic Director at Step By Step Academy, Inc. since May 2011. Before that, she served as Program Manager and social worker, starting in 2008. At Step By Step, she is responsible for supervising Program Managers, their staff, and their caseloads, collaborating in the development and monitoring of treatment plans, behavior plans, and ongoing treatment integrity.

Jennifer has a Bachelor's Degree in social work from the University of Wisconsin - Madison, her Master's Degree in social work from The Ohio State University, and she is completing coursework towards her BCBA through the University of North Texas.

Objectives

- Upon completion of ***Severe Problem Behavior***, participants will:

1. Understand what severe problem behavior looks like in a clinical setting and what treatments have shown some efficacy in reducing different types of challenging behavior
2. Understand how to write a clear and concise behavior plan that addresses the target behavior, yet also serves as a guideline for behavior change for all who work with an individual with severe problem behavior
3. Identify examples of severe problem behavior and some of the treatments that are effective in reducing problem behavior.

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What is meant by severe problem behavior?

- Behavior that is highly socially unacceptable, dangerous to the individual or those around him or her, criminal behavior, or behavior that causes an extreme amount of distress to the individual or his or her loved ones.
- What are some examples of severe problem behavior?
  - Aggression towards others
  - Eating behaviors that can cause medical problems, like rumination or pica
  - Inappropriate masturbation
  - Self-Injurious behavior
  - Ecopresis
  - Hair pulling/removal

What is the prevalence of severe problem behavior in people with autism and/or intellectual disabilities

- A study by Kanne and Mazurek (2011) reported that 68% of children and adolescents with autism showed aggression toward a caregiver and 49% showed aggression toward a non-caregiver.
- Baghdadli, et.al. reported that 32.7% of children in their study sample with pervasive developmental disorders showed self-injurious behavior.
- Taylor, Oliver, and Murphy (2011) reported that there is a high level of chronicity to self-injurious behavior in this population, especially behavior severe enough to create damage to the person's body.
- Stiegler (2005) reported that a small but significant portion of individuals with developmental disabilities engage in pica.

Impacts on person, family, and community

- Permanent injuries
- Loss of opportunities to learn in classroom and community settings
- Loss of acceptance
- Money/Resources
- Loss of school placement
- Loss of residence

Selecting Target Behaviors

- Guidelines in selecting target behaviors
  - *To what extent will the behavior change improve the person's life experience?*
  - Habilitiation
  - Relevance of behavior rule
  - Is this behavior a behavioral cusp or a pivotal skill?
  - Will this behavior change increase access to environments to learn other important behaviors?
  - Will it predispose others to interact with the client in a more appropriate and supportive manner
  - Age-appropriate

  (Cooper, Heron, & Heward, 2007)

Prioritizing Target Behaviors

- Prioritizing target behaviors
  - Safety to self and others is first priority
  - How often will the appropriate behaviors be exhibited in the natural environment
  - Long-standing effects and future skill development
  - Reinforcement from others
  - How likely is the success in changing this target behavior?
    - Consider current research, experience of the practitioner, ability to control consumer's environment, resources available.
  - Cost

(Cooper, Heron, & Heward, 2007).

Set Behavior Change Criteria

- How much change is needed to be meaningful?
- Consider social validity (the extent to which the behaviors are appropriate, intervention procedures are acceptable, and important and significant changes in target and collateral behaviors are produced; Cooper, Heron, & Heward, 2007).
- Set criterion before implementing the behavior plan
- Provides guideline for continuing or eliminating treatment
- Helps with collaboration across team members

Writing and Defining Target Behaviors

Definitions of target behaviors should be:

- Objective, observable characteristics of the behavior
  - The behavior can be observed and recorded reliably
- Clear
  - Readable and unambiguous and paraphrased accurately
- Complete
  - What is included and excluded in all situations, leaving little to judgement

- How will you take data?

(Cooper, Heron, & Heward, 2007)

Functional Behavior Assessments (FBA)

What is a FBA?

It is an assessment that incorporates a variety of techniques and strategies to identify the cause(s) of challenging behaviors. It is a problem-solving approach that looks beyond the behavior itself.

Once conducted, these assessments will thus assist in identifying what intervention to implement to address the behavior(s).

FBAs are not only important for identifying the possible cause of the challenging behavior but, the approach also allows the observer to identify the underlying motivation for it!

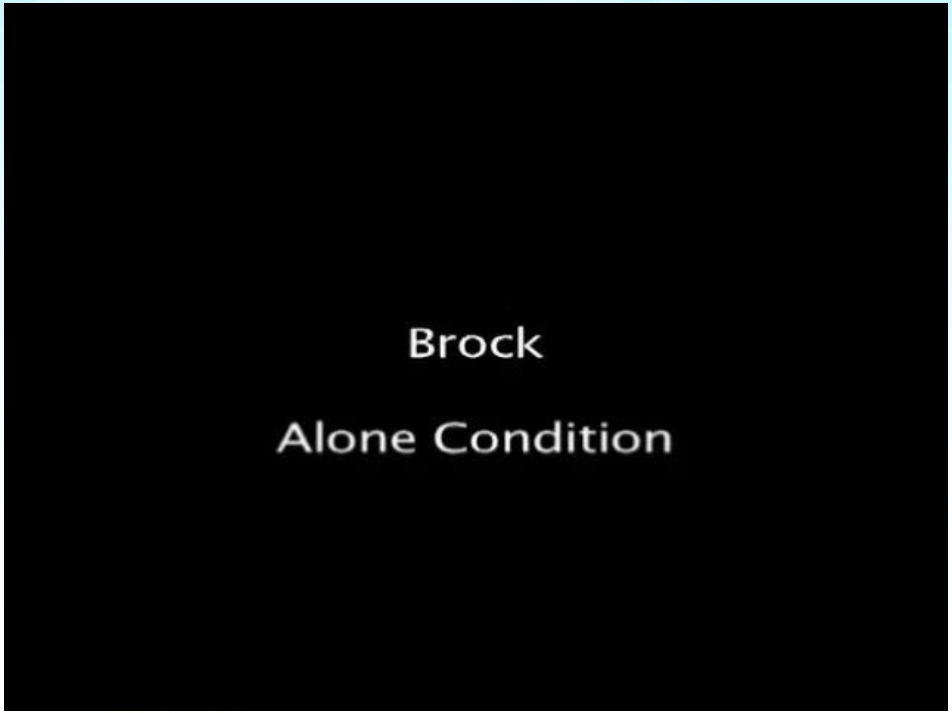
FBAs can be used to alter antecedent variables, alter consequent variables, and teach replacement behaviors

(Cooper, Heron, & Heward, 2007)

Functional Analysis

- Functional (Experimental) Analyses arrange antecedent and consequences so the separate effects of the variable(s) can be determined
  - Does not occur in person's natural environment
  - Conditions are established so the problem behavior occurs
  - The application of a FA has been applied to various behaviors:
    - Self-injurious behavior (e.g., McCord, Thomson, & Iwata, 2001, O'Reilly, 1997)
    - Aggression (Lalli & Casey, 1996; Mace, Page, Ivancic, & O'Brien, 1986; Pelio, Morren, Tesch, & Axelrod, 1999).
    - Vocalizations (e.g., Mace & West, 1986)
    - Noncompliance (e.g., Reimers et al., 1993)
    - Elopement (e.g., Fisher, Lindauer, Alterson, & Thompson, 1998).
    - Pica (e.g., Piazza, Hanley, & Fisher, 1996)

Video of a Functional Analysis



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Why conduct FBA and FA?

- Premature treatment can be inefficient, ineffective, and even harmful (Cooper, Heron, & Heward, 2007).
- Trial-and-error may cause the behavior to become more severe
- FBA can contribute to preventative measures
  - Iwata and colleagues (1994b) recommended modifying instructional environments as a preventative tool. For example, providing more frequent reinforcement, opportunities for a break, and a means to request for help.
- FA can yield results that indicate a clear demonstration of variable(s) and the occurrence of problem behavior.
  - Should be use as a last-resort assessment method with severe problem behavior and are not advised in instances where the maintaining variables can be adequately identified with other methods.

FA cautions for SIB

- When evaluating self injury through an FA, you may need to modify your conditions to ensure safety of the individual.
- An ignore condition may be more appropriate than the alone condition
- If you do utilize the alone condition, ensure that you have other precautions that are appropriate, such as a padded space.
- Protective gear may have an impact on your results. It may interfere with your ability to identify the behavioral function of SIB, as the effort needed to engage in the behavior may suppress or eliminate it (Moore et al., 2004, Borrero et al., 2002).

Preventative Procedures

- Individuals implementing plan should be trained and have necessary materials
- Examples in clincial settings include:
  - Providing optimal communication opportunities
  - Visual schedule
  - Offering/giving a break
  - Behavioral momentum
  - Providing choices
  - Monitoring task difficulty
  - Using a timer to signal when reinforcment is available & ends
  - Providing contingent attention
  - Differential reinforcement

Procedures

- Many behavior plans include more than one intervention, or are package interventions
- Plans should be written to include behaviors targeted to decrease and behaviors targeted to increase
- If reducing or eliminating a behavior, a replacement behavior *must* be taught
- Reinforcement systems
  - Identify schedule of reinforcement
  - Utilize preference & reinforcer assessments to identify high-preference reinforcers
- Other consequence procedures
  - E.g., time out, response cost, overcorrection, prompting
- Training staff
  - Key elements of successful staff training: feedback & role play!

Replacement Behaviors

If reducing or eliminating a behavior, a replacement behavior must be taught

- Teaching replacement behaviors
  - A behavior that will be functionally equivalent
  - Is the behavior in the student's repertoire?
  - What are the prerequistes needed to exhibit behavior?
  - Will the replacement behavior be reinforced by others?
- Examples:
  - Behavior to decrease: pinching to gain attention→ teach student to tap me on the should or say my name
  - Behavior to decrease: falling to the floor to escape a demand → teach student to request a break

Functional Communication Training

Functional Communication Training (FCT) is one of the most common and effective interventions for treating severe problem behavior

- What is FCT?
  - FCT is an antecedent (occurs prior to the behavior) intervention that utilizes differential reinforcement of alternative behavior (like discussed above) to teach appropriate behaviors to compete with unwanted/problem behaviors.

- It's important to recognize most of those unwanted behaviors have proven functional for the student, so it's necessary to determine an adaptive behavior that will take the place of the behavior you're planning to reduce/eliminate from his/her repertoire.

(Tiger, Hanley, & Bruzek, 2008)

Functional Communication Training

- Examples of problem behaviors addressed with FCT:
  - Aggression (Carr & Durand, 1985)
  - Self-injury (Kurtz et al., 2003)
  - Bizarre vocalizations (Mace & Lalli, 1991)
  - Stereotypy (Wacker et al., 1990)
  - Inappropriate sexual behavior (Fyffe, Kakng, Fittro, & Russell, 2004)

- FCT can be an appropriate treatment for various problem behaviors maintained by social (positive or negative) sources of reinforcement

(Tiger, Hanley, & Bruzek, 2008)

Selecting alternative behaviors

- Tiger, Hanley, and Bruzek (2008) discussed these considerations:
  - Effort required to engage in the response
  - In topography-based systems, such as sign language, the form of the response differentiates one verbal response from another
  - In selection-based systems, such as picture exchanges, the form of each response is identical (e.g., handing someone a picture card) and are differentiated by the stimulus selected.
  - The likelihood that others will recognize and respond appropriately to the response
  - The consumer's current behavioral repertoire

Effective Interventions
Choice Interventions

- Choice interventions are considered to be an evidenced-based practice for individuals with severe to profound disabilities (Tullis et al., 2011)
- Choice alone could serve as a reinforcer (Tiger et al., 2006).
- Allowing choice can be a parsimonious, yet effective way to reduce challenging behavior and increase appropriate behavior (Cannella et al., 2005; Hanley et al., 2006; Lancioni, O'Reilly & Emerson, 1996).
- Examples of severe problem behaviors choice interventions have been applied to:
  - Self-injury (Dyer, Dunlap, & Winterling, 1990; Humenik, Curran, Luiselli, & Child, 2008)
  - Public disrobing and urination (Carlson et al., 2008)
  - Aggression (Dyer, Dunlap, & Winterling, 1990; Harding et al., 2005)
  - Noncompliance (Cole & Levinson, 2002)

Differential Reinforcement (Cooper, Heron, Heward, 2007)

- Differential reinforcement – Reinforcing only those responses within a response class that meet a specific criterion along some dimension(s) (i.e. frequency, topography, duration, latency, or magnitude) and placing all other responses in the class on extinction.
- Differential reinforcement of other behavior (DRO) – Procedure for decreasing problem behavior in which reinforcement is contingent on the absence of the problem behavior during or at specific times.
- Differential reinforcement of alternative behavior (DRA) – procedure for decreasing problem behavior in which reinforcement is delivered for a behavior that serves as a desirable alternative to the behavior targeted for reduction and withheld following instances of the problem behavior.

Clinical case study—aggression and SIB

- Case study details-
  - This is a 19 year old male diagnosed with autistic disorder, and a mild intellectual disability. He exhibits protesting with aggression, which includes hitting, biting, hair pulling, and kicking. This appeared to be maintained by various variables, but a common antecedent is interruption ritualistic behaviors and escape/avoidance of demands.
  - He also exhibits self-injurious behavior, hitting himself in the head, leg, chest, and pulling on his teeth. This appears to be maintained by automatic reinforcement.

Video example of prevention procedures

Video example of prevention procedures

Effective Interventions
Extinction

- Extinction – The discontinuing of a reinforcement of a previously reinforced behavior; the primary effect is a decrease in the frequency of the behavior until it reaches a pre-reinforced level or ultimately ceases to occur (Cooper, Heron,& Heward, 2007).
- Extinction burst – an increase in the frequency of responding when an extinction procedure is initially implemented(Cooper, Heron, & Heward, 2007).
- Extinction procedures should be matched with the function of the target behavior. (Richman et al., 1998).
- Side effects of extinction can include extinction bursts and extinction-induced aggression (Iwata & Wallace, 1999).
- Extinction is often a critical component of package treatments.

Effective Interventions
Extinction – Extinction Bursts

- How common are extinction bursts?
- A lit review was conducted by Lerman & Iwata (1995) for 5 years of research articles.
- Extinction burst in this review was defined as an increase in responding during any of the first three treatment sessions above that observed during all of the last five baseline sessions
- 113 data sets met inclusion criteria for the review.
- 50% of cases had extinction as part of a package treatment (DRA, DRO, NCR, graduated extinction, instructional manipulations).
- Of all cases, extinction bursts occurred 24% of the time
- Of extinction-only cases, bursts occurred 36% of the time
- Of treatment package cases, bursts occurred 12% of the time.
- Conclusion → extinction bursts may not be as common as many people think, and may be less likely to occur when extinction is combined with other interventions.

Video Example of Extinction with Extinction burst

Extinction bursts and extinction-induced aggression

- Lerman, Iwata, & Wallace, 1999.
- Review of records over 8 years. 41 data sets (30 participants) were selected based on inclusion criteria:
  - 10 extinction only
  - 9 extinction + other intervention(s)
  - 11 extinction alone AND extinction + other intervention(s)
- SIB was maintained by escape, attention, access, and automatic reinforcement across the 30 participants.
- Results of records review →
  - 39% extinction burst
  - 22% increased aggression
  - 19% both side effects
  - 58% neither side effect

Extinction bursts and extinction-induced aggression, continued

- Extinction burst in 62% of extinction-only treatments
- Extinction burst 15% when extinction + other intervention(s)
- Extinction-induced aggression in 29% of extinction-only treatments
- Extinction-induced aggression 15% when extinction + other intervention(s)

- Differences with function of SIB:
  - Social negative reinforcement – burst 57%, ext-induced agg 23%
  - Social positive reinforcement – burst 23%, ext-induced agg 23%
  - Automatic reinforcement – not associated with either side effect

When combined with other interventions , side effects may be minimized.

Extinction and Behavioral Momentum for SIB

- Zarcone, Iwata, Mazaleski, & Smith (1994)
- N = 2 adults with profound intellectual disability with dangerous SIB
- Treatment conditions:
  - Baseline; SIB = escape
  - High-probability instructional sequence; 3high-*p*, 1 low-*p* instructions; SIB = escape.
  - High-p instructional sequence plus extinction; SIB no longer = escape. Physical guidance to complete task and continued schedule.
- Results → in high-p sequence, SIB was maintained at or above baseline for both subjects. In high-p sequence plus extinction, SIB decreased to near-zero rates for both subjects.

Extinction and DRA for SIB

- Richman, Wasker, Asmus, & Casey, 1998
- Subject = 27-year old woman with profound intellectual disability and autism
- SIB = finger picking
- Escape extinction was evaluated, and consisted of hand-over-hand guided compliance to initiate tasks. Then DRA was added to mand for breaks and access to tangibles
- Sensory extinction was evaluated, and consisted of blocking finger picking, redirecting to a toy and praising independent toy play
- There was also a condition of only DRA, then return to sensory extinction + DRA.
- Results → sensory extinction + DRA immediately suppressed SIB. DRA only led to previous levels of SIB.
- Authors emphasize the importance of identifying the maintaining contingencies for behaviors when determining interventions involving extinction.

Extinction + Visual Schedules + DRO

- Waters, Lerman, & Hovanetz, 2009.
- N = 2 boys with autism, one with aggression only, one with aggression an disruption, specifically during transitions.
- Function = avoidance and access to preferred activities.
- Treatment conditions:
  - Baseline – guided compliance with transitions, problem behavior = escape
  - Visual-schedule only – pictures for current and upcoming activities, carry picture to next activity. Problem behaviors remained at 100% of intervals.
  - Extinction + DRO – same as baseline but 3-step prompting for compliance when problem behavior was displayed. Also, praise offered for transitions without problem behaviors.
- Results → high problem behaviors continued in visual-schedule only condition. DRO + extinction effectively reduced problem behaviors by 61% and 77%. Results were slightly better when visual schedules were *also added* at that point (76% and 89%).

Extinction + DRO

- Mazaleski, Iwata, Vollmer, Zarcone, & Smith (1993).
- N = 3 women with profound intellecutal disability with severe SIB causing tissue damage.
- Function = positive reinforcement for all
- Interventions– various combinations of DRO, reinforcement, extinction, and DRO+reinforcement for each subject
- Results → IN SIB maintained by socially mediated positive reinforcement, the extinction processes of DRO are critical for reduction of those behaviors. DRO alone was not effective.
- It is very important to identifying maintaining variables of SIB when planning intervention.

Specific Severe Behaviors

Encopresis

- Encopresis is a relatively rare condition with potential serious implications for the child and family
- Diagnostic Criteria for Encopresis include (Lukeman, 1977; Radford & Anderson 2003):
  - A. Repeated passage of faeces into inappropriate place whether voluntary or intentional
  - B. At least one such event a month for at least 3 months
  - C. Chronological age is at least 4 years
  - D. The behavior is not due exclusively to the direct physiological effects of a substance (e.g., laxatives) or a general medical condition except through mechanism involving constipation
- Encopresis can present a myriad of problems for the child and family, including poor hygiene, caregiver fatigue, loss of educational and social opportunities, health problems, and low self-esteem for the child.

(Radford & Anderson, 2003)

Encopresis continued

- Radford and Anderson (2003) report minimal research on encopresis, with the vast majority of literature examining faecal constipation and retention.
- The authors stated parents and practitioners point to the following issues as reasons why encopresis may occur:
  - Anxiety
  - Control
  - Previous bad experience
  - Skill performance

Encopresis continued

- Radford and Anderson (2003) recommended tackling encopresis with the following steps:
  - 1) Have a thorough medical check
  - 2) take data—have a clear picture of the child's bowel habit
  - 3) Promote social knowledge and understanding– make clear expectations, consistency, and other teaching methods (e.g., social stories)
  - 4) teaching the child to sit on the toilet and have a positive experience
  - 5) BM's on the toilet—reinforcement, regular schedule
  - 6) Maintain regular BM's on the toilet utilizing intermittent reinforcement

Pica

- Pica is the ingestion of non-food substances and is a significant problem for individual with intellectual disabilities.
- The risk of death associated with pica may be higher than that of other forms of self-injurious behavior (Foxx & Livesay, 1984; McLoughlin, 1988; Piazza et al., 1998)
- Other potential risks include:
  - Intestinal blockages
  - Parasites
  - Surgery to remove objects
  - Poisoning
- Pica has previously been treated with intrusive interventions, such as aromatic ammonia and lemon juice, physical restraint, protective devices, and overcorrection

Pica continued

- Hagopian, Rooker, and Rolider (2011) conducted a literature review examining empirically supported treatments for pica in individuals with intellectual disabilities
  - They found that behavioral treatment is a *well-established* treatment for pica
  - Treatments combining reinforcement and response reduction procedures exceed criteria to be designated as *well established*.
  - Generally, more studies relied on manipulating the environment to limit the opportunities to engage in pica and by applying punishment
  - Contemporary behavior treatment aims to:
    - Bring eating under more appropriate stimulus control
    - Provide alternative and competing sources of stimulation (access to food)
    - Establishing alternative responses once the individuals contact non-edible items

Pica continued

Hagopian and colleagues (2011) discussed the following, respectively:

- Antecedent interventions include:
  - Noncontingent reinforcement (NCR) (e.g., Falcomata, Roane, & Pabico, 2007)
  - Response effort (e.g., Piazza, Roane, Keeney, Boney, & Abt, 2002)
- Interventions manipulating consequences include:
  - Differential reinforcement (e.g., Kern, Starosta, & Adelman, 2006)
  - Response block/interruption (e.g., McCord, Grosser, Iwata, & Powers, 2005)
  - Punishment (e.g., Ferreri, Tamm, & Wier, 2006)

- Antecedent interventions and interventions manipulating consequences can be combined to produce effective treatment and signficiant reductions in pica (Hagopian et al., 2011)

ASD and Suicide (Raja et al., 2011)

- In a study of adults in a hospital psychiatric intensive care unit and private practice, 26 clients with ASD were identified.
- Likely to be under-reported:
  - Low rates of suicidal behavior in youth with ASD
  - Under-diagnosing of ASDs in adults

Suicide Study Findings

- 2 committed suicide :
  - Client 1 →PDD-NOS, schizophrenia, alcohol abuse; IQ=96; jumped off bridge
  - Client 2 → Asperger's, schizophrenia; IQ=75; disembowelment
- 2 suicide attempters:
  - ASD, mood disorder with psychotic signs, IQ=103, 2 attempts of cutting and injecting air into veins
  - ASD, mood disorder with psychotic signs, IQ=80, cut face and cut off finger with razor.
- 8 with suicidal ideation
- 2 with one relative who had attempted suicide
- 2 with 1+ relatives who had committed suicide

ASD and suicide, continued

- Anxiety is more frequent in those patients with suicidality
- In their lifetimes, 21/26 patients presented delusions and 19/26 presented hallucinations
- This was first study to explore this area and find the level of information
- Suicidal behavior is highly prevalent in patients with ASDs attending psychiatric services for adults
- Those patients who completed suicides were not seen to have been at risk
- Symptoms of ASD lead to difficulty in psychiatric evaluation
- Absence of previous attempts should not minimize concerns about risk
- Ratio of suicide/suicide attempt is high

Trichotillomania – Hair pulling
Look at the function

- As with any other severe problem behavior, you must identify the function in order to develop an appropriate intervention
- Often thought to be automatically reinforced, but could be in various ways.
- Many assessment approaches consider internal states, which we cannot measure or verify (Rapp et al., 1999).
- After functional analysis, Rapp et al. explored the sensory variables involved in their subject's hair pulling. Experimental conditions → alone, free hair, glove. Results indicated that hair pulling and hair manipulation were maintained by sensory-perceptual reinforcement, as she demonstrated near-zero and zero levels of hair pulling when hair was freely accessible.
- Intervention should be function-based, rather than topography-based for those behaviors that are not maintained by socially mediated reinforcement.

Clinical Case Studies

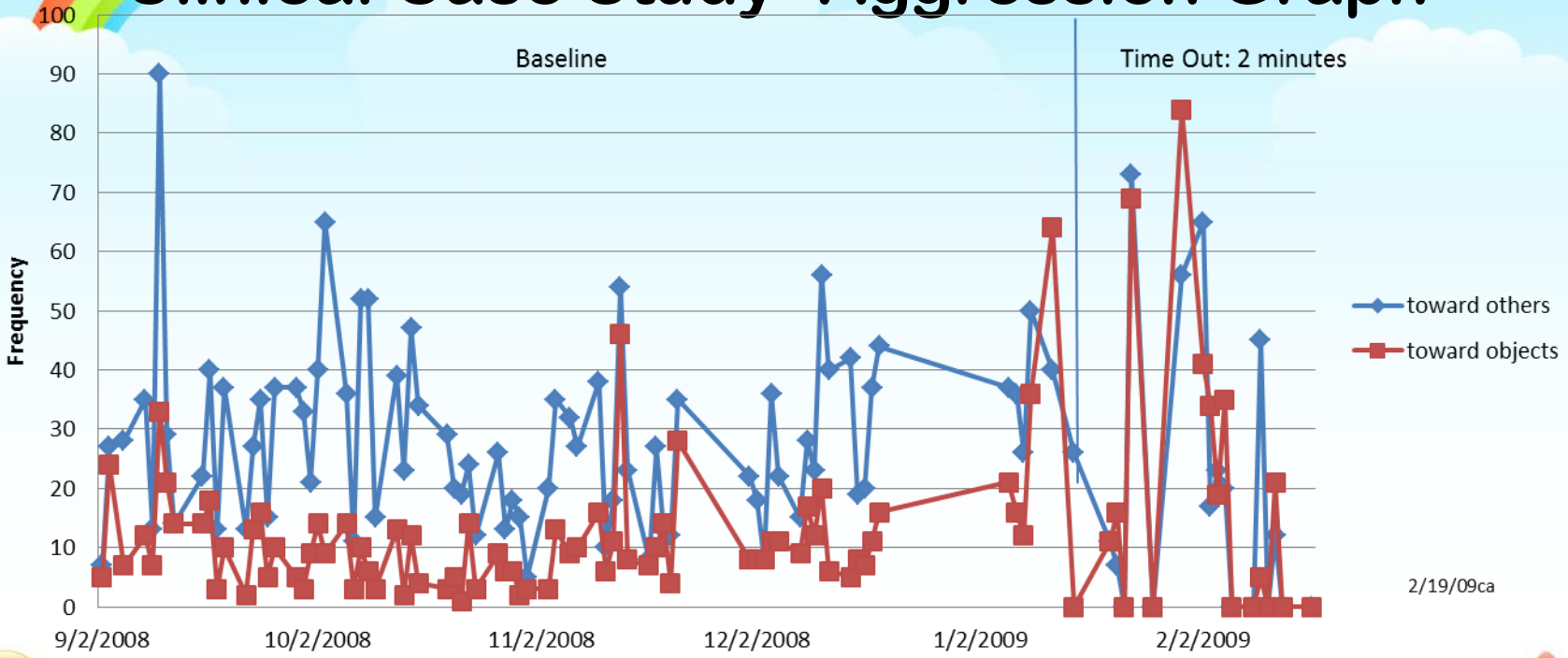
Aggression towards others

- Aggression towards others can be a significant problem in people with autism and other disabilities.
- Kanne & Mazurek (2011) reported that, when polled, over two thirds of parents stated that their child with autism had exhibited aggression toward another person and that 56% continue to aggress toward others.
- This same study identified risk factors for aggressive responses and suggested that the following risk factors were key:
  - Aggression is more prevalent in younger people
  - Early language delays
  - Higher family income
  - Social and communication problems

Clinical Case Study- Severe Aggression and Property Destruction

- Case study details-
  - This is an 8 year old male diagnosed with autistic disorder.
  - He exhibits severe aggression toward others, including head butting, biting, scratching, hitting, and kicking- often these occur in the middle of a tantrum, but sometimes there seems to be no antecedent.
  - He exhibits property destruction in the form of ripping instructional materials, throwing objects and purposefully breaking items.
- Intervention-
  - This consumer was put on a supportive behavior plan that included following a daily schedule, consistency in commands, follow through on all directives, and high rates of reinforcement on a variable 30 second schedule. Other interventions included on the support plan were DRO, neutral redirection, and a non-exclusionary time-out for aggression toward others outside of programming

Clinical Case Study- Aggression Graph



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Clinical Case Study- Aggression, cont.

- This consumer was unable to significantly reduce his rate of aggressive behavior with the intervention.
- Other factors to consider:
  - Parents inconsistent with medication administration
  - There was question whether consumer completely understood the contingency
  - Possible co-morbid diagnoses

Rumination

- Regurgitation of previously-ingested food, re-chewing and re-swallowing it.
- Can be due to a medical issue or can be an operant behavior.
- Often maintained by automatic reinforcement.
- Difficult to detect – can have an impact on interobserver agreement measures.
- Some interventions in recent literature:
- Flavor spray (Register et al., 2009)
- Chewing gum (Rhine & Tarbox, 2009)
- Noncontingent juice (Kliebert & Tiger, 2011)
- Supplemental feeding (Lyons et al., 2007)

Rumination – considerations in treatment

- Expense of replacement items (flavor spray, gum inexpensive)
- Caloric intake
- Difficulty in monitoring baseline and progress
- Plan to thin the interval schedule as needed and appropriate. It is not feasible to maintain a schedule of 30 sec all day, for example.

Clinical Case Study- Rumination

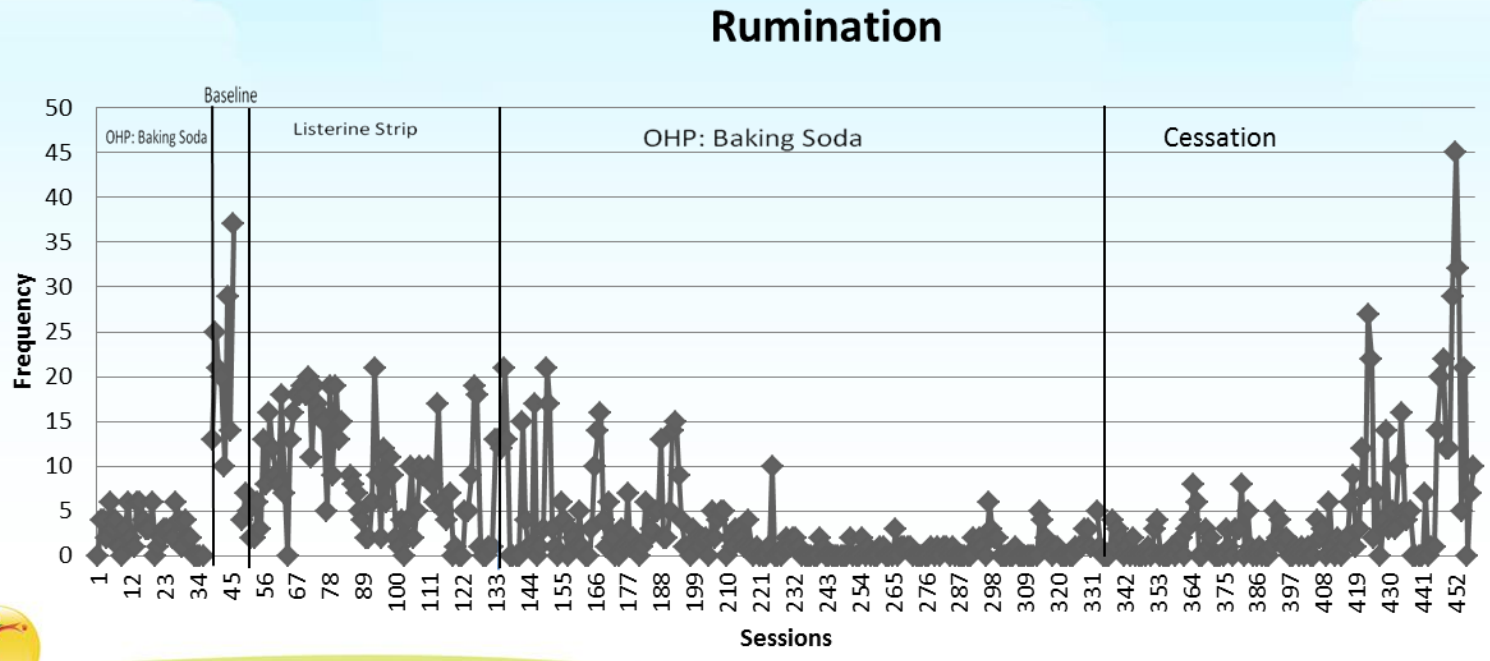
- Case Study Details
  - The consumer is a 10 year old male diagnosed with autism and moderate intellectual disability
  - The consumer engages in rumination of both liquids and solids up to hundreds of times per day. This activity was affecting his health, producing low energy and lack of proper growth. The regurgitation was particularly prevalent after meals and when the consumer was ill.
  - Other procedures attempted were satiation procedures (giving the consumer starchy foods after meals), and liquid rescheduling (the consumer does not consumer liquids with meals)
  - Intervention- the consumer was given an oral hygiene procedure where he was given a Listerine strip and, when that did not reduce the behavior enough, tooth brushing with baking soda when he ruminated.

Clinical Case Study- Rumination, cont.

- Case Study Details cont.

  - The consumer was able to reduce his instances of rumination to near zero levels with the oral hygiene procedure. As shown by the graph, when the oral hygiene procedure was discontinued, the consumer's instances of rumination increased significantly.

Treatment of Rumination using Oral Hygiene Procedures- Listerine strips and brushing with baking soda



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Clinical Case Study- Protest with Aggression, Spitting, & Blowing/smearing nasal mucus

- Case study details-

  - This is an 14 year old male diagnosed with autistic disorder.

  - He exhibits severe aggression toward others, including kicking, hitting, pinching, grabbing and slamming into walls. He also exhibits aggression towards objects, such as kicking holes in the wall, throwing and knocking over furniture

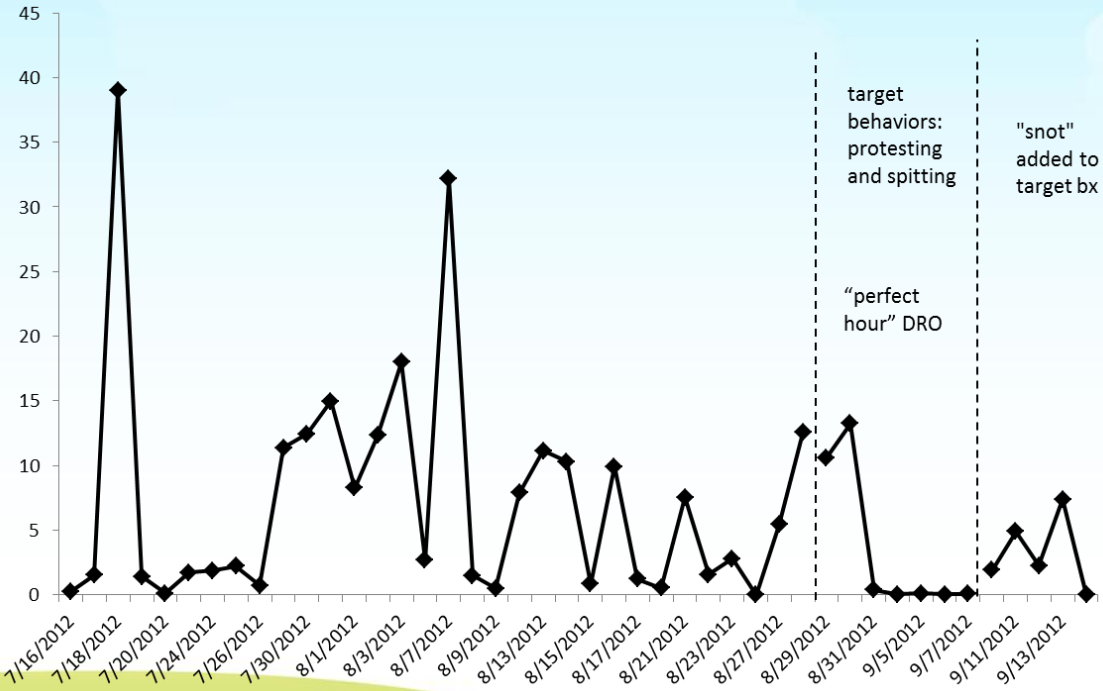
  - He exhibits spitting and blowing nasal mucus onto staff and objects and furniture in classroom.

  -These behaviors appear to be maintained by denied access to preferred items, escape/avoidance of tasks, and attention-seeking

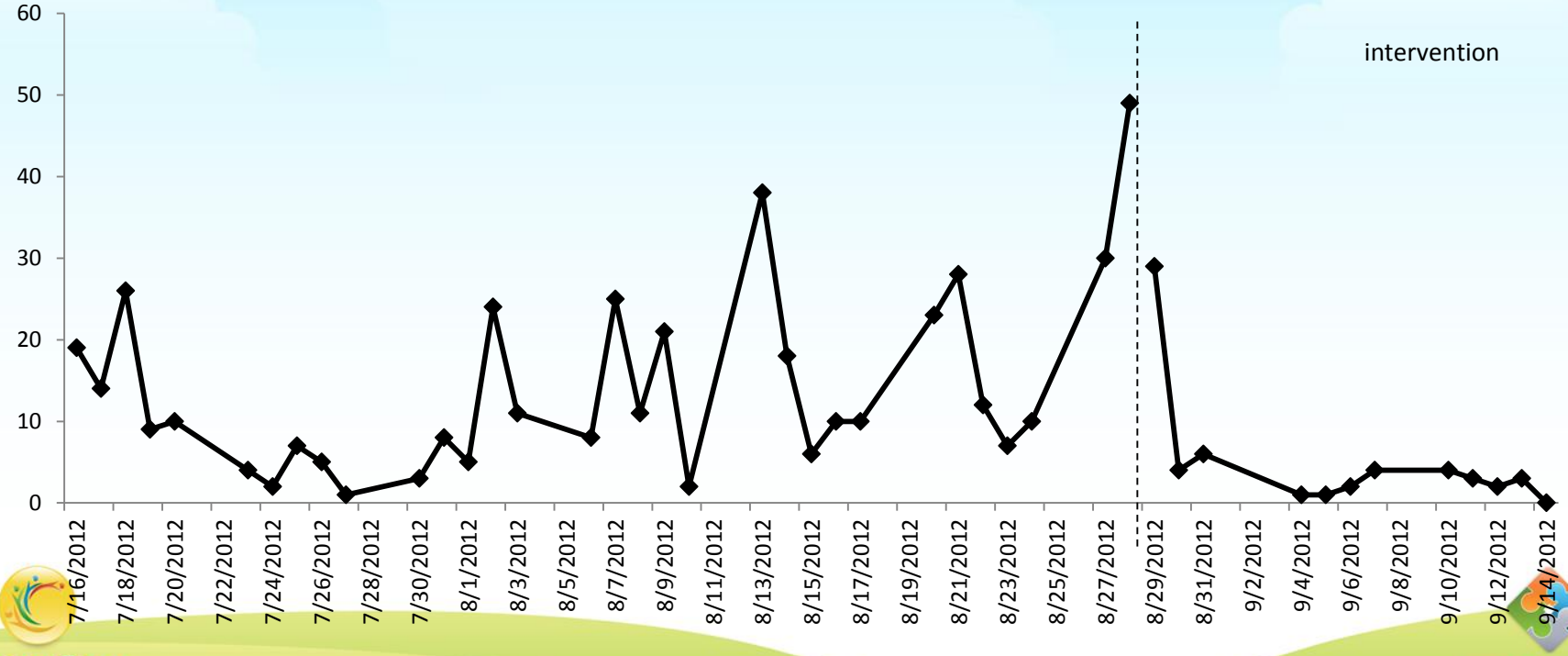
- Intervention-

  - This consumer was put on a supportive behavior plan that included following a visual schedule, a 60 minute DRO or "perfect hour" criterion, restitution, teaching replacement behaviors (e.g., "no thanks", "help me", "play with me"), and neutral redirection.

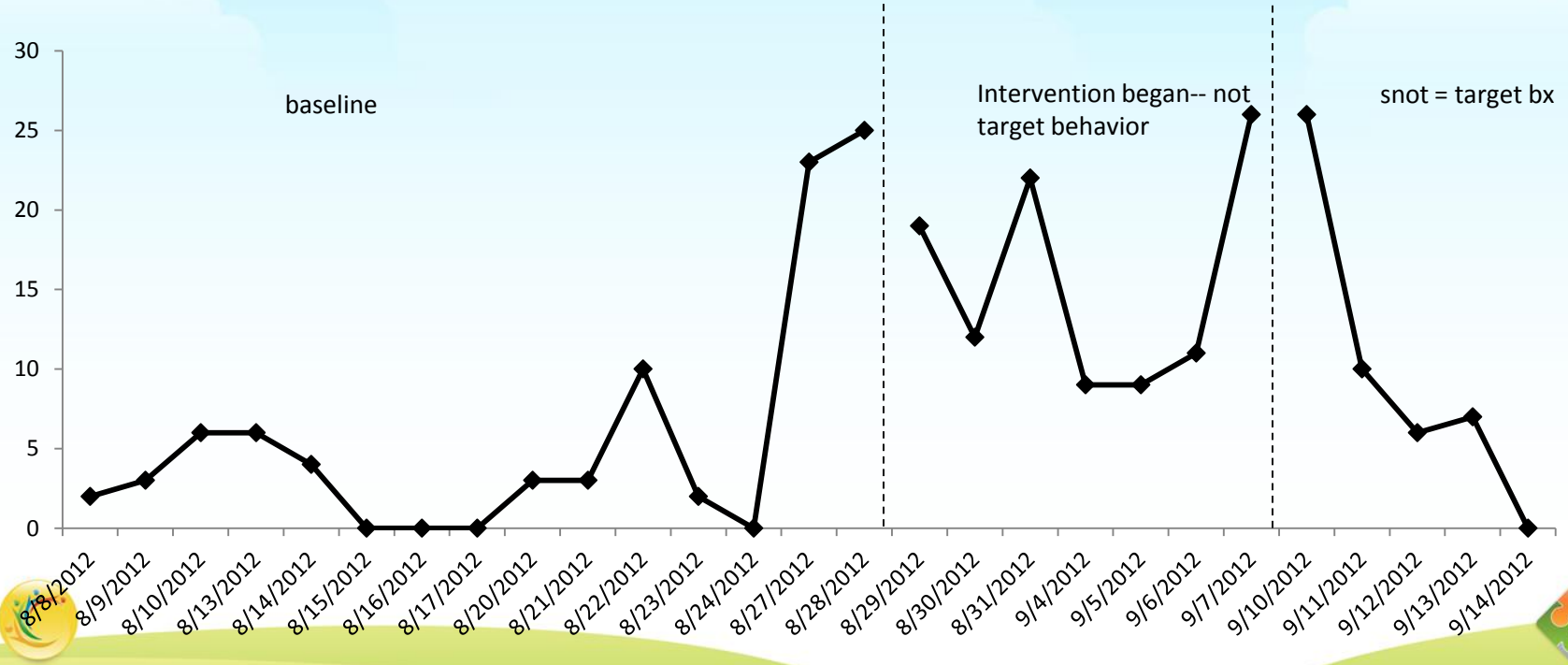
Clinical Case Study—Protest with Aggression Graph



Clinical Case Study—Spitting graph



Clinical Case Study—Nasal mucus graph



Clinical Case Study- Protest with Aggression, Spitting, & Blowing/smearing nasal mucus con't

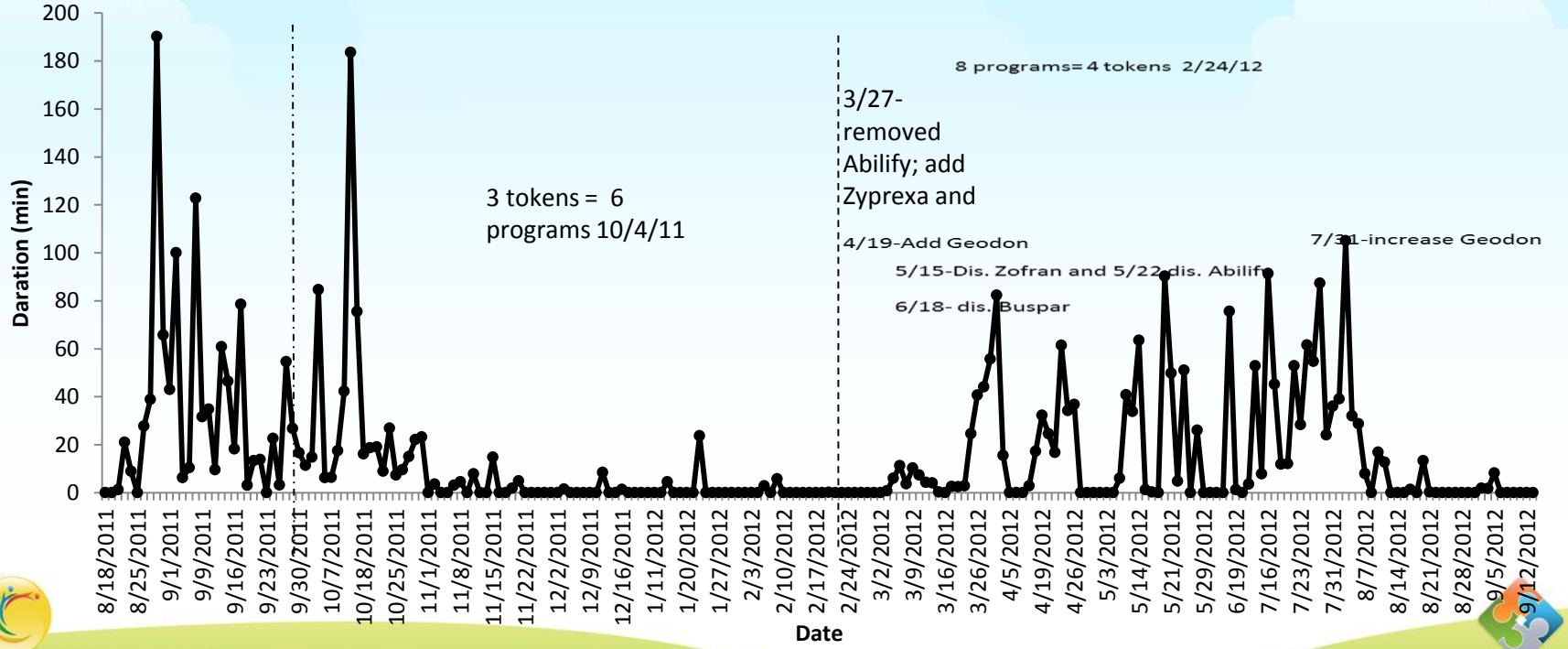
- The intervention was successful at reducing protesting with aggression, spitting, and blowing/smearing nasal mucus.
- Variables hypothesized to have played a key role: teaching appropriate replacement behaviors, a consistent schedule of reinforcement, loss of preferred items when engaged in target behaviors, and treatment integrity
- Parents anecdotally report better behavior at home
- Generalization and maintenance has not yet known

Clinical Case Study- Protest with Aggression and Inappropriate sexual behavior

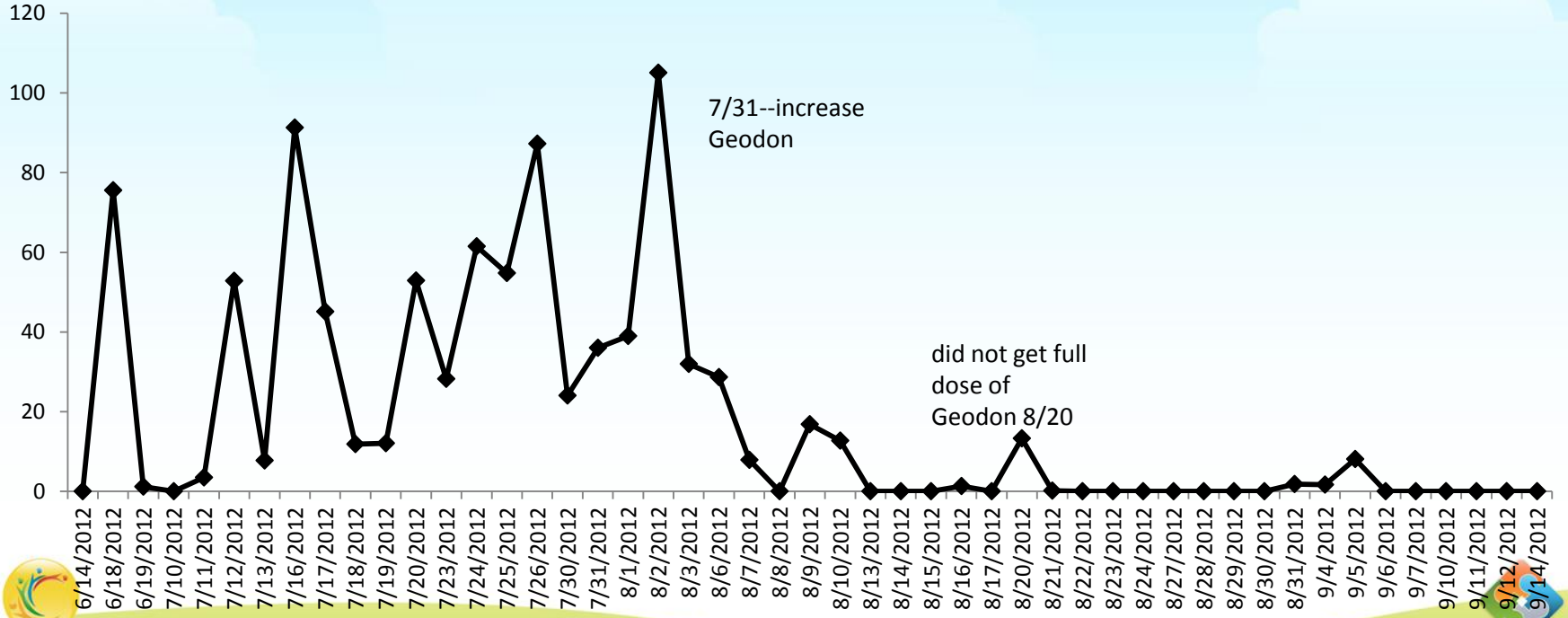
- Case study details-
  - This is an 13 year old male diagnosed with autistic disorder, a severe intellectual disability, bipolar disorder, and obsessive compulsive disorder.
  - He exhibited protesting with aggression, which included hitting, biting, hair pulling, kicking, property destruction, and self-injurious behavior. This appeared to be maintained by various variables, but a common antecedent was interruption ritualistic behaviors.
  - He exhibited inappropriate sexual behavior, which included touching himself repeatedly overtop of his clothing. This appeared to be maintained by automatic reinforcement

- Intervention-
  - Several different interventions were applied to protesting with aggression which included token economy systems, utilizing a visual schedule and timer, and neutral redirection to tasks. Physically blocking and manually blocking with restrictive clothing were tried to decrease inappropriate touching. The family worked closely with a psychiatrist in addition.

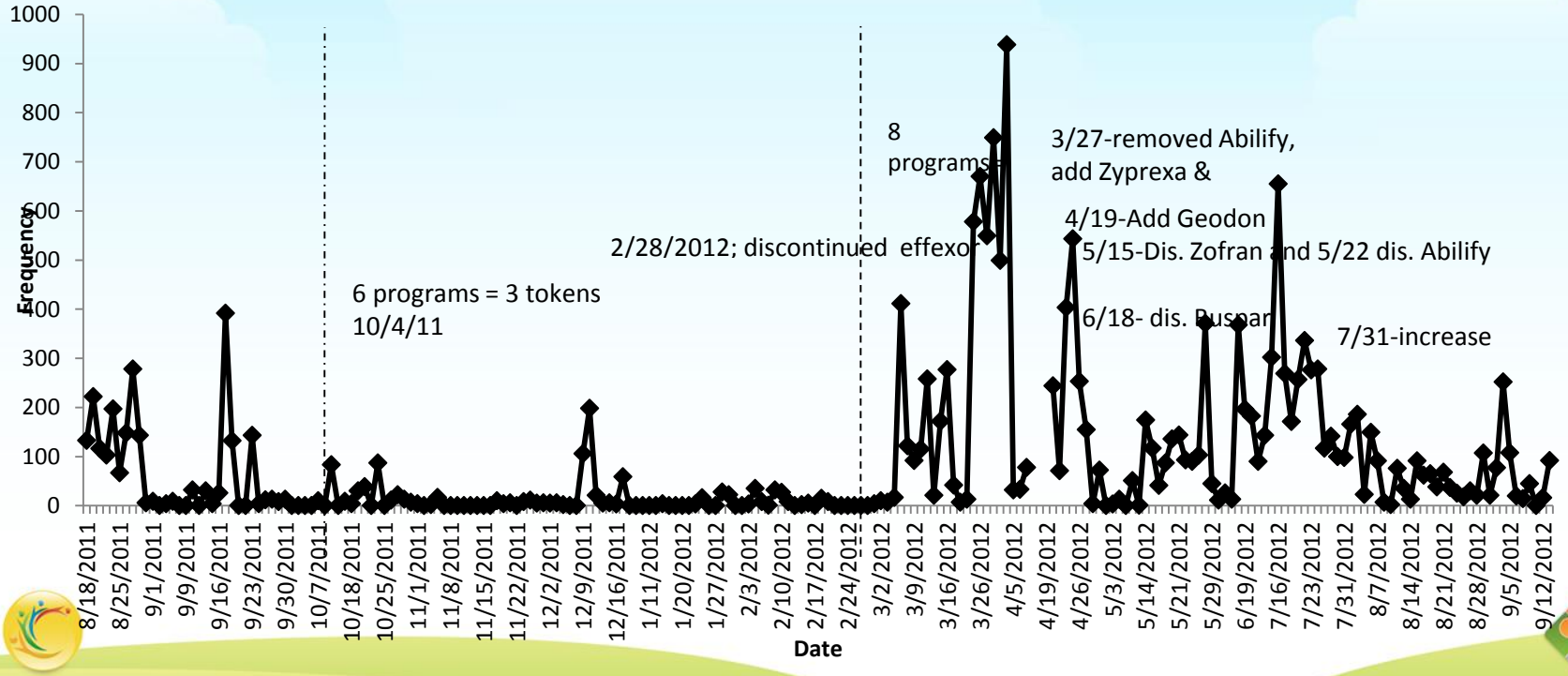
Clinical Case Study- Protest with Aggression graph



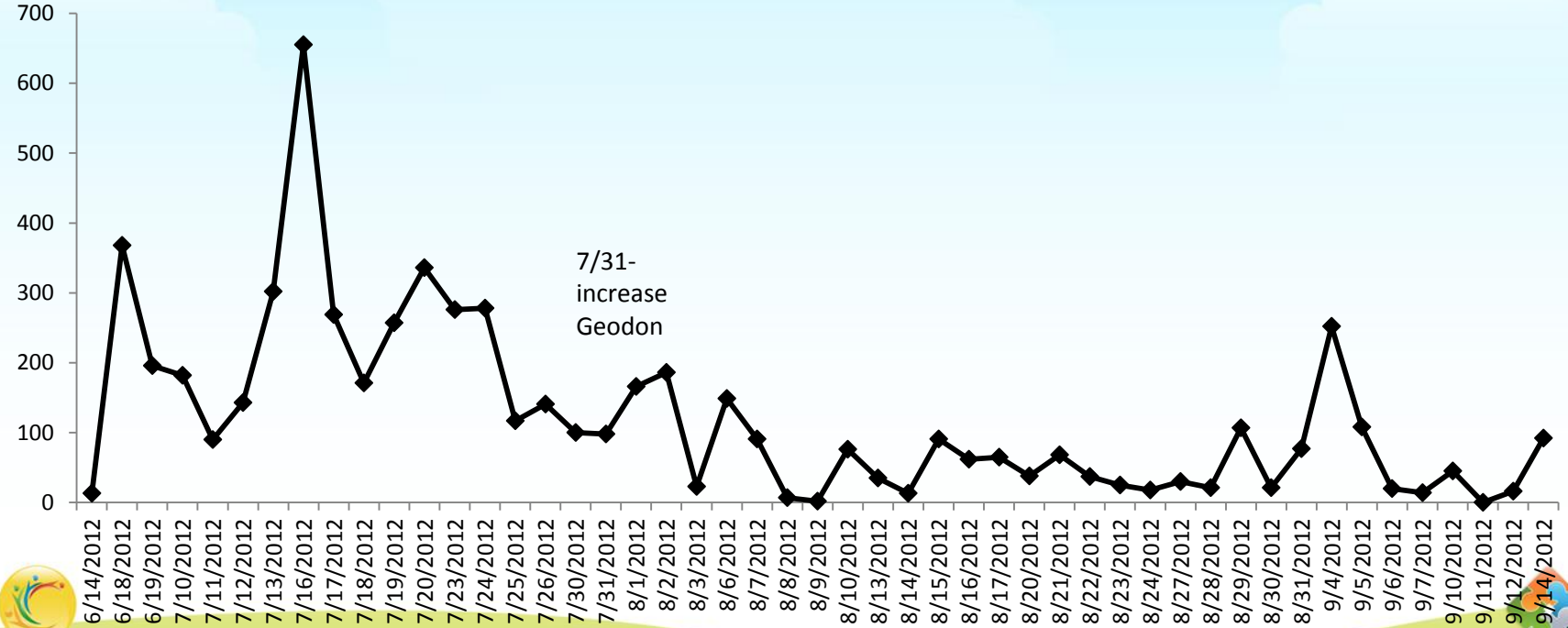
Clinical Case Study—Protest with Aggression graph



Clinical Case Study—Inappropriate sexual behavior graph



Clinical Case Study—Inappropriate sexual behavior graph



Clinical Case Study- Protest with Aggression and Inappropriate sexual behavior

- Protesting with aggression and inappropriate sexual behavior were reduced, but not eliminated
- Factors to consider:
  - The number of medication changes over the last year
  - Co-morbid diagnoses
  - Restrictive interventions

Closing Thoughts

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