Managing Problem Behavior in the Home and Community Settings

Amiris Dipuglia
PaTTAN Autism Initiative

National Autism Conference, 2019
Goals of this presentation

• Identify maladaptive/problem behaviors
• Discuss some “first steps” to take
• Discuss how to determine why maladaptive/problem behaviors occur
• Review some effective treatment procedures based on the function of behavior
• Review data collection and graphing
• Provide you with confidence to provide effective treatment to even the most severe child to improve the quality of their life and their family’s life!
• Aggression and self injury, along with other problem behaviors, are common in individuals who present Autism Spectrum Disorders and other developmental disorders.

• There is much that is not fully understood about these behavior patterns nor are there any easy answers in many cases.

• There are, however, systematic approaches that are powerful and are evidence based.

• The child, family, and staff’s safety is ALWAYS first PRIORITY.

• Solving these problems involves careful attention to detail, teamwork, and persistence and patience.
Don’t blame yourself!

• There are many factors that effect behavior
• We just do what we know (what we have learned: what has worked to make things better for us)
• Working to solve problems involve caring deeply enough to do something different
  AND
• Remaining calm enough to be objective
What is this thing called “Behavior”? 

- Behavior is what the person does (Actions/movement) 
  - Observable 
  - Measureable 
- Behavior does not occur in a vacuum: we always do things in an environment 
- Behavior may be hard to predict, but making it more predictable is always a good first step 
- “good” or “bad”: it’s just what a person does
Don’t blame the child

• Children do what they know (what they have learned)
• We all do what “works” (makes things better for us)
• What works is determined by a relationship between what we do and how the world responds
All behavior follows a few basic rules: The ABCs of behavior...

• Antecedent
• Behavior
• Consequence

• What happens before and after a behavior allows prediction
  • If we can predict we can get some control
### Operant Analysis (ABCs of Behavior)

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivating Operation (MO)</strong></td>
<td><strong>Response</strong></td>
<td><strong>Reinforcement</strong></td>
</tr>
<tr>
<td>• Value altering</td>
<td>What the student does</td>
<td>Increases future probability of behavior</td>
</tr>
<tr>
<td>• Behavior altering</td>
<td></td>
<td>• Socially Mediated</td>
</tr>
<tr>
<td><strong>Discriminative Stimulus (SP)</strong></td>
<td></td>
<td>• Automatic</td>
</tr>
<tr>
<td>Signals availability of reinforcement</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prompts</strong></td>
<td><strong>Observable</strong></td>
<td><strong>Positive</strong></td>
</tr>
<tr>
<td>Additional things we do to ensure behavior will occur</td>
<td><strong>Measurable</strong></td>
<td><strong>Negative</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Continuous</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intermittent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ratio:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fixed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Varied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fixed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Varied</td>
</tr>
<tr>
<td></td>
<td>Variable Ratio Schedule of Reinforcement (VR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reinforcement occurs for an average number of responses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Makes responding strong and steady</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• It is unpredictable</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Punishment:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Decreases future probability of behavior</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Extinction:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reinforcement stops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behavior fades</td>
<td></td>
</tr>
</tbody>
</table>
Making Behavior More Predictable

• Requires understanding of patterns of responses
• Across time and conditions
• Patterns are not always easy to see
• Requires systematic observation
  • Count or measure behavior
  • Relate the behavior to events
Brian Iwata: 3 Critical Components of Effective Behavior Plans

• Reduce motivation for problem behavior
  • Make it so they don’t want to do it!

• Teach a skill that is appropriate and accomplishes the same thing
  • Make it so they don’t need to do it!

• Use extinction if problem behavior occurs
  • Make doing it ineffective and inefficient
All three steps are based on “Function”

- **Function** = reinforcement
- **Reinforcement**: a consequence that increases the future probability of behavior
  - Both positive and negative reinforcement increase behavior
  - Not all consequences are reinforcers (Brian Iwata: the sneeze effect)
Causes of behavior

- We “behave” or do things to change our immediate world
- How things change as a result of what we do, make it more or less likely that we will do the same thing in the future
- When things get better, we do what happened just before more often
- If things get worse, we do whatever we did just before less often
### Functions

<table>
<thead>
<tr>
<th>Function in Common Terms</th>
<th>Function in Technical Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>Socially mediated positive reinforcement</td>
</tr>
<tr>
<td>Tangibles</td>
<td>Socially mediated positive reinforcement</td>
</tr>
<tr>
<td>Escape</td>
<td>Socially mediated negative reinforcement</td>
</tr>
<tr>
<td>Self stimulation</td>
<td>Automatic positive reinforcement</td>
</tr>
<tr>
<td>Pain attenuation</td>
<td>Automatic negative reinforcement</td>
</tr>
</tbody>
</table>
What to observe and how to observe

• If the problem behavior is worth fretting about; it is worth doing something about
• If it is dangerous, something must be done
• Define it: observable and measurable
• Count it: how often does it occur? When does it occur? (clicker/timer)
• What are we doing before problem behavior occurs? (alone, demand, block access)
• What do we do after problem behavior occurs? (ignore, react, give something, sooth)
Things ("variables") that have an effect on our behavior

- Our physiology: genes, brain, body, hormones, etc.
- Our culture: what other people around us value and respond to
- Our own history of doing things and how things change as a result of what we do: this is our learning history
- None of these variables work in isolation
- There is not much we can do about physiology and culture
3 components of an effective plan

- Motivation
  - Alter the value of the reinforcer
- Teach alternative skill
  - Very doable in most cases if you know what to teach
- Extinction: reduce effectiveness of behavior
  - May be a challenge and have secondary effects
  - May also be absolutely necessary
• If we look at motivation as resulting from changes in the environment, we can go about altering motivation.

• Motivation:
  • Alters the value of a reinforcer (learned and unlearned)
  • Changes the frequency of behavior
The role of certain physical treatments

- Diet, sleep, medication: serve to alter motivation
- They do not, in and of themselves, reduce problem behavior
A side note on working with medical providers

- Diet, psychopharmacological, and other medical treatments should be monitored by physicians AND
- Should be informed by measures of behavior (such as daily counts of how often behavior occurs) from school, home, and other settings
- Verbal reports are notoriously unreliable!
- Medical interventions should work in tandem with interventions to teach new behaviors
Enrich the Environment

- Engaged children have little reason to emit problem behavior
- Study what children like
- Keep children busy
Teaching is the way to go!

- Brian Iwata second requirement is to teach a competing behavior
- Antecedent interventions: an ounce of prevention is worth a pound of cure
- Can’t do something unless you know how
- Even if you do know how, you might not do it
- No one sits in the fire very long (if things get worse, we try to escape)
- The playground dilemma (leaving the playground occurs seldomly)
Don’t blame the child

- Children do what they know (what they have learned)
- We all do what “works” (contacts reinforcement)
- What works is determined by a relationship between what we do and how the world responds
Don’t blame yourself

• There are many factors that have an effect on behavior
• We just do what we know (what we have learned)
• Working to solve problems involves caring deeply enough to do something different
• ALWAYS...Remaining calm enough to be objective
General Ways to make behavior better through teaching without complex plans

- Adults as signals that suggest possible outcomes (due to pairing with reinforcement)
  - Eye contact
  - Tone of voice
  - Arm movements
  - Other directional movements
  - Plus some ideas, such as “ready hands’ (to be detailed a little later)

- How to talk with children (or not talk as the case may be!)
How to talk with children

• Say what you want them to do
• Do not call undue attention to problem behavior
• Talk more about things you want to see happen and less when problem behavior occurs
• Talk is cheap: be sure that you back up any statements
• Do not say things you are not going to back up! (Don’t threaten)
• Too many demands lead to avoidance!
• Avoid denigrating, blaming child, whining
• Behavior specific praise and feedback
• Tone of voice
Some things that may not work

• “Warnings” or advanced notice (see work of David Wilder)
• Stating the rationale for the transition or direction
• Labeling the problem behavior
• “I” statements: “I don’t like it when…”
• Stating why you think the behavior is occurring (“you’re doing this to be mean”; “you just do this to drive me crazy”, etc.)
• Only works with children who have verbal skills and only if your reasons are backed by facts
  • Complex relations between words and events
  • “be good” example

• However: reasoning will be important for children and teens who can “reason” (verbally problem solve)
  • Involves rule governed behavior: must be backed up!
  • Explicit directions: state contingencies in place
  • Peers more important than adults
  • Importance of social skills instruction
• Attributing “meltdown” behavior (temper tantrums, property destruction, screaming, crying, “storming”, etc.) to sensory function (automatic negative reinforcement) can be tricky territory
• A problem: everything is sensory
• Fishing out which stimuli evoke meltdowns may be difficult
• Danger of reinforcing unwanted behaviors
• Simpler answers may be more likely:
  • want something
  • want to escape something
  • missing some skill set
• Sensory sensitivity may serve as a motivation: it alters the value of other reinforcers
• This is not to say that students with autism do not respond differently to various stimuli than most people
Good instruction

- Explicit
  - Structured enough to allow easy learning
  - Loose enough to allow flexible responding
- Builds and plans for generalization
- Active responding
- Teach skills for the real world
What to Teach?

Common Issues

- Use of promise reinforcer
- Mand
- Cooperation
- Ready hands
- Wait
- Give up reinforcer
- Interruption transition
- Accepting “no”
Using a Promise Reinforcer

• Purpose is to offer a potential reinforcer when the learner is presented with a situation that has historically lead to engagement in maladaptive behavior in an attempt to off-set the value of engaging in maladaptive behavior or decrease the severity of the maladaptive behavior.

• Teaching Procedure
  • Identify a variety of potential reinforcer – food is easiest and most consistent
  • A few seconds prior to delivering the demand to transition/interrupt/deny access to/etc. hold out the item so the learner can see it is available
  • Present the demand to transition/interrupt/deny access/etc. while holding out the reinforcer
  • If the learner complies/accepts without engaging in maladaptive behavior or engages in less severe problem behavior deliver the ‘promised’ reinforcer
Mand Training

- Most critical of the techniques
- Only verbal operant that directly benefits the speaker
- Most effective replacement behavior for maladaptive behavior
- To teach mands it is mandatory to identify many potential things that can serve as reinforcers
- Limited pool of reinforcers? Then priority should be conditioning more!!
Teach and Increase Likelihood of Cooperation

- **Teach cooperation through positive reinforcement techniques**
- **Use effective instruction:**
  - Program competing reinforcers
  - Errorless instruction
  - Pair instruction with positive reinforcement
  - Fade in demands gradually (number and effort)
  - Fast paced instruction (short time between trials)
  - Mix and vary instructional demands
  - Choice making (limit use at this level; use strategically to deepen of motivation)
  - Neutralizing routines
  - Intersperse easy/hard tasks
  - Task novelty
  - Session duration (keep short)
  - Immediate delivery of reinforcement
Ready Hands

- **Approach behavior** must first be established
- Hands folded with **interlocked fingers** (this often needs to be adapted to **one hand on top of the other**)
- Teach as listener response using **imitative prompt**
- Initially, use promise reinforcer
- Intermittently reinforce when established
- Use judiciously: not every trial or run-through
Wait

- Wait program
  - Ready hands is what the child does while they wait
  - Brief pause before delivering reinforcer, may use hand up to signal wait
  - Again use only intermittently
  - Can interject easy trials
  - Consider the value of what student is waiting for
• Incorporates process of promise reinforcer
• Teach the child to trade one good thing for another
• Can be initiated fairly early
• Formal protocol available on Resource File
  • May not need a formal skill tracking sheet if established early
Considerations when teaching Giving Up Reinforcers

- Practice often, but \textbf{not every time}
- Offset trade with a promise reinforcer
- \textbf{Don’t start with most valuable reinforcer}
- If trade is made, at first, keep the interval that the reinforcer is not available \textbf{short}
- If trade is not made, run error correction with no promise
- Remember \textit{transfer trials}
Interruption/Transition Protocol

- Determine the demand to transition to a less reinforcing activity that you will place on the learner.
- Identify and have prepared in advance the Promise Reinforcers to be used in the interruption transition training.
- Present the Promise Reinforcer before you give the direction to transition.
- Present the direction to transition in clear direct wording.
- If the learner successfully complies, give him the Promised Reinforcer and have him return to the preferred activity. (You can deliver additional reinforcement when he returns to the activity).
If the learner engages in problem behavior as soon as you request the transition, do not remove the demand or allow access to the preferred item or activity the child is being asked to give up. In addition, remove the Promised Reinforcer. Instead, continue to present the demand to the learner until compliance with the demand is demonstrated while maintaining safety of student and others. Once at the transitioned area, continue to place easy demands until you gain instructional control, and then place the demand to go back to the original area. Do not give additional reinforcement upon return to the original location when problem behavior has occurred.

- Physically block self-injurious (SIB), aggressive, and property destructive behaviors.

- Allow him there for a few seconds and interrupt again using the original procedure and do not place extra demands unless problem behaviors occur. Differentially reinforce the better transition if and when it occurs.

- As the learner accomplishes successful transitions, delay the interval that he must wait to go back to the original activity. (unless following a specific schedule)

- Record the learner’s responses on the Interruption/transition data sheet.
• As you say NO, bring up a reinforcer or offer another activity by saying “but you can have or do this reinforcer instead”.

• If the student does not engage in problem behavior, deliver the reinforcer. If the student does engage in problem behavior, put the reinforcer away and withdraw the other offer and do not attend to the problem behavior.

• Instead redirect the student to a neutral activity using prompts as needed.

• In the event that you had to redirect to a neutral activity, make sure student complies with at least 2-3 tasks without problem behavior before you deliver reinforcement. At this point DO NOT deliver the reinforcer that was denied when the problem behavior occurred and make sure reinforcement is less that if the student would have accepted the alternative.
Teaching “Accepting no”

- Physically block self-injurious (SIB), aggressive, and property destructive behaviors.
- Avoid running too many trials in which you deny the reinforcer in a row. In other words, make sure you intersperse trials in which you do in fact deliver the reinforcer requested.
- For some students, it may be necessary to sequence steps carefully so that you “Set them up for success”. Some of the considerations include the value of the reinforcer being denied, value of the reinforcer being offered as the alternative, number of trials in the day in which reinforcers are denied, and percent of trials in which an alternative is offered. Example:
  - Step 1: Deny less reinforcing items while offering a more reinforcing item
  - Step 2: Deny a reinforcing item while offering a reinforcer that is somewhat equal in value.
  - Step 3: Deny a reinforcing item while offering a less reinforcing item
  - Step 4: Deny reinforcing items and offer an alternative for only 80% of the trials
  - Step 5: Deny reinforcing items and offer an alternative for only 50% of the trials
  - Step 6: Deny reinforcing items and offer an alternative for only 30% of
Step 3: What if problem behavior occurs?

- Use of extinction
- Things get worse before they get better
Effective use of extinction

• Response Interruption and Redirection
• Time out
  • Count and mand
  • Duration of time out issue
  • Return to opportunity to access reinforcement

• Escape Extinction
  • Safety issues
  • Inadvertent problems
  • Reinforcing early in chain if needed
Be careful to not be reinforced for ending problem behavior. Instructors can usually feel good by ending problem behavior by reinforcing it, but short term gain will make for long term pain (both for the student and the instructor).

There are exceptions, however.

Immediately ending problem behavior may mean you have reinforced it.
Sometimes problem behavior is quite serious

- SIB
- Aggression
- Property destruction
- Elopement
• Positive rather than negative (freedom from aversive and demeaning treatment). Positive reinforcement in PBS.
• Research based practice
• Functional assessment
• Least intrusive requirement
• Restraints last resort (restraint = physical force and restraining free movement; except h/h and hold w/out force to calm, certain OT/PT devices, seat belts, safety harness)
• Restraints only used when clear and present danger and only when less intrusive measures fail
• Parental notice of restraint use; IEP w/in 10 days unless parent waives
• Only in IEP if certain conditions met (part of PBSP, part of teaching alternative skills, staff trained; plan for eliminating use.)
• No Prone restraints
“Aggression has been found to be more common among individuals with ID than among those in the general population (Holden & Gitleson, 2006) with an added risk factor for aggression for those individuals with a dual diagnosis of ASD and ID (Hill & Fumis, 2006; McClintock, Hall, & Oliver, 2003).”

“The rate at which individuals with ASD present with ID has been estimated at 70% (Fombonne, 1999), and within these populations aggression is one of the behaviors most likely to be identified for intervention (Didden, Duker, & Korzilius, 1997; Homer, Carr, Strain, Todd, & Reed, 2002).”

both from Brosnan & Healy, 2011
What causes aggression and self-injurious behaviors?

- Aggression and self injury are behaviors, they are things people do.
- Aggression and self injury are purposeful; they serve to alter ongoing circumstances.
- The history of the individual coupled with biological/neurological variables alter the probability of problem behavior.
- Main classes of circumstances that alter the frequency of these behaviors:
  - Attention
  - Tangibles
  - Escape
  - Self-stimulation
  - Pain attenuation
Steps in Addressing Problem Behavior

- Functional Analysis
- Baseline frequency or duration data
- Functional Hypothesis Statement/statements
- Behavior Plan (designed by all identified functions)
  - Address motivation
  - Teach competing skill
  - Adjust consequences: extinction and other methods to insure behavior is inefficient and ineffective
- Implement with fidelity
- Monitor plan (fidelity checklists)
- Adjust plan based on data/effectiveness
  - Both for motivation, instruction and consequence
• Do you have immediate access to every part of the room?

• Can you see every setting where students will be spending their time (no dead space)?

• Do you have adult and student schedules in a prominent place?

• Are materials for instruction readily accessible?

• Can student easily select/replace materials?

• Do you have designated areas for various activities?
• Saul Axelrod: Most interventions are selected based on premises other than functional relations such as:
  • Interventions familiar to the teacher
  • Interventions that worked in the past with other students
  • Topography based interventions (i.e., timeout for hitting)
  • Simply on ease of implementation

• Selecting interventions by topography may actually worsen rate of behavior problems (i.e.; Time out for behaviors maintained by socially mediated negative reinforcement).
• FBA can be thought of as a reinforcer assessment of sorts (Neef and Peterson, 2007 in Cooper, Heron, & Heward, 2007)
• “Function” as used by behavior analysts is a term that is similar to reinforcement. When one looks to find the function of a behavior one is looking to determine what variables likely serve as reinforcement for the behavior
Practical Implications: Making program changes based on FA: (adapted from Carbone Clinic)

**Antecedent Manipulation**
(stimulus control/motivation)
- Reduce # of demands (VR)
- Increase # of easy skills interspersed
- Decrease response effort
- Further reduce errors (modify prompt procedures)
- Change instruction pace (ITI)
- Decrease/increase session time
- Conduct Sr+ assessment
- Change field of stimuli
- Increase # of teaching trials
- Change physical environment
- Change aim
- Teach pre-requisite skills
- Decrease # of goals/objectives
- Build MO by deprivation of specific reinforcers
- Change teaching procedure
- Other:

**Consequence Manipulation**
(reinforcer/extinction/punishment)
- Provide more valuable reinforcer
- Provide higher rate of reinforcement (lower VR)
- Reinforce immediately
- Provide greater magnitude of reinforcement
- Reinforce on transfer trials
- Better use of extinction
- Improve implementation of differential reinforcement
- Other:
The Behavior Support Plan: 3 Critical Components of Intervention

1. MO: reduce motivation to engage in problem behavior
2. Teach competing skill within functional response class (manding v. problem behavior)
3. Extinction: problem behavior does not contact reinforcer (must consider safety issues)
A plan for each function

- PBSP should be function specific
- The same behavior may require separate plans for each function
- Avoid "shotgun" approaches to intervention
Training Staff: Behavior Management and Discipline

- Teach staff to “catch them being good”
- Teach staff to maintain and review data daily
- Teach staff to remain calm in all situations
- Teach staff “hands off” methods of discipline
- Establish a focus on teaching appropriate behavior rather than reacting to problem behavior
- Establish a focus on keeping students meaningfully engaged
- Establish an environment wherein teachers support one another: they come to each other’s assistance when needed
- Have emergency plans and procedures established in advance so staff know how to respond when crisis do arise
Function Based Interventions:
Socially Mediated Positive Reinforcement: Emphasis

- Reduce MO by providing enriched experience
- Make access to reinforcement easy
  - But pair access with social conditions
- Teach the mand
  - Ease of response form and errorless teaching
- Extinction in the form of an interval with no access to reinforcement (time out or modified time out such as count and mand)
  - Note benefit of “ready hands”
  - Interval of “time out” can be short when appropriate
• Abolishing the CMO-R is the primary antecedent intervention for problem behavior maintained by socially mediated negative reinforcement

• Be careful to not jump to interventions such as “break cards” too early

• Escape extinction is an appropriate consequence for when problem behavior occurs, however:
  • Need to determine if demand to be followed is within student’s repertoire
    • NO: provide prompts or drop to easier demand
    • YES: usually demand on procedure, but in some cases, may need to treat as an error
Automatic Reinforcement, Positive

• This function may be more common in students with more significant disabilities or more limited skill sets
• This function can change into other functions through a conditioning history
• Often takes form of self-injurious behavior
• Main interventions:
  • Engagement and access to other reinforcers at any time problem behavior is not occurring
  • Response interruption and redirection
Automatic Reinforcement, Negative

- Often is the first explanation for problem behavior generated
- Treating problem behavior that is maintained by other functions as if the function is automatic negative has dangers:
  - May actually reinforce the problem behavior
  - Delays establishing function-appropriate interventions
- Functional analysis studies suggest this is not as common a function as what is often suggested
- Need to ask basic questions:
  - Does the response topographies of concern happen across a range of conditions (if not, likely not automatic negative reinforcement)
  - Do changes in conditions alter response frequency? (If so, problem behavior may not be a function of automatic negative reinforcement)
- This function often requires medical interventions to eliminate the source of painful/aversive stimulation:
  - The list of possible interventions is quite long
Considerations in Evaluating Interventions

- Is intervention being done correctly?
- Is intervention being done consistently?
- Is instruction (concepts/stimuli) arranged faultlessly? clear examples/non-examples across irrelevant variables
- Is intervention being done often enough?
- Is data accurate?
- Is enough time allotted to do the intervention?
- Are interventions procedures clearly stated?
- Are staff able to adjust prompt level and reinforcement on a moment to moment basis?
Student A
Intervention: Instruction and Mand Training

Problem Behavior in Minutes)

Aggressive Behavior:
Hitting, pinching, scratching, biting, destroying property

Duration: From first aggressive behavior until instructional control re-established
The Relation Between Positive Behavioral Intervention and Reduction of Aggression

- **Aggressive Behavior**: Graph showing the number of aggressive incidents over sessions in October and November, with a comparison between baseline and Mand Training.

- **Mand Training**: Graph showing the number of mands per day over calendar days in November, with a distinction between spontaneous and prompted mands.
“Increasing the effectiveness of instruction results in less failure, more frequent social and other forms of reinforcement, and general improvements in the demand situation to the point where it may not be functioning as a demand, but rather as an opportunity”

Jack Michael


• Dipuglia, A and Miklos, M. (2014). Instructing Functional Verbal Behavior in Public Schools: Recent Outcomes from the PATtAN Autism Initiative. Symposium presented at the 40th Annual Convention of the Association for Behavior Analysis, Chicago, IL


References


• Palmer, 2012 The role of atomic repertoires in complex behavior. The Behavior Analyst, Spring; 35(1): 59-73


