Three Important Things to Consider When Starting Intervention for a Child Diagnosed With Autism

Mary Jane Weiss, Ph.D., BCBA-D, The McCarton School, New York, New York

Thomas Zane, Ph.D., BCBA-D, Endicott College, Beverly, Massachusetts

When a child with autism spectrum disorders (ASD) first begins to receive services, what should the top three targets for intervention be? This is an intriguing question that is difficult to answer, in part because of the diversity of presentations and needs in individuals with autism (Witwer & Lecavalier, 2008). It is difficult to generalize treatment targets from one child with an ASD to another; children's behavioral excesses or deficits can be more different from one another than they are similar. In addition, the set of deficits with which any one child presents can be overwhelming; many children require intervention and programming across all developmental domains and present with significant challenges such as self-injurious behavior or aggression. Selecting targets of intervention can be a formidable task even to an experienced clinician.

It is not possible to state precisely what skills to target for a child receiving services for the first time, but there are some common considerations. Clinicians must first accurately identify the abilities and deficits in the language, social, and behavioral areas (the three domains of challenges that make up this disorder; American Psychiatric Association [DSM-IV-TR], 2000), and must determine individualized areas of need.

Once assessments are completed, the clinician will have numerous targets of intervention across the three core areas. These will be highly specific and individualized for the learner. Nevertheless, there are response classes/skills that are relevant across most individuals with autism and set the stage for more complex learning in other areas. We posit three such fundamental response classes: manding, social responsiveness, and imitation.

Teach Manding

In the language area, the most fundamental skill to teach first may be manding/functional communication (Bondy & Frost, 2001; Frost & Bondy, 2002; Simic & Bucher, 1980). Skinner (1957) defined a *mand* as, "a verbal operant in which the response is reinforced by a characteristic consequence and is therefore under the functional control of relevant conditions of deprivation or aversive stimulation" (pp. 35-36). Functionally, we describe a mand as a response that "specifies" the form of the reinforcing consequence (Skinner, 1957). Colloquially, mands are sometimes described as requests, and generally this implies

indicating desired items or actions.

Whether the skill of manding is just emerging or is more elaborate and sophisticated, this response class is crucial for several reasons. Many individuals diagnosed with an ASD do not initiate communicative responses to obtain positive reinforcers or to escape. It is essential to assess how the individuals with an ASD currently get their needs communicated. What do they currently mand to obtain? How sophisticated is the skill; do they mand for primary reinforcers, or do they mand for social opportunities or more abstract events? What responses currently serve as mands? Is desire or need communicated by aberrant behavior? Is it communicated inefficiently, perhaps via pulling someone in the vicinity of what is desired? The establishment of a manding repertoire can significantly diminish behavioral difficulties and lead to broader positive behavioral changes (e.g., Charlop-Christy, Carpenter, Le, LeBlanc, & Kellet, 2002).

There are several considerations at the onset of treatment regarding manding. First, is this a child who mands for just one or two things (e.g., juice and pretzels)? A restricted mand repertoire is not sufficient, and breadth of the mand repertoire is important to consider during the first year of programmed intervention (Sundberg, 2004). Second, how does the child mand? As noted above, is it via aberrant behavior? Third, have they been introduced to a system of communication yet? If so, how efficient and effective does it seem? What topography of manding might be a good match for their skills? For a child with limited to no vocal ability, or for a learner whose vocalizations are extremely limited or emerging, a supplemental system of communication is likely to be needed.

Two options for supplemental systems of communication are the Picture Exchange Communication System (PECS) or American Sign Language (ASL). For many learners, PECS is the logical choice (Bondy & Frost, 2001; Frost & Bondy, 2002; Charlop et al., 2002), as it has empirical verification of effect and emphasizes prerequisite social skills (i.e., it is essential that the learner first recruit the attention of the communication partner). For other learners (perhaps those with outstanding imitative repertoires), ASL may be a viable alternative, although less data are available regarding the successful use of this topography with children with an ASD.

After the type of communication is selected, manding skills

should be strengthened in the context of relevant motivating operations. For example, to increase the likelihood of a learner manding for a glass of water, the learner should be at some level of deprivation for water and see a glass of water out of reach. Learning opportunities are increased by teaching in the context of enticing and structured teaching sessions. Capitalizing on naturally occurring opportunities throughout the day is also emphasized and will promote the generality of the manding repertoire (Sundberg & Michael, 2001).

Teach the Child to Be Socially Responsive

Social responsiveness consists of two general types: Responding to initiations by others (e.g., requests to play, greetings) and compliance to requests by teachers within teaching contexts. Many learners with autism, especially when they are new to intervention, do not respond to the social bids by others. Particularly, new learners are typically lacking in responsiveness to and compliance with instructor requests. A lack of responsiveness has serious implications across this first year of intervention. Without the establishment of “readiness to learn” skills such as making eye contact when called upon and compliance with one-step directions, the teaching of any subsequent skill, no matter how basic, will be difficult. Such responsiveness can be developed by making the instructor an agent of reinforcement by providing instruction with potent reinforcement, which is essential for increasing approach behaviors and reducing avoidant or escape behaviors.

Teach Imitation Skills

Imitation is the foundation of many different kinds of skills, is an extension of the social responsiveness response class, and is also a social navigation skill once it becomes a response class (Kleeberger & Mirenda, 2010). In other words, imitation can be used to problem-solve; a student unsure of what to do can refer to peers and follow their lead. However, the primary importance of imitation training is that it allows for the teaching of important skills including toy play, functional use of objects, and critical social skills.

Imitation can be taught with two teaching methods. Historically, it has been taught via discrete trial instruction (DTI), which is an efficient way to teach many different imitative responses. In addition, there is evidence supporting the social benefits and generalization advantages to teaching imitation during natural occasions (e.g., Ingersoll & Schreibman, 2006). Both DTI and naturalistic teaching appear to be important for teaching a comprehensive and generalized imitation repertoire.

Three Important Things to Consider After the First Year of Intervention

Once there is significant progress in the three skill areas described above, on what should the practitioner focus? The key areas outlined as priorities in the first year all remain curricular threads well into subsequent years of intervention.

Manding is likely to continue to be a major focus of intervention. A mistake that practitioners sometimes make is giving insufficient attention to the development of a manding repertoire. A child who can mand for five items is not a skilled mander. After initial manding is established, the depth and breadth of the manding repertoire should be expanded. It is important for children to learn to mand for attention, escape, and information once they have learned to efficiently mand for a multitude of desired items (Sundberg, Loeb, Hale, & Eigenheer, 2002). The mand topography should also be continually assessed. Is the child’s communication modality functional, efficient, and preferred? Is the alternative modality still required to ensure communication breadth? Is it leading to the development of vocal communication?

Imitation is likely to be a major focus of future intervention to achieve the quality and complexity of imitation that is desirable. Working on imitation as a long-term curricular thread allows for teaching imitative skills that require increased duration of attention to a model (Leaf & McEachin, 1998). It also allows for an increased focus on the specificity and precision of the imitative response. These subtle and important elements of imitation training are often ignored; attention to them facilitates the development of a functional response class of imitative behavior.

Social responsiveness also would remain centrally important, although it will have shifted from compliance and responsivity training to more complex goals. For example, there may be a focus on responding to greetings and invitations to play from peers. Establishing initiation of social interactions can often begin at this time, although it may well already have been a major focus in the first year. The skill of joint attention might continue to be addressed albeit in more complex forms. Qualitative aspects of social responsiveness may also be shaped, such as the clarity or latency of a social response or the endurance of interactions.

A child new to services who begins acquiring manding, imitation, and social responsiveness skills should be positioned to achieve their maximal outcome. Maintaining a focus on these areas into the next year of intervention ensures that these foundation skills develop in ways that enhance their maintenance and generalization.

References

- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (Revised 4th ed.). Washington, DC: Author.
- Bondy, A., & Frost, L. (2001). *A picture's worth: PECS and other visual communication strategies in autism*. Bethesda, MD: Woodbine House.
- Charlop-Christy, M. H., Carpenter, M., Le, L., LeBlanc, L. A., & Kellet, K. (2002). Using the Picture Exchange Communication System (PECS) with children with autism: Assessment of PECS acquisition, speech, social-communicative behavior, and problem behavior. *Journal of Applied Behavior Analysis*, 35, 213-231.
- Frost, L., & Bondy, A. (2002). *Picture Exchange Communication System*. Newark, DE: Pyramid Educational Consultants.
- Ingersoll, B., & Schreibman, L. (2006). Teaching reciprocal imitation skills to young children with autism using a naturalistic behavioral approach: Effects on language, pretend play, and joint attention. *Journal of Autism and Developmental Disorders*, 36, 487-505.
- Kleeberger, V., & Mirenda, P. (2010). Teaching generalized imitation skills to a preschooler with autism using video modeling. *Journal of Positive Behavior Interventions*, 12, 116-127.
- Leaf, R., & McEachin, J. M. (1998). *A work in Progress: Behavior management strategies & a curriculum for intensive behavioral treatment of autism*. New York: DRL Books.
- Simic, J., & Bucher, B. (1980). Development of spontaneous manding in language deficient children. *Journal of Applied Behavior Analysis*, 13, 523-528.
- Skinner, B. F. (1957). *Verbal behavior*. New York: Appleton-Century-Crofts.
- Sundberg, M. L. (2004). A behavioral analysis of motivation and its relation to mand training. In L. W. Williams (Ed.), *Developmental disabilities: Etiology, assessment, intervention, and integration*. Reno, NV: Context Press.
- Sundberg, M. L., Loeb, M., Hale, L., & Eigenheer, P. (2002). Contriving establishing operations to teach mands for information. *The Analysis of Verbal Behavior*, 18, 14-28.
- Sundberg, M. L., & Michael, J. (2001). The value of Skinner's analysis of verbal behavior for teaching children with autism. *Behavior Modification*, 25, 698-724.
- Witwer, A. N., & Lecavalier, L. (2008). Examining the validity of autism spectrum disorder subtypes. *Journal of Autism and Developmental Disorders*, 38, 1611-1624.

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