



Initial Guidelines for Developing a Communication Intervention Plan for Individuals with Autism Spectrum Disorders and Significant Limitations in Communication Ability

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The general guidelines proposed in this article may be applicable for two groups of individuals with autism spectrum disorder - those that have typical cognitive ability but who have a delay in developing receptive and expressive communication skills, and those who have a mild to significant cognitive impairment in addition to difficulties with receptive-expressive communication. This latter group may contain adults as well as children.

While the initial decision making process may be similar for the two groups of individuals with an autism spectrum disorder, the rate of change and eventual outcome will probably be different. Many from the first group will probably develop adequate speech by age five and will have achieved that end through a variety of intervention efforts. Many in the latter group, the group with cognitive impairment, may not progress from a limited skills base to the development of adequate (i.e., frequent, functional, flexible) oral speech communication skills. Instead, many may continue to require some degree of augmentative communication support throughout adulthood.

Regardless of the eventual outcome, however, service providers must face the question of getting started with an intervention program. This article does not pretend to cover all of the complexities of the initial decision-making process and the subsequent implementation of an intervention plan. It will, however, present an overview of a basic process and will address some of the primary issues.

Guideline #1: Select a speech language pathologist who has training in a variety of intervention approaches, especially augmentative communication.

While some people attempt to develop a communication program without the involvement of a speech language pathologist, it is not always a successful endeavor. It is important for someone to know about typical and atypical communication development, to know a variety of intervention approaches, and to know when to shift from one strategy or focus to another.

While familiarity with autism spectrum disorders should be considered when selecting a service provider, that background can be obtained through reading, viewing videos, attending workshops, and mentoring by others with more experience. Thus, one does not need to be an expert in autism at the moment of selection or assignment to an individual's case, but the individual will need good motivation and self direction to quickly become familiar with the intricacies of the disability.

Speech language pathologists will either need to be multi-talented in implementing various interventions or they will need to devote energy to quickly achieve this status. Intervention approaches that cross disabilities and which are important for individuals with autism spectrum disorder include augmentative communication, functional communication training, social pragmatic intervention, natural language teaching, incidental teaching, milieu language teaching, and other applied behavior analysis approaches. Many, if not most, speech language pathologists may not initially have all of these intervention strategies in their repertoire. Most college training programs find it impossible to teach their students everything they may need to know for their professional career. Given this situation, it is important to select someone as a service provider who will explore unfamiliar options and get the necessary training. Once armed with knowledge about the full range of options, a service provider can offer optimum long term intervention to the child with an autism spectrum disorder and to his or her family.

Guideline #2: Identify communication partners across environments and interview them about the child's present communication skills.

During the interview, determine if the person with an autism spectrum disorder takes an active role, a passive one, or a combination of roles with each partner. Some partners might be very good at guessing what the child wants without the child having to engage in any active or overt overtures. In this case, the child may simply stand waiting for someone to guess his or her needs. This contrasts with a child who insistently takes a partner to the location of the object that he or she wants. A different child may use the same strategy of taking someone to a location but will only exhibit this behavior with certain people or to request a few select objects.

Guideline #3: Consolidate interview, observation, and assessment data and construct a hypothesis regarding the initial goals for the communication intervention program.

From the interviews, observations, and assessment, the following should be known:

- Is the person intentional and does he or she have some notion of cause and effect? Does the person deliberately signal any messages through behaviors such as taking someone to the place where a desired object is located? If the answer to these questions is "no," then intervention may need to begin with fostering the understanding that communication is intentional.
- Does the person have object permanence? If the person consistently shows a lack of awareness/interest in preferred objects when they are out of sight during practice

teaching trials, then the person may need to start with a non-symbol based communication system rather than a symbol based one.

- If the person is intentional, what is the frequency of messages provided to others during the course of the day? If intentional messages are rare, then circumstances may need to be altered to increase the need to communicate.
- Does the person engage in joint attention? Can his or her attention be directed to near and far objects? Does the child direct communication partners attention to near and far objects for identification, desire, or sharing?
- What behavioral issues are noted during the course of a typical versus an unusual day? What behavior problems occur during a typical week? To what degree are behavioral issues really communication issues? Will the person need a means of communicating specific messages instead of using unacceptable behavior, (e.g., functional communication training) as well as the development of an effective general means of communication?
- What types of communication messages are sent (e.g., requests for objects but not for actions)? How restricted are his or her interests? Who understands any of his or her messages and who doesn't? Does the individual need to be taught some global communicative strategies such as pointing?
- What type of comprehension of directions, messages, and vocabulary is generally exhibited by the individual?
- What degree of interest or recognition of pictures (two dimensional symbols) is exhibited? What is his or her matching or visual memory ability? Does the child perform better when matching objects versus pictures of various sizes and types of representation?
- Does the child have good motor coordination/motor planning for gesturing or signing?
- What is the intelligibility of his or her oral speech, if any? How reliable is the child at using any words meaningfully and consistently?
- How is echolalia used-type, function, and frequency?
- Is the child able to read print in any form (e.g., logos, single words, complex text)?
- Can the person "voice" his or her preferences or opinions about communication needs and display options? (This would require the individual to be able to think about communication in an abstract or meta-linguistic manner.)
- How does this individual seem to learn-demonstration of step by step or the gestalt

(whole sequence), long trials of practice or sudden insight, prompting, etc.?

Guideline #4: Decide what resources are needed.

- People resources might include a second adult who acts as a prompter if one is going to begin a Picture Exchange Communication System (PECS) program. A similar person might be needed to initially prompt the use of a communication board or device within a functional activity. Someone will be needed to prepare communication displays or to program singular devices such as the BigMack® or a comprehensive device such as the AlphaTalker. For a child who has limited interests, an adult might be assigned to take the child's lead and to expand his or her interests during scheduled play periods. People resources need to be defined in terms of who is needed, for what purpose, when needed, what training will be needed, who will supervise and mentor (as needed), how information will be shared about daily outcome, and how this person will be involved with the child's intervention team.
- Material resources might include access to several software programs that provide evaluation opportunities and access to galleries of line drawings, pictured objects, and manual signs. Other resources might include equipment such as single switch devices, mini-electronic communication devices for restricted messages, dynamic display communication devices, lamination machines, velcro, and other supplies.
- Time is the most elusive resource. Without time for evaluation, planning, preparation of materials, data collection, information sharing, and collaborative problem-solving among members of the child's team, including the parents, the best designed plan may be less effectively implemented.

Guideline #5: Decide how to build comprehension along with expressive skills.

- Facilitate the comprehension of common directions and basic information. Make a list of what is important to know and frequently teach these directives/ information in the context of planned activities with the help of another person (e.g., peer, staff member, volunteer). Foster active listening and fading of prompts.
- Use visual supports to aid comprehension. For example, showing a miniature school bus could support the transition directive about leaving the school building to board the bus at the end of the school day. Touching the chair where the child is supposed to sit, would support the directive to "Sit down." Using a familiar stop sign on the door of the classroom might remind the child to wait for the adult instead of bolting into the hallway.
- Know what the person's interests are and build activities and teaching routines around them. It is preferable to build on the child's interest rather than to attempt enticing and sustaining him or her with an adult chosen point of focus or activity.
- Provide opportunities to practice a routine so that it becomes automatic to the

targeted verbal message. For example, if the directive is “Come to the table; time for snack” the objective is to have the child recognize the key words of “table” or “snack.” Be alert for other forms of cuing to which the person may be responding. For example, the child may be cued to come to the table by the sight of the boxes of crackers, by the movement of the other children, or by the schedule routine.

Guideline #6: Consider options for building expressive output (nonverbal and verbal, if appropriate) and select a tentative starting point for the intervention program.

Options might include but not be restricted to:

- Teaching singular nonverbal/ nonsymbolic behaviors such as touching to get attention, taking someone across the room, or a negative head shake.
- Teaching combined or complex nonverbal sequences such as taking someone to the cupboard and then pointing.
- Reinforcing greater use of vocalization and speech, if this is a viable component. Vocalization can be used to get attention and to express other messages. The person may need touch and visual cues to modify his or her oral production. Some people have tried various applied behavior analysis techniques or programs.
- Teaching manual signs or baby signs (temporary idiosyncratic gestures) to convey specific messages to a targeted audience.
- Teaching an exchange system such as Picture Exchange Communication System (PECS) using pictures or objects. The child should be intentional and have some preferences to begin the formal PECS program.
- Teaching a “point to” system such as a communication board using pictures, tangible objects, or text (if the child can read).
- Teaching the child to activate an electronic system to convey a message(s).

Guideline #7: Select or design opportunities for fostering communication skill development.

- Select situations/activities during which the child can have opportunities to successfully learn new communication skills or to utilize acquired skills.
- Select goal(s) to be targeted within each activity.
- Select procedures, prompts (if needed), and personnel to be used in the activity.
- Develop or prepare the support materials needed such as a topic communication board or a BigMack® to request a turn during an activity.

- Have an alphabet board available so the adult can model spelling of a key word, if appropriate, as a means of showing how to expand vocabulary beyond a fixed display.
- Allow peers to also become familiar with a communication display; they may model some examples for the student.

Guideline #8: Train others to be active members of the intervention program.

It will be difficult for a child to learn the power of using alternative means of communication if initial efforts are not consistently reinforced. In the initial stages, it can be acceptable to have a limited number of communication partners but, in order for the child to grow in terms of skills, the circle of partners eventually will need to be expanded.

Training others to be active members of the intervention program can involve several dimensions. First, partners need to understand the dynamics of augmented communication. It is always very easy for a speaking partner to dominate an interaction. Second, it is important for the partner to believe that the person with an autism spectrum disorder has thoughts about various things, has specific interests, preferences and dislikes, has memories of experienced events and may experience confusion about aspects of the world about him or her. It might take time before the individual shares much, if any, of this internal confusion/information other than expressing refusal and requests.

If a partner understands the challenges faced by the person who is nonverbal and the potential content to be expressed, then it may be easier to convince that partner of his or her role in developing effective communication skills. The person who is nonverbal must have the means by which to communicate and the opportunities in which to do so. This means partners may need to encourage use of alternative forms, to be sure needed equipment is available and ready to use, and to practice the patience needed to allow the person with an autism spectrum disorder to communicate his or her message.

Training of partners will depend on what type of partner a person will be. Different training will be needed for the individual who will be a frequent partner such as the parent or teacher versus the infrequent, casual partner who may be a neighbor or the principal.

Guideline #9: Decide how to monitor and chart progress since data can suggest the need for program changes such as an increase of supports or a change of direction.

Collection of information can take various forms, but the important issue is that there is a plan in place to guide the process. Decisions about the effectiveness of a strategy or intervention should be based on information and data and not just subjective impressions. Print materials such as articles or books can be reviewed and mentors or other resource people can be contacted for input. Options can be proposed and evaluated before modifications to procedures are introduced, a program is expanded, or a new focus is adopted.

Guideline #10: Evaluate what additional areas need to be fostered to support communication development.

Several skills or experiences may need to be fostered. Literacy training would be important from the preschool years and onward. Knowing how to functionally spell, as needed, will supplement augmentative communication systems with limited vocabulary access. Experiences provide the basis for developing or expanding interests and building new vocabulary. Supported social opportunities provide the environment from which to develop broader communicative skills. Independence in terms of responsibility for communication equipment is crucial. The person must identify with the communication materials as empowering him or her to lead a better life.

Summary

This article over-simplifies the complexities of planning and implementing a communication program for an individual who has limited expressive communication skills. It hopefully, however, provides parents, teachers, and providers with an overview of a possible process. Additional information and resources are listed in other IRCA articles. These include the following which are located on the IRCA website at www.iidc.indiana.edu/~irca .

- Communication Issues and Individuals with Autism Spectrum Disorders: A Selected Bibliography
- Augmentative Communication: A Selective Bibliography
- Visual Resources for Enhancing Communication for Persons with Autism Spectrum Disorders and Other Disabilities
- Communicative Functions
- Aiding Comprehension of Individuals with Autism Spectrum Disorders during One-on-One Interactions
- Visual Schedules and Choice Boards: Avoid the Misinterpretation of Their Primary Function
- Functional Categories of Immediate Echolalia
- Functional Categories of Delayed Echolalia

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