

## Your Child with Autism: When is augmentative and alternative communication (AAC) an appropriate option?

By Joanne M. Cafiero, PhD and Ann Meyer, MEd

*Nicholas is a beautiful, raven-haired little boy of four. He has been diagnosed with autism. He is standing in the kitchen screaming, tears running down his cheeks. His mother, Alicia, is trying to figure out why Nicholas is, once again, having another tantrum. She is speaking to him nervously and quickly, "What do you want, Nicky? A cookie, a cracker, some juice?" Nicholas becomes more upset as his mother speaks. Alicia is afraid his tantrum will escalate to head banging, which has been Nicholas' latest response to frustration. Alicia is at the end of her rope. She breaks down and sobs.*

### This scenario is all too common in families of children with autism spectrum disorders (ASD).

And the incidence of ASD is increasing at an alarming rate. Autism affects the ability to communicate and, in fact, between 33 and 55 percent of individuals with ASD never develop communication skills that are sufficient to meet their most simple daily needs. The National Research Council stated in its 2001 landmark publication, *Educating Children with Autism*, that functional spontaneous communication is a critical skill that must be addressed in all interventions for children with ASD.

### Autism and communication

What do we know about autism and communication? First, we know that the learning characteristics in ASD profoundly impact the ability to communicate. Children with autism are often visual learners; spoken communication is auditory rather than visual so the ability to understand and produce language is affected by this. Children with autism have difficulty understanding complex

stimuli. Communication involves processing not only speech, but also gestures, body language, and tone of voice. Children with autism often demonstrate difficulties with motor planning, that is, having the intention to do something then carrying that action out. The motor planning involved in speaking—coordinating the mouth, lips, tongue, and facial muscles—is extremely complex and requires sophisticated motor planning. To compound the challenge, communication development in children with autism does not follow the patterns seen in typical children.

Communication is an essential part of our humanity. Every individual with communication difficulties must be provided with the tools, strategies, and technology needed to be able to communicate. This philosophy is part of our federal laws and the United Nations Human Rights Committee.

What does this mean for little Nicholas and all children with ASD who are limited speakers? First and foremost, communication supports must be provided *as soon*

*as a child is diagnosed with ASD.* It is unethical to wait for communication to fail to develop before a communication intervention is provided.



### Communication supports: AAC

Augmentative and alternative communication (AAC) is any tool, strategy, or technology that compensates for, enhances, expands, or helps develop communication skills. AAC can be unaided or aided. Examples of unaided AAC are manual signs, gestures, and body language. Examples of aided AAC include communication boards, speech generating devices, keyboards, email, and instant messaging. This article will address aided AAC.

PHOTOS COURTESY OF ANN MEYER

Table 1  
**The Compelling Match Between  
 Autism and AAC**

Autism	AAC
Preference for visual stimuli	Uses visual medium
Difficulty with complex stimuli	Begins with simple strategies / tools & uses increasingly more complex stimuli
Difficulty with motor planning	Requires simple motor movements
Difficulty with social interactions	Provides a buffer and a bridge between communication partners
Interest in inanimate objects	Uses communication boards & speech generating devices
Difficulties with behavior	Preempts difficult behaviors by providing a way to have needs met

**What skills must a child have in order to be eligible for AAC?**

There are no cognitive prerequisites for AAC for two strong reasons. First, it is extremely difficult to assess the cognitive ability of a child with ASD so it is important to assume cognitive and communicative potential. Many children in the spectrum may present as functioning at a low level while having great intelligence. Secondly, AAC provides a framework for the development of language. So regardless of the language a child with ASD generates, AAC can support and expand that existing language. When a child with ASD is able to communicate, his or her cognitive abilities become more evident. This can profoundly affect how a child is treated by family and peers as well as the content of his or her academic program.

**What is the evidence for using AAC?**

There is a growing body of research affirming that AAC increases functional communication, decreases difficult behaviors, and increases the ability to participate in home, school, and the community. In addition AAC can contribute to the development and increase of literacy skills. There is no evidence that AAC inhibits speech but rather that AAC encourages and stimulates speech. In terms of unaided AAC (manual signs) vs aided AAC, there is some small evidence that aided AAC is superior to unaided AAC in developing speech.

**What does AAC look like for a child with ASD?**

AAC is a visual language system that is both receptive (understanding) and expressive (communicating). Visual supports such as schedules, task lists, and cueing tools are visual input strategies to help children with autism understand their world, transitions, and directions. Providing visual input—that is, pairing what you say with pointing to a word or symbol—enables the child with ASD to understand and learn more language. Children with autism who are literate may

prefer communication to be written so a simple sticky note can be an AAC tool. AAC is also expressive language. Picture Exchange systems, interactive communication boards, speech generating devices (SGD), email, and instant messaging are expressive AAC. It is important to note, however, that most AAC tools and devices can simultaneously be expressive and receptive.



In action research case studies where students were provided with ASD simple communication devices such as BIGmacks™ or SuperTalkers™, students demonstrated a significant increase in expressive communication skills. These type devices were placed directly on the student's desk during independent work tasks. The devices were easily programmed with frequently used messages:

- “I’m done.”
- “Look what I did!”
- “I need help.”
- “I need a break.”

In addition to the increase in expressive communication skills, students

experienced a decrease in challenging and inappropriate behavior previously experienced.

**Interactive communication**

Communication is an exchange between two or more people. The speaking communication partner is an essential part of an AAC intervention. Let's put an AAC system in place for Alicia and her son Nicholas.

First, we identify the environment within which Nicholas needs to both give and receive communication. Alicia, Nicholas'



mother, identifies several areas in her home where she is most frustrated by not being able to meet Nicholas' needs. Nicholas often wants to play outside in the yard. His typical pattern is to whine at the back door so that

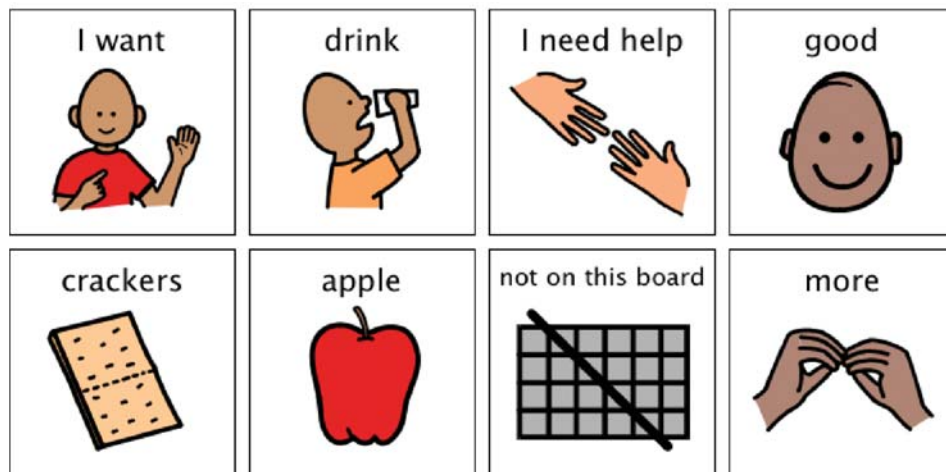
*continued on page 30*

continued from page 29

someone can open it for him. A single message device such as a BIGmack™ or Talking Symbol™ with the recorded message “I want to go outside” is placed on the counter top by the back door. When Nicholas begins to whine to go outdoors, Alicia says, “Oh, Nicky, you want to go outside?” She teaches Nicholas to use the communication device by pointing to it and then activating the message “I want to go outside.” Within two weeks, Nicholas is communicating with a device by asking to go outdoors.

The kitchen is another environment that has many opportunities for teaching communication and decreasing frustration for both Nicholas and Alicia. A communication board (See Figure 1 above) is made with all the vocabulary needed for Alicia to talk to her son and for Nicholas to respond. The vocabulary includes the food items Nicholas prefers, tools he needs related to those items, comments he can make, and requesting words such as “I need help.” Also included are words that Alicia needs to say to Nicholas. The communication board is created using a graphic symbols software program called Boardmaker®. Alicia prints out the communication board on card stock, laminates it and places it on the refrigerator where both she and Nicholas can access it easily. As Nicholas begins to use his AAC systems, his behavior improves, and Alicia engineers her entire home with AAC so that Nicholas is never without a way to use symbolic functional spontaneous communication. Tools and devices are placed in the bathroom to help with his grooming, in his bedroom for communicating during bedtime storybook reading, and in the car to help with transitions. Nicholas uses more and more words on his AAC tools and devices to communicate. Alicia has discovered that AAC provides a window on Nicholas’ potential as both a learner and communicator.

Figure 1



(Boardmaker®, Mayer-Johnson, 2001)

### Important final words

The commitment and competence of the communication partner will determine the success of any AAC intervention. The following principles are essential in supporting the development of communication with AAC.

- \* Assume your child is intelligent and capable of understanding and communicating.
- \* Pair speech with pointing to a graphic symbol on a communication board or device.
- \* Talk to your child naturally with AAC, then give wait time for him or her to respond. Minimize hand over hand with AAC.
- \* Do not use an AAC device to quiz or drill your child.
- \* Do not pressure your child to communicate; encourage him or her and be patient.

- \* Include vocabulary your child may not know. Remember that AAC also helps develop communication.
- \* View the AAC tool or device as your child’s voice and ears; support them in using it everywhere.
- \* Don’t give up. You are teaching a new language, and it takes time. •

Joanne M. Cafiero, PhD is an Autism and AAC consultant. She is the author of *Meaningful Exchanges for People with Autism: An Introduction to AAC*, the first and only book on the subject. She was a member of the National Academy of Sciences committee on educational interventions for children with autism. Dr Cafiero was formerly director of autism projects for Johns Hopkins Center for Technology. She designed the Johns Hopkins graduate program, Teaching Students with Autism. Dr. Cafiero teaches practitioners and families of children with autism both nationally and internationally.

Ann M. Meyer, MEd was an Autism specialist and Special Education Administrator. She is the current Director of Research & Development at AbleNet Inc. AbleNet Inc. has been a provider of AAC and assistive technologies for over 20 years. AbleNet provides innovative AAC solutions for students with autism that can easily be implemented in the home, school, or community.

