

Autism Practice Brief

VCU Autism Center for Excellence (VCU-ACE)

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Autism Q&A: Introduction to Alternative and Augmentative Communication

Individuals with autism spectrum disorder (ASD) have difficulty with communication. Typically, those with Asperger's Syndrome, or high functioning autism, have difficulty getting their message across or sustaining conversation. Others with autism have trouble developing speech and might not ever fully develop spoken language. Therefore, many individuals with ASD will need alternative means in order to communicate. This Q and A will provide an introduction to Alternative and Augmentative Communication (AAC) devices for individuals with ASD.

Question: What is AAC?

ANSWER

The American Speech-Language-Hearing Association defines AAC as "a set of procedures and processes by which an individual's communication skills (i.e., production as well as comprehension) can be maximized for functional and effective communication." Alternative and Augmentative Communication includes all forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas. We all use AAC when we make facial expressions or gestures, use symbols or pictures, or write.

People with speech or language difficulties may benefit from using AAC to supplement existing speech or replace speech that is not functional. Special devices or aids, such as hand signs, pictures, communication boards or electronic devices, are available to help people express themselves. This may increase social interaction, school performance, feelings of self-worth and overall quality of life.

Question: What are the types of AAC?

ANSWER

There are two types of Alternative and Augmentative Communication devices, they include unaided and aided AAC.

- Unaided AAC is always accessible to the student, because it relies only on the individual's body to convey the message. Examples include gestures, body language, and/or sign language.
- Aided AAC may not always be accessible to the student, because it relies on the use of tools or equipment to convey the message. Examples can range from paper and pencil, which is considered "low tech" to picture symbols, or a voice output device, which is considered "high tech".

Question: What are the most common forms of AAC?

ANSWER

The most common forms of AAC are sign language, exchange communication, and Voice Output Communication Aids (VOCA). Sign language is a complete language that uses movements of the hands for communication. Most people are familiar with sign language, since this is typically used by individuals who are deaf.

Exchange communication involves exchanging an object for the desired want or need. The student can exchange a real object, miniature real object, drawing, photograph, or written word for communication.



This picture is an example of a communication board a person with autism uses to ask for items during art. The person hands or "exchanges" a picture from the board to another person to request items needed.

The item the person exchanges to communicate will depend on the person and his or her ability to associate the object, picture or word with the actual item. For children just learning to communicate, exchanging an object that looks very similar to the item they want may be a good

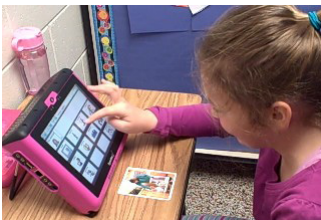
place to start. For those who can distinguish pictures, they may be taught to exchange pictures or drawings. For individuals who can read, exchanging a written word may be best.

Perhaps the most common form of exchange communication is through the use of pictures. Keep in mind, some individuals might have trouble associating a picture with the actual item, so real photographs of the item may be helpful to use. Caregivers and teachers can also use drawings of the object or a pictorial representation of the object for exchange provided the individual understands what the picture represents. Many use programs like Boardmaker, Clip Art, or Google Images to find pictures of their child's favorite toys or foods to use for picture exchange.

Here you can see two pictures of a computer. One picture is an actual picture of the child's computer while the other is a line drawing.



When using Voice Output Communication Aids (VOCA), students communicate by touching a picture or word on a device that provides speech output. Many devices can be programmed to offer many different picture choices so the students can also combine pictures to make sentences. Some popular VOCAs include the Dynavox, Tango and Vantage Plus.



Here you will see a young girl using a VOCA to communicate.

Smart Phones and Tablets are also becoming a popular form of AAC. They are less expensive and less bulky than traditional VOCAs. Smart Phones and Tablets are also easy to navigate for most users.

Question: What are the pros and cons of each?

ANSWER

There are a number of pros and cons to using any of the Alternative and Augmentative Communication systems discussed in this Q and A.

Sign Language:

There are many pros to using sign language. First, it is a common form of communication

as we all rely on the use of gestures to communicate. For example, I might put my finger up to my lip to indicate I want a person to be quiet or I might point to an item I want. Second, for the person to use sign language, he or she does not need any additional tools or devices to communicate. A third benefit is that signs actually "look like" the object that the gesture represents. For instance, the sign for ball looks like the person is holding a ball in his or her hands. Finally, when using sign, the person can learn to put multiple words together in a sequence and can eventually sign full sentences and use this system for many different functions of communication including requesting, commenting and asking questions. Research has shown that sign language is a beneficial communication system for children with ASD and that those who use sign language may learn spoken language at a faster rate. This is likely because sign language requires the child to engage in motor planning just like speaking does.

While there are many pros, there are a few cons to using sign language as a communication system. The general public does not understand sign language, thus reducing the number of communicative partners that the child might have. Additionally, a child who has difficulty with motor imitation skills may have difficulty with learning the signs and performing them accurately.

Determining whether to use sign does require taking these factors into consideration; however, they should not be deterrents to using this system. Typically, those who will be communicating with the person with ASD can learn the signs needed to communicate effectively and can even learn to interpret the signs even when they are not performed perfectly.

Exchange Communication:

Exchange communication is a popular system because of the many benefits. First, it is a visually based system. Since many individuals with ASD process visual information effectively, this system can be learned very quickly. Second, it can be tailored to the learning needs of the person as the person can learn to exchange objects, pictures, drawings or text. Third, exchange communication uses concrete visual representations that are easily understood by the communication partners.

While the system can be very effective there are some important considerations. Not all individuals with ASD will be able to easily discriminate the objects or pictures they are to exchange to receive a desired item. For some, this takes considerable time to learn this step. Additionally, when using an exchange system, it can be cumbersome and difficult to ensure the communication items are always accessible in every environment. Certainly, with any communication system it must be ensured the person can communicate no matter where they are, even if they are on the playground or at the grocery store. Exchange communication systems also require constant maintenance and upkeep such as taking new pictures or gathering new items. However, this is often because the person is learning and is building communication skills!

Voice Output Communication Aids:

The VOCAs have the same pros and cons that the exchange system has and have some additional benefits. Since they have auditory output, they provide a way for the person with ASD to gain attention from the communicative partner without requiring visual proximity. This may be important for some individuals who may struggle with interactions. Additionally, VOCAs can be programmed to communicate long messages more closely approximating conversation. When using VOCAs, it is important to consider the durability of the device to ensure they can withstand any bumps or knocks inflicted as well as the cost as many can be quite expensive. Furthermore, VOCAs will need to be programmed and maintained, requiring frequent upkeep from caregivers and teachers.

Question: How do teachers choose which AAC device to use with their students?

ANSWER

Alternative and Augmentative Communication should be considered for a person who has an expressive communication impairment that impacts his or her ability to use oral language effectively. When determining the type of AAC to teach, it is recommended for the decision to be made by a team of professionals who can assess the person and identify the best system based on use and functionality. The lead professional on this team will typically be the speech-language pathologist who is to work closely with the caregivers. Others who might

be involved include but are not limited to occupational therapists, physical therapists, early interventionists, and special educators.

While assessment is important when choosing an AAC device, ultimately the choice should be based on the child's preferences and strengths. There are no prerequisites for AAC use. Therefore, while assessment is important, giving a child a means of communication is more important! In some instances, choosing a system that matches the person's strengths or interests and teaching its use is the best route and gives the person a way to communicate sooner.

As AAC is considered, it is important to also remember that many individuals may use more than one means to communicate. For example, a child may use sign language to say "yes", "no", and request the bathroom while using picture exchange to ask for food items, drink items and favorite toys. We all use multiple modes of communication so it stands to reason that the person with ASD may benefit from using more than one system as well.

Question: How do caregivers and educators teach an individual to use an AAC device?

ANSWER

There are a number of strategies that caregivers and educators can use to teach a person to use an AAC device. The following list provides some suggestions that may facilitate a student's learning to communicate.

- Begin teaching using items that are highly motivating for the person.
- Teach concrete words first. For instance, teach him or her words for their favorite items such as 'ball,' 'cookie,' 'juice,' etc. Refrain from teaching vague terms such as "please" and "more".
- Always, pair spoken words with the use of an AAC device during intervention; even if the device is being used to supplement or replace spoken language.
- When first starting AAC intervention, reinforce the individual by providing the desired, highly motivating item immediately after he or she uses the AAC device to communicate. It is also helpful to reinforce attempts to communicate. At the beginning of intervention, reinforce the person with the motivating toy, food or drink even if he or she does not use the device correctly but makes a reasonable attempt.

- Build AAC intervention into the person's natural environment. Identify times or activities throughout the day to perform AAC intervention. Remember to focus on his or her motivations.
- Provide a large number of opportunities to work on and practice the skill. The person will not learn to communicate without ample opportunities to practice. Try to provide the person with hundreds of opportunities to communicate each day.
- Model how to use the AAC by showing the person how to make the sign, exchange the item or activate the device.
- Prompt the person when teaching the use of the AAC system. Individuals with ASD learn through prompts. A prompt is a cue which helps the person know what to do. We can provide many levels of prompts. They include hand-over-hand physical assistance, partial physical assistance, a gesture (e.g. pointing to the picture), or even a verbal cue. When teaching AAC, begin providing prompts which help the person understand what he or she is to do, then gradually fade the prompts after the person begins to master the skill.

SUMMARY

Many individuals with ASD have difficulty learning to use spoken communication. There are many different types of Alternative and Augmentative Communication systems that may be used to either replace or to supplement oral language. Many caregivers of children with ASD are concerned that the use of AAC will impede their ability to speak using words. However, research has shown that many AAC interventions facilitate speech production. Because each person is unique and has individual strengths, each will benefit from a different type of communication system. The most common forms of AAC are sign language, exchange communication, and Voice Output Communication Aids (VOCAs). It is important to note that selection of an AAC device should be based on the needs and strengths of each individual person. A team led by a speech-language pathologist may be instrumental in selecting an appropriate system. Regard-

less of how the system is selected, it is critical for each person to have an effective means of communication as quickly as possible.

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