

Augmenting the Speech of People Diagnosed with Autism/ASD.

Augmenting speech

Individuals are described as having a severe communication impairment (SCI) or complex communication needs (CCN) when their speech and handwriting are insufficient to meet their communication needs. The terms are usually used in relation to people with no speech or very little intelligible speech, but they may also be applied appropriately to people whose speech, while clear and fluent, is still not meaningful or representative of their real thoughts.

Impaired speech may be replaced or augmented by gesture and body language, hand signs, spelling, and specially developed communication aids. These strategies may all be described as augmentative communication, or AAC (which stands for Augmentative and Alternative Communication—‘augmentative’ communication is added on to speech, ‘alternative’ communication is used instead of speech).

When to start

Everybody with a diagnosis of autism who has significantly less functional speech than their age peers should be assessed by a communication specialist. The aim of intervention should be to help the person communicate as fluently as possible, using any strategies which work for that person.

Augmentative strategies should be introduced to young children as soon as it becomes apparent that speech is likely to be significantly delayed, to ensure that they don't miss out on social and learning experiences requiring speech.

Will using an augmentative strategy adversely affect speech?

Often families are anxious that use of augmentative communication will inhibit speech. In fact, every indication is that the reverse is true. Most of the published research concerns children who augmented their speech with communication boards or manual sign. Additionally, most people who have worked in the AAC field over the last few years have observed significant speech improvements in some people using communication aids which talk.

For example one of my current students, ‘Matt’, a 4-year-old with autism and very limited clear speech, who hated being read to, took his new Cheaptalk 8 home and played the *Hairy Maclary from Donaldson's Dairy* overlay repeatedly, while looking at the book. He quickly learnt to say everything on that overlay clearly. The same strategy worked for games such as *Simon Says* and also, very importantly, for basic social utterances.

Significant speech improvements have also been documented in some older people who use computers or communication aids which speak what the user types.

Finding the right augmentative strategy

Unfortunately it is not easy to replace the flexibility, fluency and portability of speech. Manual sign is as portable as speech (like your tongue, your hands go everywhere with you) but only people who know sign will understand you. A communication book containing lots of pictures and words will be understood by more people but is a nuisance to carry round and can't be used in the swimming pool, or to talk to a number of people at the same time. An electronic voice is great for talking to a number of people, but the batteries go flat. And it doesn't respond well to being dropped or getting wet. And so on.

Every augmentative communication strategy has pros and cons. In selecting communication strategies for your child or your student, account has to be taken of these, in addition to the physical and sensory skills of the users, their academic skills and their communication needs.

It is rare for any user's overall communication needs to be met by one device or one strategy, partly because most people with severe speech impairments also find hand-writing difficult. The need for specialist training of communication partners must also be considered when choosing a strategy.

Strategies for augmenting speech

Gesture and body language are used to some extent by almost everyone. Some formalized gestures, such as nodding the head for 'yes' and shaking for 'no', are powerful, but there are intrinsic limits on the sophistication of communication obtainable by gesture and body language alone. While a person may respond to questions or make basic needs understood with gestures, carrying on a conversation is virtually impossible.

Sign Language—hand signs are often taught to children with delayed speech. They are useful, but require good hand skills. Unfortunately many people with SCI have difficulty reproducing the sequences of fine movements necessary for signing (and handwriting). As a result, they often end up able to recognize many more signs than they can produce. And, of course, hand signs are only useful if everyone the child interacts with recognizes the signs.

The **Picture Elicited Communication System (PECS)** is a strategy aimed at encouraging children who find speech difficult, particularly children with autism, to initiate communication by taking a card with a picture or symbol of a wanted item to an adult. Because the user selects symbols by grasping rather than pointing, PECS symbols may be used successfully by people who find pointing difficult. PECS is a useful strategy for getting basic needs met and avoiding frustration, but by itself it allows only limited communication, due to the obvious vocabulary limitations. Users are sometimes encouraged to

assemble strings of symbols to create sentences, but, as with symbol or word boards, the range of possibilities is very limited.

Communication aids are devices specifically developed or adapted for use by people with severe expressive impairments. Because these people have very varied skills, needs and problems, there are many communication aids, ranging from simple communication boards to lap-top computers which speak. Some communication aids require literacy, but many do not.

Communication boards or books represent language in words, photographs or specially drawn symbols. There are many symbol systems (Blissymbols, Picsyms, Compic, etc) but they all share the same limitation—a communication board user can only say what the person who assembled the board or book thought was necessary or suitable. It is impossible to provide enough symbols or phrases to cover all situations, and the larger the number of items the harder the system is to use.

VOCAS or **voice output communication aids** are electronic communication aids which talk, either in synthetic speech or in digitized human speech. There are many of these, ranging from single-utterance devices (e.g. BIGmack) to aids which may contain thousands of utterances (e.g. Vantage) and text-to-speech devices which say anything which is typed (e.g. Lightwriter). These devices are also called Speech Generating Devices, or SGDs.

Spelling gives people without fluent speech access to an unlimited vocabulary understood by most of the people with whom they come in contact. Spelt communication loses the inflection of speech and sign, but it is nonetheless the most empowering non-speech communication strategy. Because it is relatively slow, spelling requires intense concentration on the part of the speller and patient communication partners. People who can spell but cannot write can use keyboards or alphabet cards.

Visual strategies include calendars, schedules, choice-boards and menus, transition/travel helpers, task organizers and so on. Providing information in a clear visual form helps people to be sure about what is happening and what they are expected to do. Visual strategies foster the development of both literacy and independence skills, but they serve primarily an input role, providing information rather than being a means of expression, and should be used in conjunction with individualized expressive communication programs.

Communication aid access

'Access' is a specialized term when used in augmentative communication. It refers to HOW communication aid users activate their communication aids. Many people who need to augment their speech have difficulties using their hands. These may be due to

obvious problems such as paralysis or severe tremor or due to less obvious problems such as impulsivity or perseveration. Whatever the difficulty, there are ways around it. This is where a specialist augmentative communication therapist or team has an important role – in establishing why potential communication aid users have difficulty in using their hands, and what the best alternative access strategies are.

Unfortunately for people with autism who have pointing difficulties, it is easier to help potential communication aid users who also use wheelchairs, because large devices that more easily accessed can be set up on a wheelchair but not carried around.

Facilitated Communication Training

Facilitated communication training is a strategy for teaching people who need to use AAC to use communication aids with their hands. It is particularly appropriate for people who can move their hands and arms freely but who have difficulties with other aspects of communication aid use such as motor planning, eye-hand co-ordination, scanning displays, index-finger isolation and pointing. It is often used with people who are diagnosed as autistic.

In facilitated communication training (FCT) a communication partner (facilitator) helps a communication aid user to overcome difficulties in hand use and develop functional movement patterns. The immediate aim is to allow the aid user to make choices and to communicate in a way that has been impossible previously.

Practice using a communication aid such as a picture board, speech synthesizer, or keyboard in a functional manner is encouraged, to increase the user's physical skills and self-confidence. As the student's skills and confidence increase the amount of facilitation is reduced. The ultimate goal is for students to be able to use the augmentative communication strategies of their choice independently.

Every effort should be made to provide people who generally use aids with facilitation with the skills to access aids containing a limited range of options, such as YES/NO boards and multiple-choice boards, independently, so they can communicate in the absence of a facilitator.

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