

Speak to Me: Effective AAC Devices for Post-Brain Trauma Adults

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Addressing speech limitations through AAC

According to the 2000 U.S. Census, as many as 2.7 million people in the United States suffered from speech communication limitations at that time.ⁱ The rise of documented cases of autism in children, along with the increase of general population numbers, suggest that figure to be significantly inflated as of 2008.

Since the number of Americans with speech and communication challenges is continuously increasing, so is the need for cutting-edge tools to assist medical professionals and the patients who receive their help. Speech therapists work directly with patients through an individualized campaign of speech therapy and use of AAC (augmentative and alternative communication) devices. It is important for primary physicians, hospital staff, and insurance providers to also be familiar with the latest AAC device technologies. This allows professionals to empower the decision-making team (the patient, their family, and caregivers) with the most current information to make informed decisions.

The two most important values expressed by people who rely on AAC are:

- Saying exactly what they want to say, and
- Saying it as fast as they can.ⁱⁱ

This document examines the challenges affecting the post-brain trauma adult user groups with speech disabilities, and how medical professionals may be empowered to assist them through a program involving the latest in AAC device technology.

Problems involving AAC device technology and stakeholders

AAC device technology has been in use since the 1980s and continues to develop. Understandably, such devices have largely been modeled for the autistic community and severely disabled, with an emphasis on children and assistance for their learning opportunities.

While such targeted individuals are primary users of these devices, and with a growing autistic pattern among children, the need for AAC devices and cutting-edge

device technology to address such issues is only increasing. However, it is important to make sure the needs of users falling outside of the spectrum of autism and children's learning opportunities are also addressed; such as adults suffering from speech limitations due to causes such as brain trauma.

There are many challenges associated with this subject; however the following present the most acute problems in need of addressing:

1. **Connecting to users.** An effective system needs to be in place to overcome the challenges in connecting those in need to the process of evaluation and consideration for effective ACC devices.
2. **The need for effective devices for post-brain trauma adults.** A majority of the AAC devices available do not adequately accommodate the needs of post-brain trauma adult users who carry a varying range of speech, motor, and cognitive abilities.

More medical professionals, including primary care physicians and professionals outside of speech therapists, need to stay informed on the availability of the latest AAC device technology. By exposing a more widely informed base of professionals to these devices, a larger audience of patients qualifying as potential matches may be achieved; especially those patients who in the past were not considered and through reassessment may now qualify due to improved AAC device technology.

The purpose of these efforts and examination of these problems is to identify what barriers exist between the user group in question and their ability to be connected to effective AAC devices. The desired outcome is that speech therapists and the medical community will be more effective in connecting AAC devices to their patients. That will hopefully lead to the recipients in the user group increasing (the patients), and empower their communication abilities so they may lead more productive, fulfilling, and happy lives.

AAC history and previous approaches

In order to understand the problems involving awareness and limitations with AAC device availability and technology, it is necessary to review the history of AAC evolution and its societal awareness. The following history is taken from *Focus on Autism and Other Developmental Disabilities*, published on December 22, 2004.

AAC emerged in the 1950s and 1960s as an avenue for communication for those individuals (largely people with significant disabilities) who had not developed the more traditional communication skill of speech. During its brief history, AAC has undergone remarkable changes. For example, the fundamental nature of assessment in AAC has evolved from a candidacy model, in which persons were to demonstrate eligibility, for an AAC system by attaining certain prerequisite skills, to the contemporary universal model, which is based on the premise that anyone can

- Choose portable devices. Portability allows nonspeaking individuals to take their "voices" anywhere.
- Consider flexible devices. Look for devices that offer a variety of access options.
- Require excellent voice quality. Sound projection and quality are obviously important. See if the voice output can be personalized.
- Look for a device that "grows" with the user. Think about an individual's needs a few years down the road. Can vocabulary be added and used quickly? Can the person use vocabulary independently?
- Choose durable, reliable devices. Can the device withstand the stress of daily usage? Look for reliability. Make sure the battery life lasts long enough to meet a user's needs.

These guidelines turn the focus toward the functionality and compatibility of AAC devices in the marketplace. The analysis is intended to shed further light on the options available to speech therapists, hospitals, trained medical professionals and insurance providers from this product line so they may make more informed decisions to accommodate the communication needs of their varied range of patients.

While post-brain trauma adults may fall outside the typical realm, that doesn't eliminate the fact that through evaluation and testing an AAC device may fit their communication needs perfectly, resolve their limitations, and allow them to lead a more productive life with minimal communication issues and resulting frustrations.

Research indicates that ACC devices from a high majority of the companies don't offer a speech augmentation solution for an adult suffering from brain trauma. The following section analyzes the AAC device product line within Dynavox Technologies, who is considered to have the most effective device solutions for augmentative communication. Studying the devices offered by this company illustrates their superiority to other product lines (listed in an addendum at the end of this document) in terms of versatility and how a wide variety of users are accommodated.

Products to consider for adult AAC device solutions

Through its variety of devices in its product line, Dynavox can provide solutions that can meet a variety of challenges faced by an adult suffering from speech limitations due to brain trauma. Of all the manufacturers in the industry, Dynavox supplies tools that serve the widest range of physical and cognitive capabilities in its users.

The interview with the president of Dynavox Technologies is indicative of the experience and leadership in the company set in motion from the top down. This validates the areas of expertise the company is in tune with in the industry, which is beneficial to seekers of AAC devices. There is compelling evidence to suggest that Dynavox Technologies is in tune with the diversity of their users, and knowledgeable about the breadth of their needs.

Proven design. The iChat3 combines Impact communication software and sleek styling that appeals to augmented communicators of all ages with existing or emerging literacy skills. Adults and teens will appreciate each device's professional, sophisticated appearance, while children will benefit from their small, lightweight designs.

The iChat is the Ideal Choice for symbol-based communicators, allowing them to compose and deliver messages effortlessly with straightforward Picture Communication Symbols (PCS)[®] representing words, phrases and complete sentences. It is also available in bilingual Spanish/English.

Clear, flexible voice output. New Acapela voices provide more choice and higher quality voice output, and the devices include the popular DECTalk speech synthesizer and capacity for over 200 minutes of digitized speech recordings.

Ready to run. Pre-loaded with programmed page sets designed by speech-language pathologists, the iChat3 is ready to run right out of the box, altogether eliminating the need to create custom pages for every occasion. You can create or edit new pages on a Windows PC with the included PC Editing software or directly on the device.^{vi}

In conclusion, Dynavox provides solutions that enhance a person's ability to communicate, including post-brain trauma adults with a wide range of motor and cognitive abilities. Review and analysis of the design of the Dynavox Technologies ACC devices illustrate how the product line presents the most compelling communication solution for speech therapists and medical professionals working with such a user group. The wide product range, advanced technology, ease of use, and other factors bring Dynavox Technologies as the primary manufacturer and a one-stop-shop for AAC solutions.

Costs and benefits of an effective ACC device product line

As more details are studied and revealed about the various devices offered by Dynavox, it becomes apparent that the benefits of using such a device are limitless. Post-brain trauma adults with a variety of speech, motor, and cognitive abilities can be accommodated and matched up to a device that will fit their needs and lifestyle.

Dynavox presents affordable solutions that begin with financial assistance. Many of Dynavox's customers pay for their devices through Medicare, Medicaid, private insurance, or school funding. Typically the speech therapist and Dynavox representative will assist the patient and their family with the processing of the appropriate paperwork to ensure a smooth process for device acquisition.

As a resource to help answer financial assistance questions, Dynavox staff assists their customers by walking them through the funding process. The following page provides contact information to connect you with staff who can answer your questions.