

# Empowering Communication: The Crucial Role of Speech and Language Therapists in Augmentative and Alternative Communication Practices

**Key words:** Augmentative and Alternative Communication, Speech and Language Therapy, Complex Communication Needs, Service Delivery, Case Studies.

## ABSTRACT

Traditionally, the profession of Speech and Language Therapy has been associated with the assessment and intervention of children and adults with speech, language, communication, and swallowing difficulties. A lesser-known area of speech and language therapy relates to the use of augmentative and alternative communication. In this article, we explore the role of Speech and Language Therapy in the field of augmentative and alternative communication as well as provide the reader with basic information on how this can support communication. Four case studies are presented to demonstrate how augmentative and alternative communication can support individuals to achieve communicative competence.

## INTRODUCTION

Speech and language therapy (SLT) is an area of practice that aims to provide support and treatment for children and adults who have speech, language, and communication needs (SLCN), as well as providing services to individuals who have difficulties with eating, drinking, and swallowing.

One area of practice requiring specific SLT expertise is augmentative and alternative communication (AAC). Speech and language therapists (SLTs) working in this field are found in community settings. In many countries, however, SLTs also work within specialist teams that specialize in the area of AAC and assistive technology which may include other allied health professionals such as occupational therapists. In this article, we explore the role of the SLT in the field of AAC as a means of supporting individuals with severe speech, language and communication difficulties to participate in society. The first part of the article deals with the basic concepts of AAC, who can benefit from it, and the role of the SLT within this field of practice.

In the second part of this article, we will provide four case vignettes to demonstrate how AAC can be used to successfully support children and adults to communicate and be more independent.

The term AAC refers to systems and/or strategies that can be used to augment an individual's communication skills, either temporarily or in the longer term.<sup>1</sup> AAC also includes the interventions required for the individual to attain communicative competence. The recommendation for AAC systems and/or strategies and interventions is consistent with Article 19 of the Universal Declaration of Human Rights which declares the right to communicate for all individuals including those with communication disabilities.<sup>2</sup> This is further supported by Article 21 of the Convention on the Rights of Persons with Disabilities.<sup>3</sup> SLTs working in this area are therefore uniquely placed to support individuals with communication disabilities to realize their rights and their full potential.

AAC includes unaided and aided systems and strategies. Unaided strategies make use of the body and include manual signing, the use of gestures, and body language to support communication. Aided systems are classified into low-tech and high-tech systems. Low-tech systems are often paper-based and not battery-powered. Examples of low-tech AAC systems include communication books as well as the use of pen and paper to write down messages to support communication expression. High-tech AAC systems include devices designed specifically to support communication, referred to as dedicated communication aids. In the last 15 years, mainstream technology, including tablets with special AAC software or applications, has also been utilized as communication aids. High-tech AAC systems can provide voice output which may be synthesized or digitized as well as provide access to robust language expression.

AAC is recommended for a small percentage of individuals with communication disability who are referred to as having complex communication needs (CCN). The term CCN refers to individuals who have difficulty communicating in everyday situations using speech. They may have difficulty producing or understanding speech.



At present, no local data is available on the number of people who could benefit from AAC in Malta. It has, however, been suggested that this need could account for 0.5% of the population in the UK and that 97.5% of these have nine specific medical conditions as follows: dementia, Parkinson's disease, autism, intellectual disability, stroke, cerebral palsy, head injury, multiple sclerosis, and motor neuron disease.<sup>4</sup> Furthermore, it is estimated that 97 million people worldwide may benefit from AAC.<sup>5</sup>

The goal of AAC is to provide individuals with effective ways to express themselves, participate in social interactions, engage in meaningful communication with others, and improve their overall quality of life. The selection of AAC depends on the individual's communication abilities, motor skills, cognitive abilities, and personal preferences. Often, a combination of both aided and unaided AAC methods may be used to provide the most effective and versatile communication support for an individual. The goal is to tailor the AAC system to meet the specific needs and goals of the user.

The feature-matching process in AAC assessment involves systematically matching the features of AAC systems to the specific needs and abilities of an

individual. SLTs play a crucial role in the process of feature-matching considering the following:

- **Assessment of communication skills** - the SLT conducts a comprehensive assessment of the individual's current communication abilities including their receptive and expressive skills, speech intelligibility, and cognitive skills.
- **Identifying expectations of individual and family** - the SLT explores what expectations the individual and family have for the use of the AAC system and/or strategy, and which contexts it will be used in, for example, in school, work, and/or leisure. The level of support the individual has is also taken into consideration.
- **Determining access method** - the individual's physical and motor capabilities are taken into account to determine the most suitable access method for the communication system or strategy. This can be direct access through the use of hands, body parts, or eye pointing, or indirect access such as using a switch to control the AAC system. Switches can be activated using multiple parts of the body. Access assessments are usually carried out in collaboration with occupational therapists to determine the most consistent and efficient access method.

**SARAH, 45 YEARS OLD, WAS DIAGNOSED WITH AMYOTROPHIC LATERAL SCLEROSIS AND FACED THE GRADUAL LOSS OF HER ABILITY TO SPEAK ... USING VOICE BANKING WITH AN APPROPRIATE AAC SYSTEM, SARAH WAS ABLE TO MAINTAIN MEANINGFUL CONNECTIONS WITH LOVED ONES, EXPRESSING HERSELF AUTONOMOUSLY THROUGH A VOICE OUTPUT COMMUNICATION AID**

- **Determining vocabulary representation and size**
  - Vocabulary can be picture-based, symbol-based, phrase-based, or text-based. The selection is tailored to the individual's comprehension level and cognitive skills. Vocabulary size consists of determining the range of words and topics that are made available to the individual, depending on the contexts the individual will need to communicate in.

Based on assessment findings, the SLT's role is to make recommendations for the appropriate AAC systems and/or strategies when appropriate. If high-tech AAC is recommended this would include the appropriate hardware and software solution for the individual. Part of the SLT's role is to set up the AAC system, particularly if it is aided, as well as to support the appropriate selection of vocabulary. Training to the individual, family, members, caregivers, and relevant professionals on how to use and support the AAC systems and/or strategy is also provided. Goal setting is an important component of the AAC process to ensure the successful implementation of the AAC system. Throughout the feature-matching process, the SLT collaborates closely with the individual, their support network, and other professionals to ensure that the chosen AAC system and/or strategy aligns with the user's abilities, preferences, and communication goals.

The following is a set of four case studies demonstrating how AAC is used in practice. The names of the clients have been changed.

### **CASE STUDY 1. SUPPORTING PARTICIPATION BEYOND COMMUNICATION.**

Fourteen-year-old Emily, diagnosed with cerebral palsy, faced communication challenges due to limited speech abilities. A SLT recommended and implemented a dedicated communication aid with a touch screen and customized software which Emily could access using a switch. The switch was activated using her right hand. The vocabulary was represented on the software using symbols and a keyboard with word-prediction was also available for her to spell words. Through comprehensive intervention, Emily and her family learned to use the communication aid, empowering her to express her thoughts, participate in class, and build social connections. Ongoing support from the therapist ensured the AAC system adapted to Emily's evolving needs; for example, by using the communication aid, Emily was given access to social media such as Facebook, Messenger and Instagram. She learned how to use YouTube and the Internet to search for information. This case demonstrates the transformative impact of AAC in enhancing communication for children with cerebral palsy.

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### CASE STUDY 2. DEVELOPING COMMUNICATIVE FUNCTIONS.

Alan, an autistic 3-year-old child, communicated mainly by taking adults to things that he wanted. When he did not want to do something, he screamed and threw himself on the floor. Occasionally he uttered some words, but these were not used functionally. The regular SLT introduced picture exchange communication in which Alan was taught how to exchange a picture symbol of a motivating object/activity with an adult to request what he wanted. The SLT also focused on teaching him to point to request desired objects and to wave to greet adults. As Alan began to progress, the therapist referred him to a specialist AAC team to consider high-tech AAC. The team recommended a dedicated communication aid for Alan and specific intervention strategies to support him in developing communication beyond requesting and greeting. At ten years of age, Alan was using the communication aid to make phrases to request his needs, express opinions, greet others, and express negation. He also began to use speech more frequently in the appropriate contexts, demonstrating how AAC can also support the development of speech, language and communication.

### CASE STUDY 3. PRESERVING IDENTITY THROUGH VOICE BANKING.

Sarah, 45 years old, was diagnosed with amyotrophic lateral sclerosis (ALS) and faced the gradual loss of her ability to speak. Collaborating with her SLT, she recorded a variety of phrases and expressions using voice banking technology. This preserved her natural voice as her ALS progressed. Following the AAC assessment, the banked voice was matched to compatible hardware and software to allow Sarah to use her banked messages. Using voice banking with an appropriate AAC system, Sarah was able to maintain meaningful connections with loved ones, expressing herself autonomously through a voice output communication aid. As Sarah's ALS progressed and her physical abilities diminished, the mode of access to the device was changed from access using touch on the screen to eye-gaze technology. Sarah was able to use her AAC system to communicate but also to surf the internet, use social media apps, read the newspapers, and watch videos/movies.

### CASE STUDY 4: AUGMENTING SPEECH RECOVERY POST-STROKE.

Mark, aged 60 years, experienced aphasia following a stroke, impairing his communication abilities including speech clarity. His SLT introduced AAC strategies to supplement his communication recovery, starting with low-tech tools including communication boards to aid in comprehension and expression. Mark gradually transitioned to a voice output communication aid to help him in situations in which he was not understood. With consistent therapy and AAC support, Mark regained confidence in expressing his thoughts and needs, enhancing his quality of life post-stroke.

### CONCLUSION

The SLT plays a seminal role in the assessment and intervention of individuals with speech, language and communication needs. SLTs who work in the field of AAC, play a crucial role in ensuring that individuals meet their rights to communicate, to be independent and to increase their overall quality of life. SLTs are therefore essential guides in navigating the evolving landscape of AAC systems and/or strategies in a fast-changing technological world. As advocates for client-centered care, SLTs are capable of bridging the gap between medical diagnosis and practical solutions. This collaboration between healthcare professionals and SLTs can support adopting a more client-centered approach. If you, as family doctors, think you know someone who could benefit from AAC, please reach out to a Speech and Language Therapist.

### ADDITIONAL READING RESOURCES

- Communication Matters UK: [www.communicationmatters.org.uk/](http://www.communicationmatters.org.uk/)
- American Speech Hearing Association: [www.asha.org/practice-portal/professional-issues/augmentative-and-alternative-communication/#collapse\\_1](http://www.asha.org/practice-portal/professional-issues/augmentative-and-alternative-communication/#collapse_1)

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