

## **Feature Matching Considerations for AAC in Adult Neuro Rehabilitation**

Emily Churchill  
Jessica Murphy

### **Short Abstract**

This presentation examines the role of Augmentative and Alternative Communication (AAC) in adult neuro rehabilitation to meet diverse patient needs. We will discuss the varied characteristics of this population and their specific AAC requirements, supported by current research on AAC interventions for adults with acquired neurological conditions.

The core of our discussion will be the feature matching process, discussing AAC software and hardware features in light of individual client needs and current research. We'll showcase various features including visual scene displays, voice banking, pain scales, personal care tools, and word prediction capabilities. Software considerations will be explored, highlighting how different features address specific communication challenges and enhance patient autonomy.

We'll introduce resources for dynamic, person-centered assessments that adapt to patients' changing needs throughout their journey. This presentation aims to equip speech pathologists with knowledge and tools for implementing tailored AAC in neuro rehabilitation settings. By focusing on evidence-based, person-centered approaches, we can significantly improve communication support and rehabilitation outcomes for this diverse population.

### **Long Abstract**

Augmentative and Alternative Communication (AAC) can play a crucial role in services provided to a population of adults with acquired neurological conditions. This presentation examines the role of AAC in adult neuro rehabilitation to meet diverse and evolving individual needs. We will discuss the varied characteristics of this population, research based suggestions, specific AAC requirements, and briefly explore some tools for consideration.

The adult population presents a unique set of challenges for speech pathologists. Unlike developmental disorders, acquired neurological conditions often result in sudden and dramatic changes to an individual's communication abilities. These conditions can include stroke, traumatic brain injury (TBI), amyotrophic lateral sclerosis (ALS), and other progressive neurological diseases. Each of these conditions brings its own set of communication support needs, ranging from aphasia and dysarthria to cognitive-communication disorders (Beukelman et al., 2007). Throughout the presentation, we will underscore the importance of evidence-based, person-centered approaches in AAC implementation.

A key component of our discussion will include resources for dynamic, person-centered assessments. These assessment tools are designed to adapt to the evolving needs of individuals as they progress through their rehabilitation. We will explore how these assessments can be used to guide the selection and implementation of AAC interventions, ensuring that the chosen solutions remain relevant and effective throughout an individual's progression. The importance of ongoing assessment and adjustment of AAC strategies will be emphasized, reflecting the dynamic nature of neuro rehabilitation (Beukelman & Light, 2020).

At the heart of successful AAC implementation lies the feature matching process. This critical step involves aligning the capabilities of AAC devices and software with the specific needs, abilities, and preferences of individual clients. Our presentation will explore this process, drawing on the latest research and best practices in the field to highlight specific suggestions. We will discuss how factors such as cognitive status, motor abilities, literacy skills, and communication goals all play a role in selecting the most appropriate AAC solution for each individual.

One of the key focuses of our discussion will be some of AAC software and hardware features available to address the diverse needs of this population. Visual scene displays, for example, have shown promise in supporting communication for individuals with aphasia by providing contextual cues and reducing cognitive load (Dietz et al., 2018). Voice banking, another innovative feature, allows individuals with progressive conditions like ALS to preserve their vocal identity, maintaining a sense of self even as their natural speech abilities decline (Cave et al., 2020).

We will also note specific elements within AAC systems, such as pain scales and personal care tools, which can significantly enhance client autonomy and improve the quality of care by allowing individuals to effectively communicate with their healthcare providers. Additionally, we will discuss the role of word prediction and other language support features in facilitating communication for individuals with varying degrees of language impairment. The importance of customization and adaptability in AAC software will be emphasized, highlighting how these features can, and should be, tailored to meet the changing needs of individuals throughout their rehabilitation journey.

By focusing on evidence-based, person-centered approaches to AAC assessment, and thoughtful feature matching, we can significantly improve communication support for adults with acquired neurological conditions. As technology continues to advance and our understanding of neurological recovery deepens, the field of AAC in neuro rehabilitation holds immense promise for enhancing the lives of individuals facing communication changes.

## References

1. Beukelman DR, Fager S, Ball L, Dietz A. (2007). AAC for adults with acquired neurological conditions: a review. *Augment Altern Commun.* 23(3), 230-42. doi: 10.1080/07434610701553668. PMID: 17701742.
2. Beukelman, D. R., & Light, J. C. (2020). *Augmentative & alternative communication: Supporting children and adults with complex communication needs* (5th ed.). Paul H. Brookes Publishing Company.

3. Cave, Richard & Bloch, Steven. (2020). Voice banking for people living with motor neurone disease: Views and expectations. *International Journal of Language & Communication Disorders*, 56(10), 1111/1460-6984.12588.
4. Dietz, A., Weissling, K., Griffith, J., McKelvey, M., & Macke, D. (2018). The impact of interface design during an initial high-technology AAC experience: A collective case study of people with aphasia. *Augmentative and Alternative Communication*, 34(2), 119-129