REVIEW OF: Augmentative and Alternative Communication
for Persons with Aphasia By: Hux, K., Beukelman, D. & Garrett, K.[*]

Background Information

- Understanding the components of a conversation, specifically the forms of conversation of elderly adults, is important because most stroke survivors are over the age of 60. Since aphasia may affect their ability to engage in some or all segments of a conversation, it significantly impacts social interactions.

- Typical conversations consist of the following elements:

  1. **Greetings** – A conversation usually begins with a brief, generic message to indicate awareness of the other person, gain attention, and/or encourage engagement into a conversation. The types of greetings may vary depending on the age of the individual. For example, an adult may say "Hello. How are you feeling today?" and a teenager may say "Hey! What's up?"

  2. **Small Talk** – Following a greeting, individuals may exchange a brief message that requests or shares information about either participant such as, "What do you think of the weather?" or "How was your weekend?" Individuals may use small talk with a variety of communication partners because it is non-specific as compared to "individual-specific" such as "How is your hip?" In addition, small talk serves to extend greetings into further conversation.

  3. **Information Sharing** – Question-and-answer and storytelling tend to be the most common forms of information sharing. Question-answer serves to engage topics of mutual interest for the participants. Storytelling serves the purpose of instruction, entertainment, transfer of cultural traditions, and establishing relationships. Storytelling may occur as stories that:

     - Have occurred to the speaker personally (first person).

     - The speaker has learned from another source such as the news (second person).

     - Are used to teach lessons or highlight specific points (official stories).

     - Are made up by the speaker (fantasy stories).

  4. **Wrap-up and Farewell Statements** – Wrap-up statements usually precede a farewell statement to prepare a person for the end of the conversation. A wrap-up statement could be "Nice talking with you, we should talk soon" and a farewell statement may be "See you later" or "Goodbye".

- Research shows communication patterns in elderly adults indicate the following:

  - Although small talk may slightly decrease, use of storytelling and narratives increases.

  - Storytelling serves to "establish social membership with peers" with the bond of "common experience" (e.g., discussing participation in WWII).

  - Reference to the past occurs just as often as reference to the present.

  - A substantial amount of utterances are activity specific such as games or game playing.

- Research indicates that AAC may be:

  - Viewed primarily as a replacement for natural speech.

  - Introduced only at the end of intervention when it appears that restoration of natural speech is not achievable.

  - Provided only for individuals with severe or profound aphasia.

- AAC includes a wide range of strategies and techniques that are used to address the communication needs. AAC can potentially provide support to the following severity ranges of aphasia:

  - **Mild aphasia:** Although individuals in this category may primarily rely on natural speech, communication breakdowns secondary to anomia or word finding difficulties may still occur. Word lists may help to facilitate word retrieval or scaffold natural speech.

  - **Moderate aphasia:** In this category, the degree of language impairment limits the effectiveness and success of communicating daily needs. AAC strategies and techniques may serve to either supplement or replace natural speech as well as the ability to convey more complex (longer) messages or topics.

- **Severe aphasia:** At this level, natural speech is significantly compromised and individuals may rely heavily on AAC strategies and techniques to communicate. The ability to initiate or carry out a specific technique will vary and may require additional support from a communication partner to be successful.

- **Receptive Impairment:** If an individual has a significant impairment in the ability to understand others, AAC strategies and techniques would serve to augment or support comprehension. In this case, communication partners would facilitate comprehension using AAC techniques such as drawing, writing key words or using a rating scale.

Purpose of the Chapter

This chapter discusses how AAC techniques and strategies or communication devices can influence intervention with persons with aphasia (PWA) across the severity range. It targets the use of AAC to supplement or scaffold residual speech ability rather than replace it, enhancing participation in conversations. In addition, it identifies the components of a conversation, how these components relate to not only the PWA, but also its social impact and importance of considering the components when designing an AAC intervention program.

Key Findings

- The authors suggest that when Speech-Language Pathologists view AAC as only a replacement for natural speech, it may not be introduced until the end of intervention, leaving little time for training or practice of AAC strategies or techniques; subsequently rendering AAC ineffective, unsuccessful and/or unaccepted.

- The use of specific AAC techniques will vary depending on the severity of the aphasia, the situation or environment, the familiarity of the communication partner or the amount of assistance the PWA may need from the communication partner.

Note: In this summary, we will not discuss the entirety of the chapter's content. Rather, we will highlight the main concepts influencing the development of DynaVox Compass™.

- **Written Choice:** During the course of conversation, the communication partner may ask a question related to the topic and write down possible answers. The communication partner says each choice aloud and the PWA points to the choice indicating their response. This continues throughout the conversation and the amount of choices provided may vary depending on the aphasia severity (e.g., only two choices for a person with severe expressive and receptive aphasia). This strategy supports the idea that when using multiple modalities, such as speech and written choice, comprehension improves. Another variation of written choice is rating scales.

- **Rating Scales:** Rating scales provide a way for a PWA to express an opinion by assigning a value, similar to taking a poll or survey. For example, a rating scale may be a range of numbers (1-5) with 1 being very important and 5 being not important or labeled with a range of words "always, sometimes, never" or "bad to good". "Even individuals with severe expressive aphasia may understand the notion of rating scales and find them an effective means of conveying opinions" (p. 685).

- **Drawing for Expression:** In this technique, the PWA uses simple drawings, such as a map, to supplement natural speech. The drawing helps to guide the conversation by establishing the topic, adding details to clarify or extent the topic, or repairing a communication breakdown.

- **Partner Drawing:** In this technique, the communication partner uses simple drawings to supplement their speech and facilitate comprehension. Additionally, both the PWA and communication partner can continue to add to the drawing to enhance or clarify the intended message or topic.

- **Alphabet Board:** The alphabet board can supplement communication by pointing to the first letter, several letters or the entire word to facilitate comprehension.

- **Word Dictionary:** A word dictionary may be a list of words that the PWA has difficulty saying or lists of words in categories that he/she can use to self-cue, supplement speech, clarify or extend the conversation or topic.

- **Picture/Photo Dictionary:** This strategy is similar to the word dictionary but uses symbols (icons) or photos to represent words or messages. A picture dictionary may be modified to fit the aphasia severity. For example, an individual with mild aphasia may use it if they have difficulty reading to self-cue, while an individual with severe aphasia may use it to communicate needs, greetings and basic information or ideas.

- Communication Devices: Communication devices provide a voice output option for both message retrieval and formulation. A single button can retrieve a word, phrase or sentence for efficient communication. PWA access messages represented with a graphic symbol, photograph, word, or short phrase. Additionally, they may also create messages with access to an alphabet (spelling) or by combining words and/or phrases.

Application of Key Findings in DynaVox Compass™

- **Visual Scenes and Topics:** Clear, contextualized Visual Scenes are used to support successful communication. The visual image may be used to trigger speech, clarify speech or to access related messages to speak.

- **Access to Topic Messages:** Topic Messages can be used to trigger speech, assist in repairing speech and/or serve as an alternative to speech. Three types of Topic Messages provided are:

  1. **Topics/Topic Messages** provide individual messages that can be produced at will. For example, "Van Outing" has related Topic Messages such as "I'm ready to go." or "Where are we going?" under the Topic image.

  2. **Sub-topics** within the general Topic are identified by yellow Hotspots around a particular object (e.g., a "bench" or "picnic table" in the "Park"). Sub-topics can be used to encourage lengthier or deeper interactions. For each Topic Message and Sub-topic, we have four intents in columns – Questions, General Comments & Requests, Positives and Negatives.

  3. **Scripts** are a series of messages that appear in order to help you communicate in important situations. Scripts can be used to tell stories, share information back and forth, and to practice, as a cue for what to say verbally. Every Topic has three scripts that you can use "as is" or edit, or add your own.

- **Shared Communication Space:** Both users and communication partners have access to a variety of compensatory strategies to maintain successful interactions. Both participants can utilize the visual scenes and additional compensatory tools such as the Whiteboard and Rating Scale for co-construction of meaning as well as support expression and comprehension.

- **Whiteboard** – The Whiteboard is one of the easily accessible and broadly applicable communicative tools within DynaVox Compass™. It provides a Shared Communication Space for both the PWA and the communication partner to increase their participation in and understanding of the conversational topic through interactive drawing. Individuals will be able to store and retrieve previous drawings for use as a referent.

- **Rating Scale** – This tool supports Written Choice conversation as facilitated by the communication partner in a variety of conversations and settings as well as providing access to a pain scale with which many of us are familiar. The primary Rating Scale will be a horizontal line with arrows at both ends. The therapist/caregivers/PWA will have the following options:

  - With numbers (1-3, 1-5, 1-10).

  - With text (terrible, OK, great) or text with symbols.

  - Pain scale (1-10) with options of pained faces (no text).

- **Word Lists** – Word Lists are topical with semantic categories (e.g., food, drink, transportation, actions) linked to the toolbar. The PWA has the option to use the Word Lists to produce single words within a topical interaction or to clarify or extend the current conversation topic or message. The Word Lists are customizable, with the option of with or without symbols and sorted alphabetically or by favorites.

- **Keyboard:** The Keyboard has the option of being QWERTY, alphabetical or AEIOU and can be used to either spell a word letter-by-letter or, similar to the alphabet board, to self-cue or cue the communication partner to the first letter or letters of a word. If appropriate, an individual may also chose a Keyboard with Word Prediction that will predict a word as typed with or without symbols.

- **QuickFires:** QuickFires are messages that allow quick interaction in any conversation at any time, and in any place (e.g., Yes, No, Wait, What? Good, Bad, OK, Help). PWA can be use QuickFires as fillers, interjections, or generic comments. In DynaVox Compass™, the number of QuickFires is related to the number of topic messages (e.g., 20 Topic Messages, 20 QuickFires). Individuals can edit QuickFires as well as remove those they do not want to include.

- **Photo Album and Camera** – Both of these tools can be used for taking and storing photos of remnants (e.g., ticket, brochures, menus, daily or special events) to be used as Topic Pictures, a photo album, or pictures on buttons. This is supportive of topic initiation, storytelling and advanced AAC strategies.

*Hux, K., Beukelman, D. & Garrett, K. (1994) Augmentative and Alternative Communication for Persons with Aphasia. In Chapey, R. *Language Intervention Strategies in Adult Aphasia, 3rd edition*. *Baltimore: Williams & Wilkins*. (3rd ed., pp. 675-687). Baltimore: Lippincott Williams & Wilkins.