Treatment Efficacy Summary

AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

Cognitive-Communication Disorders

Resulting from Right Hemisphere Brain Damage

Damage to the right hemisphere of the brain (RHD), often due to stroke, can result in a variety of deficits in cognition and communication. Cognitive deficits affect one or all of the following areas: attention (including visuospatial neglect), memory, problem solving, reasoning, organizing, planning, and awareness of deficits. These deficits impact communication by decreasing the efficiency and effectiveness of comprehension, expression and pragmatics (a person's use and interpretation of verbal and nonverbal language in social interaction). Specific language deficits often affect non-literal language, alternative meanings, and other subtleties of language. Conversation may focus on insignificant details and speech may be rambling. Speech-language problems associated with RHD may be sufficient to interfere with the communication needed for daily living.

Disorders associated with RHD are a focus for speech-language pathologists. The existing clinical data for cognitive rehabilitation in general, and for adults with RHD specifically, provide some promise regarding treatment outcomes.

Cicerone reports "clear evidence supporting the effectiveness of cognitive rehabilitation" for impairments of attention, functional communication, memory, and problem solving[i]. While much of the evidence is from individuals with diffuse traumatic brain injury, many of the symptoms are similar to those associated with RHD, and the benefits may be similar as well. Additionally, cognitive rehabilitation has been endorsed by the National Institutes of Health (NIH) consensus panel (1998)[ii].

Specifically for adults with RHD, data from ASHA's National Outcomes Measurement System (NOMS) show that for patients with right hemisphere cerebrovascular disease who received speech-language pathology services, 73% improved in problem solving, 80% increased attention, 74% improved memory, and 77% improved in pragmatics. Treatments for visuospatial neglect have been shown to be effective primarily when they are intensive, encourage active scanning or internal cueing (as opposed to clinician-driven cues, such as "look to the left"), or involve left limb movement combined with scanning tasks[iii]. For broader cognitive-communication abilities, one outcomes study[iv] of individuals with RHD evaluated the benefits of an interdisciplinary program that focused on physical, emotional, vocational, speech and language function along with family education and support. Although improvement was not seen in all deficit areas, results suggested that the participants developed greater independence in daily living and returned to modified work programs.

The role of the speech-language pathologist is to assess patients with RHD to identify the specific deficits that are present along with preserved abilities and areas of relative strength in order to maximize functional independence and safety. The treatment plan should be based on each individual's goals and needs to address the deficits that diminish that person's ability to communicate efficiently and effectively. It should build upon and exploit strengths. Treatment implementation should be accompanied by data collection to assess the effectiveness of the treatments. Another important element in the treatment of adults with RHD is counseling family members and caregivers about a patient's abilities and deficits, especially since these cognitive-communicative deficits are often unfamiliar to the general population. Speech-language pathologists also serve as case managers to coordinate and ensure appropriate and timely delivery of a management plan.

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[i] Cicerone, K., Dahlberg, C., Kalmer, K., Langenbahn, D., Malec, J., Bergquist, T., Felicetti, T., et al. (2000). Evidence-based cognitive rehabilitation: Recommendations for clinical practice. Archives of Physical Medicine and Rehabilitation, 81, 1596-1615.

[ii] NIH Consensus Statement. 1998; 16:1-41.

[iii] Tompkins, C.A. (1995) Right hemisphere communication disorders: Theory and management. San Diego: Singular.

[iv] Klonoff, P.S., Sheperd, J.C., O'Brien, K.P. & Chiapello, D.A. (1990) Rehabilitation and outcome of right-hemisphere stroke patients: Challenges to traditional diagnostic and treatment methods. Neuropsychology, 4, 147-163.