NSW Speech Pathology
Evidence Based Practice Interest Group

Critically Appraised Topic (CAT)

CLINICAL BOTTOM LINE: Computer-only therapy can result in improved language across a range of communication modalities. Generalisation and maintenance effects remain unclear however computers can be considered as a mechanism for increasing treatment intensity in chronic aphasia.

Background and Objectives: The group was interested in determining whether computer therapy with minimal Speech pathology involvement might be a useful adjunct to face to face therapy and therefore might help to increase therapy intensity in people who are more than 6 months post stroke.

Clinical Question [patient/problem, intervention, (comparison), outcome]:
Is computer therapy in people with chronic aphasia efficacious?

Search Terms/Systems:
Search Terms: Aphasia, chronic, computer, therapy
Search Engines: CIAP databases, National Stroke Foundation Guidelines, Cochrane, Evidence Based Guidelines, Speech Bite, Psychbite, manual searching of reference lists.

Selection Criteria:
35 articles were initially located relating to this topic. 9 were selected for including in the CAT based on the following criteria:
-'Computer-Only Therapy': relates to treatment which is established and monitored by Speech Pathologist but where Speech Pathologist does not give therapeutic advice/feedback during the treatment.
-Chronic aphasia: > 6 months post onset of aphasia.
-Research articles less than 15 years old and with more than one participant.

Results:
Benefits were demonstrated with the use of computer-only therapy/programs in relation to script training, reading comprehension, naming, and multiple language modalities.
In most cases results were preliminary with small participant numbers (range n=3-25). The majority of studies represent level IV evidence (case series or single participant design) with 1 randomised control trial. (Please see attached table for summary of articles). Results indicate that computer-only therapy can result in improved language performance but the level of generalization (if any) remains unclear and it is also unclear whether treatment effects are maintained. Further research is also required in relation to whether more intensive computer-only therapy translates into greater improvements.
On a positive note, many studies demonstrated that people could learn to use computer programs even when they had not used computers prior to their stroke. Improved self perceptions of communication were noted where these measures were taken.
Use of computer-based programs (established and monitored by Speech Pathologists) may allow people with aphasia to participate in appropriate ongoing, and intensive intervention.

Clinical Group: Hunter Acquired Communication Impairment EBP Group

Date: December 2011

References:

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