CLINICAL BOTTOM LINE:
Remotely delivered computer therapy is efficacious for treated items when delivered to seven participants with chronic aphasia. There may be generalisation to untreated items.

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


Design/Method: A case series study with seven participants using an ABACA design, in which A represented a period of assessment with no treatment and B and C represented word-finding therapy.
- Initial assessment included naming performance on the Object and Action Naming Battery and a control task: the Sentence Comprehension Assessment. Assessments of word picture matching PALPA 47 and PALPA 48, oral reading, and patterns of response during word retrieval.
- 'Baseline measures repeated 6 weeks apart to determine stability
- Post therapy measures taken 2x: 1st within one week of program end, then at minimum of 6wks post treatment to establish maintenance
- Post treatment interviews conducted to determine participant perceptions of the program
- StepByStep computer software, developed specifically for the study, was loaded onto participants’ home computer by speech pathologist. Participants instructed to use programs as much as they chose, with remote monitoring by speech pathologist. After 3 months, a face-to-face assessment took place, then treatment continued for a further 3 months, monitored remotely by the speech pathologist.
- Tasks included: spoken and written word-picture matching, semantic association, reading and spelling, with range of levels of response, eg multiple choice, spoken response, keyboard response.
- Outcome measures: computer usage recorded via software, language assessment including naming battery, sentence-processing assessment and interviews.

Participants: 7 participants (6 M, 1 F) with chronic aphasia 2-12 years post stroke. Age range 53 to 66 years. All participants had word finding difficulty. 4 out of 7 had previous computer experience.

Experimental Group: As above

Control Group: None

Results: participants on average used the system for 2.45 hours per week (average 12hr 23 mins per month over the 27 week period). Statistically significant improvement for treated object naming for all participants, treated verb naming for 6 out of the 7 participants, 3 out of 7 participants showed generalisation to untreated items. Control assessment was stable. Post treatment interviews undertaken with participants revealed positive experience and perceived participant benefits.

Comments – Strengths/weaknesses of paper
Small sample size
Case series design limitations: cannot generalise results to population, only report on participants in study
Participants self-selected for study – possible selection bias, ie participants were motivated to continue therapy and open to computer use
Participant severity level not explicitly stated – only report on baseline measures
Unclear/insufficient explanation of why comprehension of sentences was a control task?
Lack of control over variable ‘amount of practice’ as this was driven by participants
Participant not followed up for a maintenance phase

Level of Evidence (NH&MRC): IV

Appraised By: Hunter  ACI EBP group  Date: November 2011