

## iCAHE JC Critical Appraisal Summary

### Journal Club Details

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Journal Club location	Queen Elizabeth Hospital
JC Facilitator	Selena Brady
JC Discipline	Multi-D
CAT completed by:	Matt

#### Question

What are the effects of using apps/technology for scheduling/calendars/external memory aid with patients with cognitive impairment and/or elderly patients to improve organisation and recall of appointments and information?

#### Review Question/PICO/PACO

**P:** Elderly patient's or patients with cognitive impairment

**I:** Apps/technology for scheduling/calendars/external memory aid

**C:** Not using technology

**O:** Organisation and recall of appointments and information

#### Article/Paper

Charters, E., Gillett, L. and Simpson, G.K., 2015. Efficacy of electronic portable assistive devices for people with acquired brain injury: a systematic review. *Neuropsychological rehabilitation*, 25(1), pp.82-121.

*Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).*

**Article Methodology:** Systematic review



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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p><b>Did the review address a clearly focused question?</b>                      What is the efficacy of electronic portable assistive devices for people with acquired brain injury</p>
2	✓			<p><b>Did the authors look for the appropriate sort of papers?</b>                      Looked at intervention studies (group, n-of-1)</p> <p>Research designs across the 23 studies included one RCT, four single participant trials, and 18 case series or cohort studies.  <b>Is it worth continuing?</b>  <b>YES</b></p>
3	✓			<p><b>Do you think the important, relevant studies were included?</b>                      Ovid (Medline, pschyinfo etc) and Cinahl databases were searched. - Certainly could have looked at more databases.</p> <p>ie. Cochrane Library, Emcare, PubMed, EMBASE, JBI Library of Reviews</p> <p>Adequate search terms used</p> <p>A second search was also conducted</p> <p>A manual search was conducted for additional publications from the reference lists of obtained articles with the same inclusion criteria applied</p>
4	✓			<p><b>Did the review's authors do enough to assess the quality of the included studies?</b>                      Study quality was rated by the PEDro (Physiotherapy Evidence Database) scale, (randomised controlled trials), the Downes and Black tool (other group intervention studies), and the Single Case Experimental Design tool (single participant studies). Levels of evidence were determined using five levels of classification based on the Spinal Cord Injury Rehabilitation Evidence table.</p> <p>Independently rated by two authors</p>
5	✓			<p><b>If the results of the review have been combined, was it reasonable to do so?</b>                      Qualitative synthesis. No metaanalysis</p> <p>Yes it is reasonable not to combine the results in a metaanalysis as the data is heterogenetic. Different study designs, different data collected, different interventions and devices used.</p>

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6		<p><b>What are the overall results of the reviews?</b>                  Results found no Level 1 studies (RCTs with PEDro score <math>\geq 6</math>), four Level 2 studies and 10 Level 3 studies. There was insufficient evidence to recommend any practice standards, but sufficient evidence to recommend the use of electronic reminder systems in supporting the everyday functioning of people with acquired brain injury as a practice guideline. Higher quality studies are required to support a broader range of compensatory roles that electronic portable assistive devices have the potential to play in neurorehabilitation and the long-term support of people with acquired brain injury.</p> <p>Authors comment: Overall, the majority of studies (21/23), regardless of the electronic device used, reported positive results for at least some of the outcomes under investigation. – very broad</p> <p>From the six studies which reported effect sizes, there were eight analyses for which effect sizes can be reported. Two findings were “medium” in magnitude and six were “large”. Medium effect sizes were reported for cueing/reminding using a mobile phone or voice organiser. Large effect sizes were reported for cueing/reminding using Neupage, a PDA, a voice organiser, or other electronic memory aid; and for navigating using audio prompting on a PDA.</p> <p>Authors concluded that results from the studies that targeted cueing or reminding, and which utilised the EPAD as a cueing tool, were the most robust among those reviewed.</p>
7		<p><b>How precise are the results?</b>                  Not vary. Does occasionally provide p-values. Mainly qualitative.</p>
8	<p>Journal Club to discuss</p>	<p><b>Can the results be applied to the local population? Choose relevant context issues. The following are only suggestions to prompt discussion.</b></p> <p><b>CONTEXT ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>– Infrastructure</li> <li>– Available workforce (? Need for substitute workforce?)</li> <li>– Patient characteristics</li> <li>– Training and upskilling, accreditation, recognition</li> <li>– Ready access to information sources</li> <li>– Legislative, financial &amp; systems support</li> <li>– Health service system, referral processes and decision-makers</li> <li>– Communication</li> <li>– Best ways of presenting information to different end-users</li> <li>– Availability of relevant equipment</li> <li>– Cultural acceptability of recommendations</li> </ul> <p>Others</p>
9		<p><b>Were all important outcomes considered?</b></p>
10		<p><b>Are the benefits worth the harms and costs?</b></p>
11		<p><b>What do the study findings mean to practice (i.e. clinical practice, systems or processes)?</b></p>

12	<p><b>What are your next steps?</b>  <b>ADOPT, CONTEXTUALISE, ADAPT</b></p> <p><b>And then (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)</b></p>
13	<p><b>What is required to implement these next steps?</b></p>

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