

## iCAHE JC Critical Appraisal Summary

### Journal Club Details

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<b>Journal Club</b>	DomCare SA
<b>JC Facilitator</b>	Angela Basso
<b>JC Discipline</b>	Multidisciplinary

### Clinical question

What are the impacts of an extended period of hospitalisation, the associated de-conditioning and ill health, on the cognitive capacities of the older person (pre-admission having no cognitive issues) and implications on their return home to live safely and independently in the community?

### Review Question/PICO/PECO

- P** Older people discharged from hospital
- E** hospitalisation, ill health
- C** n/a
- O** cognitive capacity

### Article/Paper

Ehlenbach W, Hough C, Crane P, Haneuse S, Carson S, Curtis J, Larson E 2010 'Association between acute care and critical illness hospitalisation and cognitive function in older adults', *JAMA*; 303(8): 763-770.

*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:** Prospective cohort study

**Journal Club Meeting on:** 19<sup>th</sup> July 2013



**CONTACTS**

www.unisa.edu.au/cahe  
 iCAHE@unisa.edu.au  
 Phone: +61 8 830 22099  
 Fax: +61 8 830 22853

University of South Australia  
 GOP Box 2471  
 Adelaide SA 5001  
 Australia

CRICOS Provider Number  
 00121B



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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p><b>Was the purpose stated clearly?</b></p> <p>The objective of the study was to examine the relationship between hospitalisations secondary to acute illness or critical illness and cognitive decline and dementia in older people.</p>
2	✓			<p><b>Was relevant background literature reviewed?</b></p> <p>The authors have cited previous studies that demonstrated association between critical illness and cognitive decline in older individuals. However, they argued that existing studies have not used objective measures to report cognitive function. They also reported that no studies have looked at the risk of developing dementia in patients who had been critically ill; hence the need for the current study.</p> <p><b>Is it worth continuing? Yes</b></p>
3	✓			<p><b>Was the design appropriate for the study question?</b></p> <p>The study used a prospective cohort design. In a prospective cohort study, a group of individuals with common characteristics are assembled and followed over time. It involves determining exposure (e.g. critical or acute illness) who are free of the outcome of interest (e.g. dementia) and evaluate participants for incident events (i.e. outcome) that occur over time. The objective of cohort studies is to compare the risk for an outcome or outcomes (e.g. dementia or cognitive decline) that are defined by exposure status (e.g. acute or critical illness). As such, this type of design is appropriate to address the aims of the current study.</p>
4	✓		✓	<p><b>Was the sample described in detail?</b></p> <p>Table 1 shows the participants' characteristics at baseline and subsequent hospitalisations.</p> <p><b>Was sample size justified?</b></p> <p>The study recognised the limited power of the study to detect significant association between critical illness and dementia (as there were only a few participants who experienced critical illness).</p> <p><b>Was informed consent obtained?</b></p> <p>Ethics approval was obtained from the institutional review board of the Group Health Cooperative. Written informed consent was obtained prior to study enrolment.</p>
5	✓			<p><b>Were the outcome measures valid and reliable?</b></p> <p>The Cognitive Abilities Screening Instrument (CASI) has been reported to be a valid and reliable instrument for measuring cognitive function in the older population.</p>

6	✓		<p><b>Results were reported in terms of statistical significance?</b> The difference in cognitive scores following hospitalisations was presented using confidence intervals and p-values.</p> <p><b>Was the analysis method appropriate?</b> The approach undertaken by the authors was appropriate and rigorous.</p> <p><b>Clinical importance was reported?</b> Journal club to answer</p>
7		✓	<p><b>Drop outs were reported?</b> While the exact number of drop-outs was not reported in the paper, the authors have accounted for the potential bias that could have happened as a result of excluding participants in the analysis (deaths or those who withdrew from the study). Refer to page 766, first column, last paragraph (additional sensitivity analyses)</p>
8	✓		<p><b>Conclusions were appropriate given study methods and results?</b> Bottom line results: There is a significant association between acute care and critical illness hospitalisation and cognitive decline (after adjusting for pre-morbid cognitive function). There is also an association between acute care and critical illness hospitalisation and risk for developing dementia.</p>

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