

## iCAHE JC Critical Appraisal Summary

### Journal Club Details

---

<b>Date of submission</b>	Jan 2013
<b>Journal Club location</b>	Modbury GP Plus
<b>JC Facilitator</b>	Deb Harvey
<b>JC Discipline</b>	OT

### Clinical Scenario

*How are iPad applications being utilised in rehabilitation?*

### PICO

- P** adult rehab patients
- I** iPads
- C** traditional interventions
- O** benefits for clinicians and patients

### Article/Paper

Mosa ASM, Yoo I & Sheets L (2012) A systematic review of healthcare applications for smartphones, *BMC Medical Informatics and Decision Making*, 12:67. (Provisional Report)

*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](#).*

<b>Article Methodology:</b>	Systematic Review
<b>Returned JC on:</b>	2013
<b>By CAHE staff member:</b>	Olivia Thorpe



University of  
South Australia

iCAHE

International Centre for  
Allied Health Evidence

A member of the Sansom Institute

CONTACTS

[www.unisa.edu.au/cahe](http://www.unisa.edu.au/cahe)

[karen.grimmer-somers](mailto:karen.grimmer-somers@unisa.edu.au)

[@unisa.edu.au](mailto:@unisa.edu.au)

Telephone (08) 8302 2769

Facsimile (08) 8302 2766

University of South Australia

GPO Box 2471

Adelaide SA 5001

Australia

CRICOS Provider Number

001218



University of  
South Australia

iCAHE

International Centre for  
Allied Health Evidence

A member of the Sansom Institute

Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p><b>Did the review ask a clearly-focused question?</b></p> <p>Yes, the objective of this systematic review was to classify smartphone-based healthcare technologies as discussed in academic literature according to their functionalities, and summarise articles in each category.</p>
2	✓			<p><b>Did the review include the right type of study?</b></p> <p>Yes, the study included all articles focussing on the design, development, evaluation or use of smartphone software applications to be used by healthcare professionals or patients. Articles were excluded if they were not published in English.</p> <p><b>Is it worth continuing?</b> YES the studies which have been looked at are relevant in addressing the study aims.</p>
3	✓			<p><b>Did the reviewers try to identify all relevant studies?</b></p> <p>Yes, the authors searched a variety of databases using MESH headings and additionally perused reference lists of included articles.</p>
4			✓	<p><b>Did the reviewers assess the quality of the included studies?</b></p> <p>No, no information was reported to indicate that critical appraisal was performed to assess the quality of the included studies.</p>
5		NA		<p><b>If the results of the studies have been combined, was it reasonable to do so?</b></p> <p>The results have not been combined in a meta-analysis, however they have been combined in a qualitative manner with common 'themes' produced and studies grouped appropriately.</p>
6				<p><b>How are the results presented and what is the main result?</b></p> <p>The results are presented using text and figures.</p> <p><i>Bottom line result:</i> 57 applications for health professionals were found focussing on the following: disease diagnosis, drug reference, medical calculators, literature search, clinical communication, hospital information systems (HIS) client applications, medical training and general healthcare applications.</p> <p>The use of smartphones and applications is becoming more common and should be further researched.</p>

CONTACTS

[www.unisa.edu.au/cahe](http://www.unisa.edu.au/cahe)

[karen.grimmer-somers@unisa.edu.au](mailto:karen.grimmer-somers@unisa.edu.au)

[@unisa.edu.au](mailto:@unisa.edu.au)

Telephone (08) 8302 2769

Facsimile (08) 8302 2766

University of South Australia

GPO Box 2471

Adelaide SA 5001

Australia

CRICOS Provider Number

001218



University of South Australia

iCAHE

International Centre for Allied Health Evidence

A member of the Sansom Institute

7		<p><b>How precise are these results?</b></p> <p>Precision of the review results cannot be determined based on how the included studies were analysed (i.e. narrative synthesis instead of meta-analysis).</p> <p><i>*Notes on confidence intervals [can determine precision of results]</i></p> <p>Confidence intervals (CI) describe the uncertainty inherent in the observed effect (e.g. risk of falling), and describe a range of values within which one can be reasonably confident that the true effect actually lies. If the CI is relatively narrow, the effect size is known precisely. If the interval is wider the uncertainty is greater, although there may still be enough precision to make decisions about the utility of the intervention. Intervals that are very wide indicate that we have little knowledge about the effect, and that further information is needed.</p> <p>The width of the CI for an individual study depends to a large extent on the sample size. Larger studies tend to give more precise estimates of effects (and hence have narrower CI) than smaller studies. For continuous outcomes (e.g. scores on functional scales), precision depends also on the variability of measurements across individuals; for dichotomous outcomes (e.g. fallers versus non fallers) it depends on the risk of the event. The width of a CI for a meta-analysis depends on the precision of the individual study estimates and on the number of studies combined. Precision may decrease with increasing heterogeneity of included studies and CI will widen correspondingly.</p>
8 9 10	Journal Club to answer	<p><b>Can the results be applied to the local population?</b></p> <p><b>Were all important outcomes considered?</b></p> <p><b>Should policy or practice change as a result of the evidence contained in this review?</b></p>