

CAHE JC Critically Appraised Article Summary

Journal Club Details

Date of submission	July 2008
Journal Club location	Noarlunga Health Services
JC Facilitator	Kelly Vlassopoulos

Clinical Scenario

What is an effective clinical or administrative process to improve patient attendance in their appointments?

Review Question/PICO/PACO

- P** any group of outpatients accessing allied health services
- I** any clinical or administrative process aimed at improving patient attendance at appointments
- C** usual approach
- O** rate of failure to attend

Article/Paper

Downer SR, Meara JG, Da Costa AC, Sethuraman K. *Australian Health Review* 2006; 30(3): 389-396.

SMS text messaging improves outpatient attendance.

Article Methodology:	Cohort
Returned JC on:	9 July 2008
By CAHE staff member:	Lucylynn Lizarondo

research
Centre for Allied Health Evidence
news



University of
South Australia

CAHE

Centre for Allied
Health Evidence

a collaborating centre of



THE JOANNA BRIGGS INSTITUTE

The Centre for Allied Health Evidence (CAHE)

Tel 08 8302 2769 Fax 08 8302 2766 Email karen.grimmer-somers@unisa.edu.au
University of South Australia GPO Box 2471 Adelaide SA 5001 Australia
To receive CAHE updates register online at www.unisa.edu.au/cahe



Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>The study addressed a clearly focused issue:</p> <p>Population: Patients who gave mobile telephone contact number and were scheduled an appointment at Royal Children's Hospital between October – December 2004. The control cohort consisted of patients with mobile telephone number registered in the Royal Children's Hospital database and had an appointment scheduled between October – December 2003.</p> <p>Risk factor: Risk of patient not attending their appointment.</p> <p>Outcomes: Failure to Attend (FTA) rate and Cost benefits</p>
2	✓			<p>RCT is always preferable as it eliminates or minimises bias. However, the questions were still addressed by using a cohort type of study.</p> <p>Is it worth continuing: YES</p>
3		✓		<p>Although all patients who gave a mobile number were included in the trial and historical control group, the period covered, October – December, was relatively short to represent the entire population of the Royal Children's Hospital. There does not appear to be anything special about the cohort.</p>
4	✓			<p>The 'exposure' in this study would refer to the SMS message given to the patients. The reminder message is consistent to all patients and was actually sent in one consolidated batch.</p>
5	✓			<p>At the end of 3 months, patient attendance data were extracted from the outpatient scheduling system, which was a very objective method of determining the FTA rate. A similar method was used for both groups. The financial benefit from using SMS messaging, on the other hand, was analysed by determining the cost of sending the reminder and comparing it with the financial benefit resulting from the recorded increase in patient attendance rate.</p>
6A	✓			<p>The authors have considered in their analysis variables such as type of appointment, nature of the appointment, age, and gender. In the discussion part, the authors recognised some issues that may be related to the use of SMS technology, such as incorrect mobile contact numbers and unfamiliarity of some recipients with SMS messaging. In determining the financial benefits, there were several assumptions that could have limited the accuracy of the computation. This was something that the authors acknowledged in the paper.</p>
6B	✓			
7		✓		<p>This study did not require follow-up as it involved only one time sending of SMS text message and looking at whether or not patients attended their appointments.</p>



Ques No.	Yes	Can't Tell	No	Comments
8				<p>Results have shown that FTA rates were significantly lower in the trial group (9.8%) compared to the historical control group (19.5%). A risk ratio of 1.596 was obtained, meaning---the risk of a patient not attending their scheduled appointment is more likely in patients who did not receive SMS reminder. In terms of financial impact, the average revenue earned for the group who received SMS increased by 6.4% for each new appointment and 13.9% for each review appointment compared to only 11.5% increase for the control period.</p> <p>Bottom line results: SMS text messaging is a cost effective approach in improving outpatient attendance.</p>
9				<p>This study has presented risk ratio to show which group is more likely to miss their appointment.</p>
10		✓		<p>Given the improvement in outcomes which were both measured objectively, there is an indication that SMS messaging can indeed improve patient clinic attendance and generate increased revenue. However, considering that two of the authors of this paper are share-holders of Telstra, which is the telecommunication company used for the dissemination of appointment reminder, it is not unlikely that positive results were highlighted or even exaggerated.</p>
11		✓		<p>No indication is given to suggest that a specific characteristic or variable would impact results (FTA rate) at a local level, other than the availability of services (SMS). However, in terms of financial benefits, since computation of revenues were based on several assumptions, then it is possible that the local health care setting does not have the same funding mechanism as the one mentioned in the study.</p>
12		✓		<p>There are few more observational studies on the effectiveness of SMS text messaging in improving patient attendance in different health care delivery settings. Recommendations from observational studies are always stronger when supported by other evidence.</p>