

# CAHE JC Critically Appraised Article Summary

## Journal Club criteria

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<b>Date of submission</b>	Pilot 2007
<b>Journal Club location</b>	Lyell McEwin Hospital
<b>JC Facilitator</b>	Matt Sutton

### **Clinical Scenario**

Are pre-admission clinics with multi-disciplinary involvement effective in reducing post-operative complications, hospital length of stay, improving patient satisfaction/QOL for patients undergoing arthroplasty?

### **Review Question/PICO/PACO**

- P** Patients undergoing arthroplasty (eg THR, TKR)
- I** Pre-admission clinics with multi disciplinary involvement
- C** Usual care
- O** Post-op complications, hospital LOS, patient satisfaction, QOL

### **Article/Paper**

Gocen Z, Sen A, Unver B, Karatosun V & Gunal I 2004, 'The effect of preoperative physiotherapy and education on the outcome of total hip replacement: a prospective randomized controlled trial', *Clinical Rehabilitation*, 18: 353-358.

<b>Article Methodology:</b>	Randomised Controlled Trial
<b>Returned JC on:</b>	8 October 2007
<b>By CAHE staff member:</b>	Mat Prior

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Aim was "To investigate the effects of preoperative physical therapy for patients undergoing total hip replacement." (p.353)</p> <p>The population on whom the study was being carried out was well-defined, including with respect to prosthesis type (THR with thrust plate prosthesis, cementless acetabular component)</p>
2	✓			<p>The study was conducted as an RCT, which was an appropriate method to test the effect of preoperative physical therapy against 'usual care' (no pre-operative exercise or education – postoperative only).</p>
3	✓			<p>Patients were randomly allocated into groups by random number generation (odd numbers allocated into the study group, even numbers into the control 'usual care' group).</p> <p>Groups were approximately equal in number (originally 30 in each group, 1 subject drop-out from study group as surgery not performed). Despite the randomisation, the control group were significantly older (approx 9 yrs; <math>p=0.01</math>) than the study group. In addition, they typically had a higher BMI, with this finding bordering significance.</p>
4	✓			<p>Physical outcome measurements were taken by a physical therapist who was reportedly blinded to subject group allocation. Similarly, postoperative treatment was performed by a blinded physical therapist.</p> <p>Blinding of patients would not have been possible in this study.</p>
5	✓			<p>All patients were followed up after discharge (refer Figure 1, p.355). All patients were accounted for, however measurements were only taken for 59 of 60 original participants, as 1 participant dropped out prior to surgery due to complications.</p> <p>However, it should be noted that the figure refers to a final follow-up period of 1 year post-discharge, whilst the methods and results refer to a 2 year follow-up period.</p>
6		✓		<p>Whilst all patients were followed up, it is not stated whether they were followed up and assessed in the same ways, and whether or not they received the same amount of attention from researchers and health workers. As aforementioned, there is also some confusion over the time of follow-ups.</p>
7		✓		<p>The study had 59 participants who underwent THR operations. No information is provided about how the sample was derived – it is assumed that it was via consecutive recruitment or convenient sampling – nor about the sample size required to establish sufficient power.</p>

Ques No.	Yes	Can't Tell	No	Comments
8				<p>The main results from the study are that: Subjects in the study group (pre-admission intervention) were able to perform bed, toilet and chair transfers earlier post-operatively than the control group (<math>p &lt; 0.05</math> all), and also were able to climb stairs earlier (<math>p = 0.01</math>) in the post-operative period.</p> <p>There were no significant between-group differences with respect to improvements in Harris Hip Score by discharge.</p> <p>There were no significant differences between groups with respect to improvement in Harris Hip Score at both 3 months and 2 years postoperatively.</p> <p>However, the Harris Hip Score was significantly higher in the study group at discharge (<math>p = 0.007</math>) and at 3 months post-op (<math>p = 0.02</math>); however these findings were not maintained at the 2 year follow-up.</p>
9				<p>All results have been presented in terms of statistical significance at <math>p &lt; 0.05</math>, using independent t-tests. Such tests appear appropriate for this study.</p>
10			✓	<p>Not all important outcomes have been considered within this study. Whilst functional outcomes are assessed via the Harris Hip Score, quality of life assessments are lacking, as are patient satisfaction and perception ratings of their situation, which may add more information to the comparison of pre-admission interventions against usual care. Whilst it was concluded that no major benefits of pre-admission physical therapy interventions existed, the cost-benefit of such a service, and in comparison to usual care, is not stated.</p> <p>It is uncertain to what extent the population studied is comparable to a local setting within Australia. The population studied appears relatively young – however it should be noted that the study group was younger than the control group, and thus if a significant benefit in outcome could be achieved, it should possibly be more likely to occur under these conditions. Also, it is uncertain precisely what comprised the pre-admission intervention, which would conceivably have an impact on its' effectiveness.</p>