

## iCAHE JC Critical Appraisal Summary

### Journal Club Details

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Journal Club location	Flinders Medical Centre
JC Facilitator	Alexandra Lekis
JC Discipline	Physiotherapy

#### Question

What are the effects of day zero mobilisation and physiotherapy exercise on length of stay (LOS), range of movement (ROM) and mobility post total knee replacement?

#### Review Question/PICO/PACO

**P:** Patient's post total knee replacement in the general population

**I:** Day zero mobilisation and physiotherapy exercise

**C:** Delayed mobilisation

**O:** Length of stay, range of movement and mobility

#### Article/Paper

Guerra, M.L., Singh, P.J. and Taylor, N.F., 2015. Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: a systematic review. *Clinical rehabilitation*, 29(9), pp.844-854.

*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></p> <p>Aimed to systematically review the effect of early mobilization after hip or knee joint replacement surgery on length of stay in an acute hospital.</p>
2	✓			<p><b>Did the authors look for the appropriate sort of papers?</b></p> <p>Randomized controlled trials were selected from electronic databases based on inclusion criterion requiring an experimental group mobilizing (sitting out of bed/walking) earlier than a comparison group post joint replacement surgery of the hip or knee in an acute hospital.</p> <p><b>Is it worth continuing?</b>  <b>YES</b></p>
3			✓	<p><b>Do you think the important, relevant studies were included?</b></p> <p>5 RCTs were included in the review – May have missed some relevant studies due to search strategy.                      Search strategy positives – no date restrictions, good database choices, good population and intervention search terms                      Search strategy negatives – only 3 databases chosen, Design search included Random* controlled trial, however, this could have been expanded to ensure no articles were missed.</p> <p>le use:</p> <p>exp randomized controlled trial/                      randomized controlled trials as topic/                      controlled clinical trial/                      exp clinical trial/                      exp clinical trials as topic/                      controlled clinical trials as topic/                      non-randomized controlled trials as topic/                      Random Allocation/                      Double-Blind Method/                      Single-Blind Method/                      Placebo effect/                      (random* or sham or placebo*).ti,ab,kw.                      ((singl* or doubl*) adj (blind* or dumm* or mask*)).ti,ab,kw.                      ((tripl* or trebl*) adj (blind* or dumm* or mask*)).ti,ab,kw.                      (clinical trial* or randomized controlled trial* or randomised controlled trial* or controlled trial* or placebo or blind\$3 or controlled clinical trial or random* allocat* or non-randomized or non-randomised or pseudo-randomised or pseudo-randomized).ti,ab,kw.</p>
4	✓			<p><b>Did the review's authors do enough to assess the quality of the included studies?</b></p> <p>Two researchers independently applied a validated scale (PEDro) to rate the risk of bias of the trials.</p> <p>The Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach was applied to the meta-analysis to determine the quality of evidence across the included trials.</p>

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5			✓	<p><b>If the results of the review have been combined, was it reasonable to do so?</b>                  Heterogeneity: Tau<sup>2</sup> = 0.61; Chi<sup>2</sup> = 45.83, df = 4 (P &lt; 0.00001); I<sup>2</sup> = 91%                  Therefore, passed the test of heterogeneity. This means that the data should not have been combined due to being heterogenetic.</p> <p>Secondary clinical outcomes such as range of motion and muscle strength and adverse events were analysed descriptively and between-group differences reported. Secondary outcomes did not undergo meta-analysis due to clinical heterogeneity in these.</p>
6				<p><b>What are the overall results of the reviews?</b>                  Combining the 5 RCTs data found a reduced length of stay of 1.8 days (95% confidence interval 1.1 to 2.6) in favour of the experimental group. In 4 of the 5 trials the experimental group first sat out of bed within 24 hours post operatively. In 4 of the 5 trials the experimental group first walked within 48 hours post operatively. Individual trials reported benefits in range of motion, muscle strength and health-related quality of life in favour of the experimental group. There were no differences in discharge destinations, incidence of negative outcomes or adverse events attributable to early mobilization when compared to the comparison groups. The authors concluded that early mobilization post hip or knee joint replacement surgery can result in a reduced length of stay of about 1.8 days. Trials that reported these positive results showed that early mobilization can be achieved within 24 hours of operation. This positive gain was achieved without an increase in negative outcomes.</p>
7				<p><b>How precise are the results?</b>                  Both 95% confidence intervals, SDs and P values were provided.</p>
8	Journal Club to discuss			<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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