

Early commencement of therapy in the acute phase following elective lower limb arthroplasty produces favourable outcomes: a systematic review and meta-analysis

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Background

The temporal and dose-response relationship between provision of allied health and recovery in the acute phase following lower limb arthroplasty is unclear. This systematic review investigates whether early commencement of allied health, additional intervention and/or a weekend service affects length of stay and patient outcomes in the acute phase following lower limb arthroplasty.

Methods

Electronic databases were searched in February 2015. Studies were included if they evaluated any of the following aspects of allied health on adults following lower limb arthroplasty in the acute postoperative phase: Intervention provided on the weekend with a 6 or 7-day service compared to that with a 5-day service; Additional therapy compared to that with a lesser quantity or; Early compared to later commencement of rehabilitation postoperatively. Two independent authors appraised the quality of included articles using the PEDro scale.

Results

780 potentially relevant articles were identified of which 25 met the inclusion criteria. PEDro scores ranged from 3-9/10 (mean 5.5/10). When compared with rehabilitation commencing at a later time, earlier intervention reduced length of stay (WMD=-1.98 days; 95% CI, -2.77--1.19) and resulted in a higher probability of discharge directly home (RR=1.45; 95% CI, 1.26-1.67). Addition of a weekend allied health service reduced length of stay (WMD=-1.04 days; 95% CI, -1.66--0.41) and improved function (SMD=0.37; 95% CI, 0.02-0.73). Additional therapy provided by increasing frequency from once to twice daily did not affect length of stay (WMD=-0.35 days; 95% CI, -0.96--0.26) or function (SMD=0.31; 95% CI, -0.06-0.71).

Discussion

Early commencement of allied health and to a lesser extent acute weekend service may produce favourable outcomes following lower limb arthroplasty. Redistributing allied health resources to commence therapy as early as the day of surgery regardless of the day of week may accelerate postoperative recovery. Further high quality research is needed to confirm these findings.