Long-term clinical benefits and costs of an integrated rehabilitation programme compared with outpatient physiotherapy for chronic knee pain

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study evaluated the feasibility of an integrated community rehabilitation programme and compared its clinical effectiveness and cost-effectiveness in patients with chronic knee pain. The authors concluded that the Enabling Self-management and Coping with Arthritic knee Pain through Exercise (ESCAPE-knee pain) programme was more cost-effective than out-patient physiotherapy, but this needed to be confirmed in a larger trial. The methodology and reporting were satisfactory and the authors’ conclusions appear to be appropriate.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study evaluated the feasibility of an integrated community rehabilitation programme and compared its clinical effectiveness and cost-effectiveness in patients with chronic knee pain.

Interventions
The Enabling Self-management and Coping with Arthritic knee Pain through Exercise (ESCAPE-knee pain) rehabilitation programme was compared with out-patient physiotherapy. The integrated programme combined exercise, patient education, self-management, and coping strategies and was delivered in a community centre.

Location/setting
UK/primary care.

Methods
Analytical approach:
The clinical effectiveness and cost data were derived from a randomised controlled trial (RCT), which compared the ESCAPE-knee pain programme with usual care. The time horizon was 12 months and the authors did not report the study perspective.

Effectiveness data:
The clinical data were derived from a RCT that included 48 people who were followed-up for 12 months after completion of the intervention. Assessment was blind to group allocation. The two groups were comparable at baseline in terms of their prognostic variables and outcome measures. The primary outcome was physical function assessed using the Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index. The secondary outcomes were pain, objective functional performance, anxiety, depression, health-related quality of life, exercise-related health beliefs, and health care utilisation.

Monetary benefit and utility valuations:
The health-related quality of life score was assessed, using the European Quality of life (EQ-5D) questionnaire, for each participant at baseline, immediately post-intervention, and at 12 months.

Measure of benefit:
The measure of benefit used to calculate the cost-effectiveness ratio was the EQ-5D utility score.
Cost data:
The cost categories included the intervention costs and knee treatment costs. The resource data were collected prospectively during the clinical trial. Out-patient physiotherapy costs were national reference costs. All costs were in UK pounds sterling (£) and the price year was 2005. No discounting was performed because the time horizon was 12 months.

Analysis of uncertainty:
The authors did not conduct any analysis of uncertainty on the cost-effectiveness results.

Results
Exercise health beliefs were better in the ESCAPE-knee pain group. For all other outcomes, including EQ-5D scores, there were no significant between-group differences.

The total costs were £583 for out-patient physiotherapy and £320 for ESCAPE-knee pain.

The ESCAPE-knee pain programme was more cost-effective and associated with marginally greater improvements in EQ-5D scores, at lower costs, than out-patient physiotherapy.

Authors' conclusions
The authors concluded that the ESCAPE-knee pain programme was more cost-effective than out-patient physiotherapy, but this needed to be confirmed in a larger study.

CRD commentary
Interventions:
The intervention was well described and was appropriately compared with usual care in the clinical setting. These strategies are likely to be relevant in other settings.

Effectiveness/benefits:
The effectiveness data were based on a RCT, which was appropriate for the study question and should have ensured the validity of the clinical analysis. The strengths of the trial included comparable baseline characteristics of the two patient groups and the intention-to-treat approach, but the sample size was small, which contributed to the great uncertainty in the results. The utility data were obtained from the trial, which ensured that the estimates were appropriate for the study population.

Costs:
The authors did not report the perspective, so it is not clear whether the appropriate cost categories were included. The resource use data were obtained from the trial, which ensured the accuracy of these estimates. The authors estimated the costs using national tariffs and national reference costs, which are appropriate sources of cost data. The cost analysis was adequately reported.

Analysis and results:
The use of an incremental analysis was appropriate to determine the cost-effectiveness of the strategies. The authors did not evaluate the uncertainty of their results and this may have been significant given the reported standard deviations. They did acknowledge that their results were uncertain due to the small sample size and they recommended a larger study to confirm them. They also highlighted the strengths and limitations of their analysis.

Concluding remarks:
The methodology and reporting were satisfactory and the authors' conclusions appear to be appropriate.

Funding
Funding received from the Physiotherapy Research Foundation Project.

Bibliographic details
Jessep SA, Walsh NE, Ratcliffe J, Hurley MV. Long-term clinical benefits and costs of an integrated rehabilitation programme compared with outpatient physiotherapy for chronic knee pain. Physiotherapy 2009; 95(2): 94-102

PubMedID
19627690

DOI
10.1016/j.physio.2009.01.005

Original Paper URL
http://dx.doi.org/10.1016/j.physio.2009.01.005

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Indexing Status
Subject indexing assigned by NLM

MeSH
Activities of Daily Living; Aged; Aged, 80 and over; Ambulatory Care /economics; Chronic Disease; Cost-Benefit Analysis; Costs and Cost Analysis; Exercise Therapy /economics; Female; Great Britain; Humans; Male; Middle Aged; Osteoarthritis, Knee /economics /rehabilitation; Pain Measurement; Primary Health Care /economics; Self Care /economics

AccessionNumber
22009103546

Date bibliographic record published
02/12/2009

Date abstract record published
27/01/2010