INAHTA Briefs

Issue 2010/043

Title **A Randomized 2 × 2 Trial of Community versus Hospital Pulmonary Rehabilitation for Chronic Obstructive Pulmonary Disease Followed by Telephone or Conventional Follow-Up**

Agency **NETSCC, HTA, NIHR Evaluation and Trials Coordinating Centre**
Alpha House, University of Southampton Science Park, Southampton, SO16 7NS, United Kingdom;
Tel: +44 2380 595 586, Fax: +44 2380 595 639; hta@soton.ac.uk, www.hta.ac.uk

Reference Volume 14.06. ISBN 1366-5278. www.hta.ac.uk/project/1316.asp

Aim

To determine: 1) whether community provision of pulmonary rehabilitation for people with chronic obstructive pulmonary disease (COPD) is more likely to confer benefit compared to hospital provision in both the short and long term; and 2) whether regular encouraging telephone calls prolong the benefit gained.

Conclusions and results

Pulmonary rehabilitation (PR) is known to help improve walking distance and health-related quality of life (HRQoL). It is usually provided in a secondary care setting. In the UK, interest is increasing to provide PR in a community setting.

Mean attendance at rehabilitation sessions was 80% for the community group and 83% for the hospital. Immediately post-intervention there was an increase in endurance shuttle walking time that did not differ significantly between groups. All HRQoL scores (Eq5D, CRQ total, and SF6D) improved significantly after treatment in either site, but no significant difference was found between sites, eg, SF-6D mean difference (adjusted for baseline) between hospital and community 0.01, p=0.37, CI –0.02 to 0.04. After 18 months of follow-up there was no significant difference in improvement in endurance shuttle time for hospital versus community, after adjustment for baseline walk, follow-up visit, and factorial design. No difference was found in effects on health status outcomes.

Telephone encouragement had no effect on exercise capacity, but the disease-specific CRQ total and mastery differed significantly. Emotion approaches significance. Fatigue and dyspnea are unchanged. This was not apparent for the generic SF36 or EQ5D. Post hoc analysis showed significant differences in the post-rehabilitation endurance shuttle walking distance of subjects treated by each of three rehabilitation teams when corrected for baseline distance walked. Preliminary economic analysis shows a trend for increased efficacy over 18 months in the hospital group, but lower cost in the community group, resulting in community rehabilitation being most likely to have beneficial cost-effectiveness ratios. Telephone follow-up might be cost effective in the community group.

Major exclusions were candidates for long-term oxygen therapy, or people with unstable cardiac disease. Outcome was assessed by physiological measurements and both generic and disease-specific assessments of HRQoL. All effects were fully costed in terms of their health economic effects.

Recommendations

See Executive Summary link at www.hta.ac.uk/project/1316.asp.

Methods

See Executive Summary link at www.hta.ac.uk/project/1316.asp.

Further research/reviews required

This study excluded patients needing long-term oxygen therapy. Further research is required to ensure that results can be generalized to this group and that they can be safely rehabilitated in a community setting. We noted a significant dropout between patients' initial agreement and consent to rehabilitation, and their attendance for pre-rehabilitation assessment. See Executive Summary link at www.hta.ac.uk/project/1316.asp.

Written by Ms Judith Waterhouse, United Kingdom

ISSN 1654-501X