Safety and effectiveness of home-based pulmonary rehabilitation in COPD

Despite overwhelming evidence to suggest that pulmonary rehabilitation improves health status in patients with chronic obstructive pulmonary disease (COPD), this service is largely underutilised due to poor accessibility. This Canadian multicentre randomised study was designed to compare outpatient pulmonary rehabilitation with self-monitored home-based rehabilitation in improving dyspnoea.

Patients with stable COPD (forced expiratory volume in 1 s <70% predicted) and an MRC dyspnoea score of 2 or more were recruited. 252 patients with similar baseline characteristics were randomly assigned to both groups. Both groups showed statistically and clinically significant improvements in dyspnoea scores (on chronic respiratory questionnaire) at 3 months. Although this was not maintained, the home rehabilitation group was certainly not inferior to the outpatient rehabilitation group at 1 year. Both strategies were similar at 3 months and 1 year in improving 6-minute walking distance, cycling endurance time and health status (as assessed by St George’s Respiratory Questionnaire components). Adverse events were comparable for both groups.

The authors conclude that home-based rehabilitation is safe and not inferior to hospital outpatient rehabilitation in improving dyspnoea, health status and exercise tolerance. They also point out that, despite the fact that no economic analysis was done, the cost implications are likely to be similar for both strategies. However, the results have to be applied cautiously in patients with severe COPD who potentially may benefit the most from home-based rehabilitation, as only a small proportion with severe disease were included in the study. This study alludes to a potential alternative for patients who are unable to access hospital-based pulmonary rehabilitation.


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