



Outcomes and measures of pulmonary rehabilitation in patients with COPD: a systematic review

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Abstract

The magnitude of response to pulmonary rehabilitation (PR) is influenced by the selection of outcomes and measures. Outcome and measure selection depends on various factors which can lead to high heterogeneity of reported outcomes/measures in the literature, hindering bench marking between and within PR centers and an effective evidence synthesis. We aimed to review all outcomes and measures used in clinical trials of PR for patients with COPD.

A systematic review was conducted (CRD42017079935) with searches on Scopus, Web of Knowledge, Cochrane Library, EBSCO, Science Direct and PubMed. Studies reporting on PR of stable patients with COPD and from 2000 onwards were included. Data were extracted into a standardized table. Frequency of reporting for each domain, outcome and measure was synthesized using Microsoft Excel®.

267 studies were included with 43153 patients with COPD. 22 domains, 163 outcomes and 217 measures were found. Several measures were used to assess the same outcome. Exercise capacity (n=218) assessed with the six-minute walk test (n=140), health-related quality of life (n=204) assessed with the Saint George's respiratory questionnaire (n=99), and symptoms (n=158) assessed with the modified medical research council dyspnoea scale (n=56) were mostly reported. The least reported outcomes were comorbidities, adverse events and knowledge.

This systematic review reinforced the need of a core outcome set in this field, as high heterogeneity in reported outcomes and measures was found. Future studies should assess the importance of each outcome for PR according to different stakeholders.