



## Commentary

# A commentary on “Efficacy of pulmonary rehabilitation in improving the quality of life for patients with chronic obstructive pulmonary disease: Evidence based on nineteen randomized controlled trials” (Int J Surg 2020; 73:78–86)

## ARTICLE INFO

## Keywords

Pulmonary rehabilitation  
Chronic obstructive pulmonary disease  
Quality of life  
Metaanalysis

## Dear Editor,

Chronic obstructive pulmonary disease (COPD) is a multi-factorial progressive chronic lung disease that causes obstruction to airflow. This obstruction results in persistent and progressive breathlessness, productive coughing, fatigue and recurrent chest infection. COPD is also associated with extrapulmonary effects such as muscle wasting, osteopaenia (reduction in protein and mineral contents of bone tissue), cardiovascular disease and depression, and therefore it is now best understood as a systemic disease. Worldwide, COPD is a major cause of morbidity. It is estimated that 210 million people are living with COPD, and projected that by the year 2030, COPD will be the third most frequent cause of death globally [1]. Currently, COPD is an incurable condition that is associated with significant economic costs due to progressive severity of disease and frequent hospital admissions and readmissions.

Pulmonary rehabilitation (PR) is a proactive approach in minimizing COPD symptoms, improving health-related quality of life and increasing physical and emotional involvement in everyday life. With an increase in published reports on PR, there is a need for a meta-analysis to measure the effects of PR in elderly COPD patients. Dong et al. [2] performed a meta-analysis of nineteen randomized controlled trials and demonstrated that rehabilitation constituted one important component on management of COPD and was beneficial in improving quality of life of patients.

Despite the well-documented meaningful benefits for patients and health-care systems, and recommendations for its use in international guidelines, PR is still underutilized. Several factors need to be addressed to increase PR participation. Less than 25% of COPD patients are evaluated by a pulmonary physician, who sees the majority of PR referrals [3]. Primary care physicians diagnose and manage the majority of patients with COPD. However, a recent survey showed that only 3% of primary care physicians thought PR was beneficial for patients, and were less likely to refer patients to PR although 32% had PR available

[4]. Other reasons for low referred by primary care physicians to PR were lack of PR awareness, unclear referral process and questioning the need to do more to promote exercise behavior change. Patient factors associated with the low PR participation include a belief that their disease was too mild or too severe to benefit from PR, fear that PR would be detrimental to their health, or inability to attend relating to lack of transportation or social support [5]. Promoting PR requires a multifactorial approach to include physician and patient education, improved program access, and structures to encourage enrollment and adherence. With the support from the current evidence targeting PR in COPD, we hope that the results of this meta-analysis will encourage implementation of more new programmes. Finally, formal cost-effectiveness analyses should be conducted to estimate the financial benefits from rehabilitation after COPD.

## Ethical approval

None.

## Sources of funding

None.

## Author contribution

Yun Huang: comment the paper. Tao Guo: review.

## Trial registry number

None.

## Guarantor

Yun Huang.

DOI of original article: <https://doi.org/10.1016/j.ijso.2019.11.033>.

<https://doi.org/10.1016/j.ijso.2021.105986>

Received 17 May 2021; Accepted 20 May 2021

Available online 8 June 2021

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## Provenance and peer review

Commentary, internally reviewed.

## Declaration of competing interest

No conflict of interest.

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