

# Abstracts and presentations



Platform: Rapid 5 (PLR5)

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PLR5-3017

Room V

## PLR5-3017 BRINGING PULMONARY REHABILITATION CLOSER TO THE COMMUNITY AND KEEPING ITS EFFECTIVENESS

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**Background:** Pulmonary Rehabilitation (PR) is a key evidence-based intervention in the management of chronic respiratory diseases. Nevertheless, it is still highly inaccessible and underutilised by patients, as most PR programmes are directed to patients with advanced disease and/or held on a hospital-basis. There is an urgent need to increase access to PR and therefore, new intervention models that can be more inclusive and closer to patients' homes have been recommended.

**Purpose:** To evaluate the effects of a community-based PR programme in patients with chronic respiratory diseases.

**Methods:** A quasi-experimental study was conducted. Patients were recruited from primary health care centres. Patients enrolled in a 12-week community-based PR programme of exercise training, twice a week, and education and psychosocial support, once every other week. Outcome measures used to assess effectiveness of the programme were collected pre/post PR. Dyspnoea during activities was collected with the modified medical research council-dyspnoea scale (mMRC); anxiety and depression symptoms with the Hospital Anxiety and Depression Scale (HADS); health-related quality of life with the Saint George's Respiratory Questionnaire (SGRQ); quadriceps muscle strength (QMS) with a handheld dynamometer; functionality with the 1-minute sit-to-stand (1-minSTS); exercise tolerance with the six-minute walk test (6MWT) and functional balance with the Brief Balance Evaluation System Test (Brief-BESTest). Differences were examined using the Student's t-test or the Wilcoxon test, according to data normality, and effect sizes (ES) were calculated. For the measures with an established minimal clinically important difference (MCID), an analysis of the number of patients that improved above that value was conducted.

**Results:** Fifty-six patients (36 male; 67.0±10.3years; 56.8±3.2% FEV<sub>1</sub>%predicted) with COPD (n=37), asthma (n=11), asthma-COPD overlap syndrome (n=2), interstitial lung disease (n=2), pneumonitis (n=2), pulmonary fibrosis (n=1), lung transplant due to COPD (n=1) and bronchiectasis (n=1) participated. After the PR programme, significant improvements were observed in the mMRC (2[0-4] vs. 1[0-3]; p≤0.001; ES=-0.49; 22 (39,3%) patients above the MCID); HADS Anxiety (6.5±3.5 vs. 5.7±3.4;p=0.042; ES=-0.23; 23 (41,1%) patients above the MCID) and HADS Depression (6.6±4.1 vs. 5.8±3.8; p=0.113; ES=-0.19; 23 (41,1%) patients above the MCID); SGRQ total score (46.5±19.0 vs. 38.4±16.5; p≤0.001; ES=-0.45; 35 (62,5%) patients above the MCID); QMS (29.3±7.5 vs. 32.9±7.6Kgf; p≤0.001; ES=0.48); 1-minSTS (26±10 vs. 30±11 repetitions; p≤0.001; ES=0.38; 26 (46,4%) patients above the MCID), 6MWT (400.8±116.9 vs. 455.8±118.5m; p≤0.001; ES=0.47; 40 (71,4%) patients above the MCID), Brief-BESTest (17.2±5.0 vs. post 20.2±3.3; p≤0.001; ES=0.70; 13 (23,2%) patients above the MCID).

**Conclusion(s):** Community-based PR programmes are feasible and effective to conduct in patients with chronic respiratory diseases, providing similar benefits for symptoms, health-related quality of life, lower limb muscle strength, functionality, exercise tolerance and balance to those well-established for PR programmes carried out in hospital outpatient settings.

**Implications:** Community-based PR programmes are a feasible and effective way of increasing access to a fundamental intervention for patients with chronic respiratory diseases.

**Key-Words:** pulmonary rehabilitation, community-based, chronic respiratory diseases

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