

RESULTS OF AN OUTPATIENT PULMONARY REHABILITATION PROGRAM ON EXERCISE TOLERANCE AND HEALTH-RELATED QUALITY OF LIFE.

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BACKGROUND: Pulmonary rehabilitation (PR) is an evidence-based, comprehensive, and multidisciplinary approach in the management of patients with chronic pulmonary disease. The continued success of PR programs is linked to improved patient health outcomes that include, but are not limited to, exercise capacity, health-related quality of life, and psychosocial outcomes. The purpose of this study was to determine if there were meaningful clinical changes in the six minute walk distance test (6MWD), St. George Respiratory Questionnaire (SGRQ) health-related quality of life assessment, and the Patient Health Questionnaire-9 (PHQ-9) brief depression assessment for patients who completed a 12-week, outpatient PR program.

METHODS: This was a retrospective analysis of existing archived data containing patient information retrieved for internal auditing and reporting purposes and review of medical records for all patients enrolled in the PR program over a one year period. Patients with complete data sets were used for comparisons. Improvement in outcomes variables were measured by change in pre- and post-rehabilitation scores. Regression analysis was used to determine if any significant relationships existed between outcome and predictor variables.

RESULTS: A total of 153 patients enrolled in the outpatient PR program from June 2012 to May 2013. Ninety-two patients completed the program for a completion rate of 60%. Complete baseline and follow-up assessment data were available for 66 of the 92 patients who completed the program. Patients completing PR had improvements in the 6MWD, SGRQ, and PHQ-9 (see Table 1). Multiple regression analysis revealed that FEV1% of predicted and initial 6MWD were significantly related to improvement in exercise tolerance. Presence of COPD, presence of cardiovascular disease, age, number of sessions attended, and gender were not related to changes in exercise tolerance, health-related quality of life, and depression symptoms.

CONCLUSION: Patients completing the 12-week, outpatient PR program experienced improvements in exercise tolerance, health-related quality of life, and symptoms of depression. Exercise tolerance and health-related quality of life reached minimal clinically important difference for patients in this study.

Table 1

Means, Standard Deviations, and Comparisons for 6MWD, SGRQ, and PHQ-9

Variables	Initial	Follow-up	Difference	<i>t</i> value	<i>p</i> value
6MWD	269.2±115.2	366.4±132.5	97.2±74.0	10.7	<0.001
SGRQ	51.1±17.1	38.3±18.1	-12.8±13.9	-7.5	<0.001
PHQ-9	6.5±5.9	3.3±3.9	-3.2±2.0	-5.5	<0.001

Note: Six minute walk distance test (6MWD), St. George Respiratory Questionnaire (SGRQ), Patient Health Questionnaire-9 (PHQ-9). Minimal clinical important difference for 6MWD = 54 meters, SGRQ = 4 units, PHQ-9 = 5 points.