

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 4546

**Publication Number:** P3706

**Abstract Group:** 1.2. Rehabilitation and Chronic Care

**Keyword 1:** COPD - management **Keyword 2:** Rehabilitation **Keyword 3:** Monitoring

**Title:** 6MWT improvement after pulmonary rehabilitation (PR) is inversely associated with degree of airflow obstruction in COPD patients. A retrospective study

Dr. Andrea 29542 Zanini andrea.zanini@fsm.it MD <sup>1,2</sup>, Dr. Sabrina 29543 Della Pirona sabrina.dellapirona@fsm.it MD <sup>1</sup>, Dr. Silvia 29544 Casale s.casale@gmail.com MD <sup>1</sup>, Dr. Veronica 29545 Leoni vero.leo@tin.it MD <sup>1</sup>, Dr. Marco 29546 Moscheni shumiro@live.it MD <sup>1</sup>, Dr. Francesca 29554 Cherubino francesca.cherubino@fsm.it <sup>1</sup> and Prof. Dr Antonio 29647 Spanevello antonio.spanevello@fsm.it MD <sup>1,2</sup>. <sup>1</sup> Pneumology, Salvatore Maugeri Foundation, IRCCS, Tradate, Varese, VA, Italy, 21049 and <sup>2</sup> Department of Clinical and Experimental Medicine, University of Insubria, Varese, VA, Italy, 21100 .

**Body:** Introduction: Several studies have focused on identifying clinical and functional predictors of the beneficial effects of PR in COPD patients. FEV<sub>1</sub> appears to be irrelevant to obtain benefits from PR. Aims and objectives: To evaluate associated and predictive factors of change in exercise capacity after PR in patients with COPD. Methods: 75 stable moderate-to-severe COPD patients, allocated to a 3-weeks PR in a single-centre in 2011, were evaluated. Pulmonary function, six minute walking distance (6MWD), dyspnea and quality of life were assessed before and after PR. Results: In the entire population and in the two groups, PR led to increased 6MWD (p<0.0001). Compared to group A (FEV<sub>1</sub>≥ 50%), group B (FEV<sub>1</sub><50%) had a greater increase in 6MWD (Δ6MWD, p=0.0004). Moreover, 9% of group A patients and 39% of group B showed a clinically significant increase in 6MWD (>54 m, p=0.002). In all patients baseline FEV<sub>1</sub> was negatively related to Δ6MWD (r<sub>s</sub>=−0.5). Stepwise multiple regression selected FEV<sub>1</sub> as individual predictor of Δ6MWD (r<sup>2</sup>=0.25). Comparisons are summarized in the table (mean±SD).

	N° pts	age	gender(F,M)	FEV1 (%)	FEV1/VC (%)	6MWD pre-PR	Δ6MWD
Entire study population	75	71±8	11,64	57±18	50±12	440±102	34±39
Patients with FEV1 ≥ 50%	44	72±8	5,39	70±12	56±9	472±84	19±23
Patients with FEV1 < 50%	31	70±7	6,25	39±7*	41±9*	394±110#	55±47#

\*p<0.0001 and #p<0.01 vs Patients with FEV1≥50%.

**Conclusions:** This study shows that PR is particularly effective in the more severe COPD patients. Our results support the hypothesis that simple functional baseline findings may predict the response to a PR program in moderate-to-severe COPD patients.