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Title: Role of low cost pulmonary rehabilitation programme in COPD in rural area of India

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Body: Background: Chronic obstructive pulmonary disease (COPD) is the 4th leading cause of death in the world (WHO 2000). COPD patients appear to benefit from Pulmonary rehabilitation (PR) & maintenance of physical activity, improving their exercise tolerance, experiencing decreased dyspnoea & fatigue (Berry MJ et al. AJRCCM 1999; 160:1248-53). PR is done with exercise equipment, supporting staff & follow up. In resource poor areas this is not possible. We evaluated the effect of home based PR programme in COPD patients in rural areas of India. Methods: COPD patients in stable state who were ready to follow up for 12 weeks at 2 weeks interval were included, 40 patients who completed the PR formed the study group while 20 patients who were not included in PR formed control group. The Airways questionnaire-20 score (AQ-20) and the 6 minute walk distance (6-MWD) were analysed in both groups, who continued on a similar drug management. Objectives: To study the effect of a low cost and home based PR program & to compare the improvement in outcome with non PR group. Results: The mean 6-MWD showed an average increase of 75.72 meters in the study group, while an average decrease of 2.1 meters in control group. Mean value of study group was higher for 6-MWD results and difference between the two groups was statistically significant ($p < 0.05$). AQ-20 showed a mean decrease of 6.12 in study group and 1.5 in control group which is also statistically significant ($p < 0.05$). Conclusion: A simple outpatient-based PR can improve health status, quality of life and exercise capacity in patients with COPD. Clinical implications: This can be promoted on a wide scale & can benefit a lot of COPD patients in resource poor setting.