Introduction
COPD has significant morbidity and incurs heavy utilization of healthcare resources.

Objectives
To assess whether a comprehensive care programme can decrease hospital admissions and length of hospital (LOS) for COPD patients.

Methodology
In a randomised controlled trial of patients discharged from hospital after an episode of acute exacerbation of COPD, patients were randomised to an Intervention Group (IG) or Usual Care Group (UG). The IG received a comprehensive, individualized care plan which included input from doctors, respiratory nurses and physiotherapists, optimization of medication, nurse-led education, physiotherapist support for pulmonary rehabilitation, monthly telephone calls by a respiratory nurse to assess their condition and to answer any queries for a period of one year. Patients were also followed up in the respiratory clinic by a respiratory specialist once every three months for one year. The UG were managed according to standard practice. All patients had assessments (spirometry, 6 minute walk test, dyspnoea score using Modified Medical Research Council Dyspnoea Scale [MMRC], and quality of life [QOL] using St. Georges Respiratory Questionnaire [SGRQ]) at baseline and at 12 months. The primary outcome was 12-month hospital readmission. Secondary outcomes were LOS, MMRC and SGRQ scores.
Result
180 patients were recruited (IG N=90, UG N=90; mean age 74.7±8.2 years, 172 (95.6%) males; mean FEV1 45.4±16.6% predicted normal. At 12 months, the IG had fewer readmissions (1.56±2.13 vs 2.38±2.14 times, p=0.0008) and shorter LOS (7.41±11.29 vs 12.21±12.87 days, p=0.0003) for COPD than the UG. The adjusted hazard ratio for readmissions in the IG was 0.62 (95% CI 0.42-0.91, p=0.02) compared with UG. IG at 12 months had improved mean MMRC score (-0.1±0.7 vs 0.2±0.6, p=0.033) and improved mean SGRQ score (-8.5±16.6 vs -0.1±15.7, p = 0.002) compared with UG. There was no difference between the IG and UG in lung function or 6 minute walk distance at 12 months. Conclusion: Comprehensive COPD programme can reduce hospital readmissions for COPD and LOS, and improve symptoms and QOL of the patients.