Impact of Roflumilast on COPD Exacerbations, Healthcare Utilization and Costs in a Medicare Advantage Population

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Abstract

Background: Chronic obstructive pulmonary disease (COPD) is a progressive lung disease characterized by hyperinflation, airway inflammation, and airway and alveolar damage.

Objectives: To evaluate the impact of roflumilast on the frequency and severity of COPD exacerbations, healthcare utilization, and costs compared with standard of care (SOC) among Medicare Advantage members with severe COPD.

Methods: Patients with COPD who were enrolled in an extended version of a 12-month intervention study were included in the analysis. Analysis was performed using administrative claims data from the 12 months prior to the intervention (pre-index) and the 12 months following the intervention (post-index).

Results: Among 271 patients in the roflumilast cohort and 33,758 patients in the SOC cohort, mean age of patients was 70.8 years in the roflumilast cohort and 68.1 years in the SOC cohort. Patients in the roflumilast cohort had a significantly higher Charlson comorbidity index score compared with patients in the SOC cohort (2.63 vs. 2.61, P=0.0576). The roflumilast cohort had significantly fewer exacerbations per 30 days compared with the SOC cohort (0.0790 vs. 0.7032, P=0.0451).

Conclusions: Roflumilast reduced exacerbation frequency and severity and decreased healthcare utilization and costs compared with SOC.

Keywords: Roflumilast, COPD, exacerbations, exacerbation frequency, severity, healthcare utilization, costs.