CONTINUOUS TREATMENT WITH FIXED COMBINATION OF LABA/ICS CAN AVOID COSTS OF HOSPITALIZATION IN ASTHMA AND COPD IN GERMANY

PROS38

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OBJECTIVES: To assess the impact of continuity of treatment on hospitalization rate and costs of hospitalization in patients with asthma or COPD treated with fixed combination (fc) of long-acting β2-agonists (LABA) and inhaled corticosteroids (ICS).

METHODS: This retrospective analysis, German IMS Disease Analyzer with longitudinal electronic medical record was used to identify patients with at least one diagnosis of asthma, COPD, or asthma-COPD overlap syndrome (F11.0 or J44.1 or J44.8 in the study period October 2007–September 2008, at least one fe- prescription in the first quarter of the study period and physician visits in all four quarters. The population was subdivided by diagnosis (asthma and COPD) and by SHI status (pensioners and insured-persons/qualified-family-member). Hospitalization rate was used as an indicator to assess the impact of continuity of treatment (continuous treatment (ct): at least one prescription of fc in each quarter, non-continuous treatment (nct): at least one prescription of fc in 1–3 quarters). Published data based on German DGRis were used to calculate hospitalization costs. RESULTS: Of 106,911 patients with asthma or COPD, 2,486 insured-persons/qualified-family-member and 1,692 pensioners met the inclusion criteria for asthma; 801 insured-persons/qualified-family-member and 2,389 pensioners for COPD. In each of these subgroups, the proportion of patients with ct is significantly (p < 0.05, Wilcoxon) higher in patients without hospitalization compared to hospitalized ones. The hospitalization rate decreased 1.4 to 1.7-fold in patients with nct (p < 0.05) compared to patients with ct. The estimated associated additional hospitalization costs for sick days per 10,000 patients were 370,000–960,000 EUR/year for the different subgroups of patients. CONCLUSIONS: There is a strong impact of continuity of treatment on hospitalization rate in patients with asthma or COPD.

Continuous treatment with fixed combination LABA/ICS can avoid asthma or COPD related hospitalizations and therefore offers potential for cost savings.

ADHERENCE AMONG COPD SUBJECTS ON Tiotropium and Fluticasone/Salmetoler

PROS39

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OBJECTIVES: Compare adherence, defined as persistence and compliance, in subjects with chronic obstructive pulmonary disease (COPD) initiated on tiotropium bromide or fluticasone/salmeterol therapy. METHODS: This retrospective inception cohort study used claims from a large national US health plan. Subjects with COPD were selected for the study if they had ≥1 fill of tiotropium or fluticasone/salmeterol between December 1, 2004 and December 31, 2005 and ≥12 (up to 18) months of continuous enrollment. Persistence was defined as days from the index prescription to the first 60-day gap in the index drug. Subjects with a medication possession ratio (MPR) ≥80% were “compliant” and MPR <80% were “non-compliant.” Persistence and compliance were modeled with Cox proportional hazard and logistic regressions, respectively. Covariates included index drug, demographics, baseline COPD severity, and comorbidities. RESULTS: The sample comprised 1561 tiotropium and 2976 fluticasone/salmeterol subjects. Seventy-eight percent of tiotropium subjects achieved ≥60-day gap in index therapy versus 89% of fluticasone/salmeterol subjects (p < 0.001). Tiotropium subjects were more compliant than fluticasone/salmeterol (20% vs. 9%, p < 0.001). Mean length of persistence was 95.9 days for tiotropium vs. 77.3 for fluticasone/salmeterol subjects. Seventy-eight percent of tiotropium subjects had a ≥60-day gap in index therapy versus 89% of fluticasone/salmeterol subjects (p < 0.001). Tiotropium subjects were significantly more persistent with their index therapy than were fluticasone/salmeterol subjects (hazard ratio for occurrence of 60-day gap: 0.72; confidence interval [CI]: 0.67–0.77). Logistic regression results showed tiotropium subjects were significantly more likely to be compliant vs. fluticasone/salmeterol subjects (odds ratio: 2.25; CI: 1.85–2.73). CONCLUSIONS: Tiotropium subjects were significantly more adherent than fluticasone/salmeterol subjects. The results can have important implications for management of COPD. Additional research in different COPD populations should be undertaken to investigate these findings further.

MEDICATION USE AND ASTHMA CONTROL – ANALYZING ECONOMIC TRADEOFFS USING INSURANCE CLAIMS DATA

PROS50

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Recommended care (Expert Panel Report 3, NAEP 2007) for severe asthma patients may entail expenditure on controller medications that could lead to nonadherence to prescription asthma medications. Consequently, nonadherence may increase the likelihood of exacerbations that could increase long term health care cost. OBJECTIVES: This paper examines if nonadherence to controller medications increases total health care expenditure for severe asthma patients over time due to increased frequency of severe exacerbations. METHODS: Insurance claims from the Maryland Medicaid program were used to select continuously-enrolled individuals who had inpatient admissions or emergency room visits in 2005 with asthma as the principal diagnosis. These individuals, considered to suffer from severe asthma, were followed through the end of 2006 to assess the impact of medication use on the recurrence of severe asthma exacerbations (i.e., repeat hospitalization or emergency department visit) and subsequent increased medical expenditure. For every individual, the American Lung Association classification of asthma medication was used to classify prescription medications into controller and reliever categories. RESULTS: 1) Ten percent of the sample in 2005 had an exacerbation in 2006. Results from a Probit model with selection indicated that individuals using less less than 50% of recommended care (Expert Panel Report 3, NAEP 2007) were more likely to experience a recurrence of asthma exacerbation, and 2) Results from the two-part and Heckman selection models indicated that increase in use of controller medications was associated with increased expenditure on prescription medications but lowering in patients with emergency visit expenditure due to exacerbations.

CONCLUSIONS: The cross-sectional nature of the data precludes inferences about causality between medication use and asthma-related expenditures. However, the financial tradeoffs (between prescription drugs payments and possible exacerbation-related care) of COPD patients have implications for adherence to prescribed medications and effectiveness of long-term asthma control. More research is required to examine how modifications in insurance payments can improve adherence to asthma medications.