OBJECTIVES: To assess the cost-effectiveness of three treatments (tiotropium, salmeterol, and no treatment) in patients with moderate chronic obstructive pulmonary disease (COPD).

METHODS: A Markov model with a time horizon of one year was developed to evaluate the cost-effectiveness of three treatments including i) tiotropium, ii) salmeterol, and iii) no treatment, in patients with moderate COPD. A hypothetical cohort of 100,000 subjects with moderate COPD with the following characteristics were included in the model: mean age of 65 years, smoking history of 50 pack years, and disease duration of 9.5 years. The efficacy and withdrawal data was taken from published randomized clinical trials of the treatments conducted in patients with moderate COPD. The effectiveness measure was exacerbations avoided per patient per year. Incremental cost-effectiveness ratio (ICER) was calculated as additional cost per patient to prevent one exacerbation, compared with the next most expensive option. A payer’s perspective was used and only direct costs were included in the study. Sensitivity analyses were conducted to test the robustness of the baseline estimates and the study assumptions. RESULTS: The mean annual costs for no treatment, salmeterol, and tiotropium groups were $392, $1268.7 and $1408.6, respectively. The ICER of tiotropium compared with no treatment group was $1830.46/exacerbation avoided, while the ICER of salmeterol compared with no treatment group was $2454.35/exacerbation avoided. Sensitivity analysis results for study variables were stable over a wide range; however the results were most sensitive to the compliance rates of the drugs. CONCLUSION: In patients with moderate COPD, tiotropium was more cost-effective than salmeterol and no treatment strategy. The study helps demonstrate the cost-effectiveness of new treatment interventions in COPD, which would assist private payers in evaluating the role of costly, yet effective therapies.

COMPARISON OF EVENTS (HOSPITALIZATIONS AND EMERGENCY DEPARTMENT VISITS) AND COSTS FOR MEDICAID PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) BY INITIAL MEDICATION REGIMEN

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OBJECTIVES: Limited information is available about the relative benefits of various COPD medication treatments on the outcomes and treatment costs in a Medicaid population. The objective was to compare the effects of initial medication regimens on COPD-related and all-cause events (hospitalizations and/or emergency department visits) and COPD-related and all-cause costs for patients with COPD. METHODS: A historical cohort of Texas Medicaid patients aged 40 to 65 years, with COPD-related medical costs (ICD-9-CM = 491, 492, 496), 24 months of continuous enrollment (12 months pre and post), and at least one prescription claim (index) for inhaled corticosteroids (ICS), salmeterol (SAL) or fluticasone propionate/salmeterol (FSC) between September 1, 2000, and December 31, 2003 were assessed. For analysis of events, Cox proportional hazards regression analyses were conducted controlling for baseline factors and pre-index events. For analyses of costs, a two-part model with logistic regression and generalized linear model (GLM) were used to adjust for baseline characteristics and pre-index utilization and costs. RESULTS: A total of 6793 patients were identified; IPR (n = 4213), ICS (n = 968), SAL (n = 401) and FSC (n = 1211). EVENTS—Compared with IPR, only FSC was associated with a significantly lower risk of any COPD-related event (HR 0.733 [95%CI 0.650–0.826]), and any all-cause events (HR 0.906 [95%CI 0.844–0.972]). COSTS—Compared to IPR, total COPD-related costs were similar in FSC and ICS, and reduced by $108 (p < 0.05) in the SAL cohort. However, for total all-cause costs, significant reductions were observed for FSC ($792, P < 0.05) and SAL ($1226, p < 0.05) but not the ICS cohort. CONCLUSION: Compared to the IPR cohort, the FSC cohort was 27% less likely to have a COPD-related event, 10% less likely to have any all-cause event, had similar total COPD-related costs, and had reduced all-cause treatment costs in COPD patients, indicating that FSC is a cost-effective initial maintenance therapy compared to IPR.

ESTIMATED COST SAVINGS ASSOCIATED WITH THE USE OF A NEW TASTE-MASKED ORAL CLARITHROMYCIN PREPARATION FOR THE TREATMENT OF RESPIRATORY TRACT INFECTIONS IN CHILDREN IN GERMANY

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OBJECTIVES: To evaluate the economic value of a new taste-masked oral clarithromycin preparation (clarithromycin SiPTechnology) by estimating the amount of cost savings due to its improved compliance compared to clarithromycin suspension in children with respiratory tract infections (RTI) in Germany.