

Meeting / Value in Health Info:	ISPOR 12th Annual European Congress Paris, France October, 2009
Code:	PRS4
Disease:	Respiratory Disorders, Chronic Obstructive Pulmonary Disease
Topic:	Clinical Outcomes Studies (COS)
Topic Subcategory:	EE
Title:	INDIRECT COMPARISON OF EFFICACY AND SAFETY OF FLUTICASONE AND BUDESONIDE IN THE TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE
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OBJECTIVES: The main objective of this study is to evaluate efficacy and safety of fluticasone in comparison with budesonide in patients with chronic obstructive pulmonary disease (COPD).

METHODS: Comparison was based on randomized controlled trials (RCTs) identified by means of systematic review, carried out according to the Cochrane Collaboration guidelines and Agency for Technology Assessment in Poland. The most important medical databases (EMBASE, MEDLINE and CENTRAL) were searched. Two reviewers independently selected trials, assessed their quality and extracted data. Since no head-to-head comparisons between fluticasone and budesonide were found indirect comparison using placebo (PLC) as reference group was performed.

RESULTS: The systematic search retrieved 34 RCTs which were included in the analysis (21 studies for FL compared with PLC and 13 for BUD vs. PLC). Indirect comparison showed that fluticasone (FL) is statistically significantly better than budesonide (BUD) in respect to Forced Expiratory Volume in 1 second (FEV1) before use of bronchodilator (WMD=0.05 liter [0.01; 0.09]) and after use of bronchodilator (WMD=0.06 liter [0.02; 0.10]), but those drugs didn't differ in respect to FEV1 expressed as percentage of predicted value. Moreover, morning Peak Expiratory Flow (PEF) was significantly better in favor of FL (WMD=6.08 L/min [1.44; 10.72]). There were no statistically significant differences between FL and BUD in risk of death (RR=1.24 [0.69; 2.22]), COPD exacerbations (RR=1.11 [0.85; 1.45]) and quality of life measured with St George's Respiratory Questionnaire (WMD=1.12 [-1.51; 3.75]). Risk of serious adverse events, candidosis, pneumonia and risk of withdrawals due to adverse events were similar in both groups.

CONCLUSION: Treatment with fluticasone in comparison with budesonide is associated with better improvement in spirometric parameters. Fluticasone and budesonide have acceptable safety profiles.