compared with Symbicort® Turbuhaler® was based on a conservative assumption. Inhaled corticosteroids, used in 246,666 adult patients used Symbicort® Turbuhaler® annually in Sweden and were therefore eligible for treatment with DuoResp® Spiromax®, with 72.9% of these exhibiting poor inhalation technique. Based on the predicted improvement in inhalation technique with DuoResp® Spiromax® compared with Symbicort® Turbuhaler® and asthma control in the hypothetical uptake of DuoResp® Spiromax® reaching 25% in years 4 and 5 – estimated societal cost savings through the avoidance of 147,158 lost productive days, totalled SEK285.4 million ($37.2 million US). DuoResp® Spiromax® had the potential to improve inhalation technique compared with Symbicort® Turbuhaler®, which would likely result in substantial societal cost savings.

PR563 IMPACT OF OMAZILUMAB ON ALL-CAUSE AND ASTHMA-RELATED HEALTH CARE RESOURCE UTILIZATION IN PATIENTS WITH MODERATE OR SEVERE ASTHMA

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Objectives: Inhaled health care resource utilisation (HCRU) is associated with inadequately controlled asthma. Here, we evaluate the impact of omalizumab on HCRU in patients with moderate or severe persistent asthma. METHODS: A retrospective case–crossover study was conducted using the Truven MarketScan database. Data between 1-January-2007 to 30-September-2012 was collected for analysis. Patients included in the analysis had to have a diagnosis of moderate or severe persistent asthma at any point in the analysis period. Data were stratified by asthma severity based on NHLBI criteria. RESULTS: A total of 429 patients (mean age, 48.9 years; 69.8% male) were identified from the database. The impact of omalizumab was associated with a 49.3% (p = 0.0003), 54.0% (p = 0.001), and 35.3% (p = 0.1466) reduction in the mean number of asthma-related ER visits and 69.2% (p = 0.0005), 65.5% (p = 0.0045), and 80.0% (p = 0.0016) reduction in the mean number of asthma-related hospitalisations among All, Moderate, and Severe asthma patients, respectively. The mean length of stay for asthma-related hospitalisations was also reduced to 72.1% (p = 0.0002), 64.5% (p = 0.0016), and 90.6% (p = 0.0442) in All, Moderate, and Severe patients respectively. All-cause ER visits were reduced by 30.8% (p = 0.0449) and 25.0% (p = 0.1384), and hospitalisation reduced by 48.9%, 45.2%, and 64.7% (all p < 0.0155) in All, Moderate, and Severe patients respectively. Cohort analysis of severe asthma patients (n = 12) showed significant differences in measures of asthma control and overall health status to add to the growing body of evidence helping to optimize asthma management interventions. METHODS: Data were drawn from the US 2013 Respiratory Disease Specific Program, a cross-sectional survey of adult asthma patients consulting for routine care. Partial Least Squares Path Modelling was used to quantify the inner model relationships between two latent variables of patient-reported satisfaction of drug delivery and functional status (forced spirometry).

PR564 DEVICE HANDLING ERRORS AND THE IMPACT ON QUALITY OF LIFE AND HEALTH CARE RESOURCE USE IN ASTHOMATIC PATIENTS

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Objectives: Correct device technique has a significant influence on the delivery of an inhaled medication and thus impact its cost-effectiveness. The objective of this literature review was to examine the impact of device handling errors on QOL and health care resources to understand the potential value of a novel inhaler device for health care systems and patients. METHODS: A literature search of articles published 2009-2013 was conducted on the following key words in MEDLINE®, supplemented by a grey literature review and searching of reference lists. Article selection and relevant data extraction were based on key words relating to handling error, QOL, and health care resource use. RESULTS: Of 575 potentially relevant publications, 22 were selected for in-depth review. Papers reported 25-75% of patients make critical handling errors that lead to no-dose or reduced-dose delivery on first use of devices. Incorrect inhaler use was four times more frequently reported in patients with uncontrolled asthma than in patients with controlled asthma. Poor asthma control also impacts resource use: poorly-controlled patients made twice as many ER visits, and spent 2-3 times more time consulting with physicians than controlled patients (either physician visits or time speaking to physicians). Asthma control also impacts QOL: poorly-controlled patients reported health-state utility (EQ-5D) values of 0.52-0.69, compared to 0.88-0.93 for well-controlled patients. Conclusions: Handling errors with devices can lead to poorly-controlled patients, resulting in reduced QOL and increased health care resource use. New inhaler devices represent an opportunity to reduce errors and improve asthma control, therefore improving QOL and reducing resource use. Further research is required to model the relationship between a reduction in handling error and improved asthma control status, and the subsequent impact on resource use and QOL.

PR565 MEDIUM TERM AVOIDED COSTS: HIGH-DOSE HYPOLLEGENIC HOUSE DUST MITE PREVENTIVE IMMUNOTHERAPY VERSUS CONVENTIONAL SYMPTOMATIC TREATMENT

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Objective: To evaluate the medium-term difference between high-dose hypollegenic symptomatic treatment of mite allergy and subcutaneous specific immunotherapy (SCI) with high doses of hypollegenic dust-mite preparation. METHODS: Observational, retrospective and multicenter study carried out in Spain in 2013 in 419 patients diagnosed with rhinitis and / or bronchial asthma for mite allergy were retrieved. Mean age 24.9 years (SD 14.4). Comparing the use of symptomatic medication (rescue and study) with scheduled medical care (allergy and emergency visits) and sick-dayleave numbers associated with SCI treatment versus no SCI treatment. SCI treatment vs no SCI treatment costs ratio was performed: Used resources (Symptomatic medication, unscheduled medical care, diagnostic-tests, and sick-dayleave days) and time speaking to physicians. In diagnostic-tests: 75% in spirometry testing bronchio-dilation, 72% in O2 saturation measuring; 90% in FeNO measuring and 81% in chest radiographs. In leave sick days 94%. Ratio of comparative calculations of the effect of SCI treatment versus non SCI treatment (considering conventional symptomatic treatment) is 0.8. Conclusions: Considering 3 years of SCI, and 3 follow up years of sustained efficacy after completing treatment, cost per patient SCI treated is estimated at 20% below the cost non SCI treated patient. Direct costs were reduced by 64% and indirect costs by 94%.

PR567 TECPECO II STUDY: HOW TO IMPROVE THE INHALATION TECHNIQUES IN PATIENT WITH COPD? THE INFLUENCE OF PREFERENCES

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Objectives: to test the efficacy of two interventions to improve the inhalation techniques in patients with Chronic Obstructive Pulmonary Disease and the influence of patient’s preference. Methods: Design: Multicenter patients’ preference trial or comprehensive cohort design ISRCTN15106246. Patients: 465 COPD patients (to detect a difference between groups of 25%, 80% statistical power, 95% confidence level, 10% expected losses), with inhalated treatment, written consent. Non-probabilistic consecutive sampling. Allocation: Patients without strong preferences for a treatment were randomised. ICT group (block randomization), and those with strong preferences were given the preference group. Primary outcomes: Performance of correct inhalation technique. Secondary outcomes: Pick flow, Baseline dyspnea index (BDI), Functional status (forced spirometry). Interventions: A) written information. B) Written information + Instructor. Differences between the main inhalation technique (SIBA) and conventional technique for the main inhaler devices used in our area. Intervention-B: Intervention-A + individual training (by instructors). Follow-up: 12 month, visits: baseline, 1 month, 3rd month, 6th month, 12th month. Statistical analysis: Mean, frequency, 95% confidence interval, McNemar test. Reaching 80% reduction of the baseline dyspnea index (BDI) within 12 months.

RESULTS: Predominance of males (91.4%), mean age 69.5 years (95% CI: 69.0-70.9), FEV1 (mean) –55.91% (95% CI: 53.62-58.2), mixed respiratory pattern (65.5%). Severity stage: 15.7% mild, 44.1% Moderate, 40.3% Severe. Pharmacological treatment: inhaled-beta2-agonist (88.8%), inhaled-corticoster-