the disease was developed and the study adopted society's perspective while the horizon time considered was patient's remaining lifespan. Cohorts of COPD patients treated with Tiotropium or cohorts of patients undergoing pulmonary rehabilitation programs were simulated (Monte-Carlo simulations in TreeAge software) and compared to identical cohorts of patients subjected to usual care. Life expectancies, quality adjusted life-years (QALY), disease-related costs, and incremental cost-utility ratios were estimated. **RESULTS:** At the horizon of a patient's remaining lifetime (14.29 life years in average, considering a population combining moderate to very severe patients), tiotropium would result in 0.12 life years and 0.58 QALY gained (mean estimates), induce an additional cost of 5380 €/patient in the disease-related costs, with a corresponding incremental cost-utility ratio of 8853 €/QALY. For pulmonary rehabilitation programs, these estimates were 0 life years, 0.31 QALY, 2,969 €, and 12,000 €/QALY, respectively. Results were mostly sensitive to the utility changes associated with exacerbations. **CONCLUSIONS:** Tiotropium treatment and pulmonary rehabilitation programs were estimated as worth interventions in the studied population, below the usual threshold used for declaring procedures as cost effective. Nevertheless, the modest gains in health issued from the study emphasize the need of research for developing more effective COPD-related therapies.

PRS47

OPTIMA MODEL-BASED COST-UTILITY ANALYSIS OF FIXED COMBINATION SALMETEROL/FLUTICASONE VERSUS NON-FIXED COMBINATION BUDESONIDE/FORMOTEROL IN ONE PACK FOR BRONCHIAL ASTHMA TREATMENT

Yagudina R[1], Kulikov A[1], Chuchalin AG[2], Ogorodova LM[3], Demko IV[4], Lomakin A[5], Shchurov D[6]

[1]*I.M. Sechenov First Moscow State Medical University, Moscow, Russia,* [2]*SRI of Pulmonology, Moscow, Russia,* [3]*Siberian State Medical University, Tomsk, Russia,* [4]*Krasnoyarsk State Medical University, Krasnoyarsk, Krasnoyarsk, Russia,* [5]*GlaxoSmithKline Russia, Moscow, Russia,* [6]*GlaxoSmithKline, Moscow, Russia*

OBJECTIVES: To assess costs, utilities and cost-utility of fixed combination salmeterol/fluticasone (SAL/FP maintenance treatment) versus non-fixed combination budesonide + formoterol in one pack (BUD+FORM maintenance treatment) in the management of patients with bronchial asthma by means of an OPTIMA model. **METHODS:** In this analysis we used the following data: drug prices (from List of Maximum Permissible Manufacturer Prices for Vital and Essential Drugs) and drug dosage proportion (from MRC Pharmexpert, 4Q 2010); number of inhalations per day (from instructions); QOL and number of health care resources for controlled and uncontrolled asthma (from published sources); resource unit costs (from 2010 health care insurance program). Work-off day costs included tax deficiency, GDP underproduction and sick pay. Frequency of controlled asthma was obtained from ARROW study (Ogorodova et al., 2009) for SAL/FP (73%) and from FACET trial (O'Byrne et al. 2008) for BUD+FORM (62%). Conceptual formula of analysis was: cost of drugs + % controlled * cost of controlled + % uncontrolled * cost of uncontrolled. One-way sensitivity analysis was conducted to assess the robustness of the results. **RESULTS:** Average monthly costs of drugs were 1,677 RUR/€42 and 2,023 RUR/€51 for SAL/FP and BUD+FORM respectively. Medical costs and QOL measures were 378 RUR/€9 and 0.75 for controlled asthma; 88,295/€2,207 RUR and 0.49 for uncontrolled asthma. Yearly total costs per patient were higher for BUD+FORM than for SAL/FP (58,057/€1,451 RUR vs. 44,244 RUR/€1,106). Compared to BUD+FORM, SAL/FP was associated to an expected increase of QALYs per patient (0.68 QALYs vs. 0.65 QALYs). The cost-utility analysis showed that SAL/FP was dominant (less costly and more effective in terms of QALYs gained). Results were sensitive to all the parameters varied in the sensitivity analysis, especially health care costs. **CONCLUSIONS:** Treatment of patients with bronchial asthma with SAL/FP is a dominant strategy in comparison with non-fixed combination BUD+FORM in one pack.

PRS48

COST-UTILITY ANALYSIS OF VARENICLINE VS EXISTING SMOKING CESSATION STRATEGIES IN EL SALVADOR

Lutz MA[1], Lovato P[2], Morales G[2], Cuesta G[2]

[1]*Pfizer S.A., Escazú, San Jose, Costa Rica,* [2]*Pfizer Central America and the Caribbean, Escazú, San Jose, Costa Rica*

OBJECTIVES: Smoking is the leading cause of preventable death in El Salvador (50%) and results in many serious comorbidities, including lung cancer, coronary heart disease, stroke and chronic respiratory disease. The aim of this study was to evaluate the cost-utility of varenicline compared to other existing strategies for smoking cessation within a 5-year time horizon in El Salvador using the healthcare payer's perspective. **METHODS:** The Benefits of Smoking Cessation on Outcomes (BENESCO) simulation model was used for an adult cohort (n=4,537,803). Diseases included were: stroke, lung cancer, coronary heart disease and chronic obstructive pulmonary disease. Smoking cessation therapies compared were: varenicline (0.5 – 2 mg/day), bupropion (300 mg/day), nicotine replacement treatment (NRT) (5-10 mg/day) and unaided cessation. Effectiveness measure was: quality-adjusted life year gained (QALY's), which was obtained from published literature. Resource use and costs data were obtained from El Salvador's Ministry of Health and Social Security official databases (2010). The model used a 3% discount rate for costs (expressed in 2010 US dollars) and QALYs. Probabilistic sensitivity analyses (PSA) were conducted and acceptability curves were constructed. **RESULTS:** Varenicline reduced smoking related morbidity, mortality and healthcare costs. After 5 years, Varenicline gained 306,158 QALYs, which represents 73, 94 and 178 more QALYs than bupropion, NRT and unaided cessation, respectively. Overall costs showed varenicline as the least expensive option against bupropion (+US$328,558), NRT (+US$412,730) and unaided cessation (+US$777,124). Cost-effectiveness analyses showed that varenicline was the dominant strategy. Acceptability curves showed that varenicline would be cost-effective within <3 GDP per capita threshold. PSA results support the robustness of the findings. **CONCLUSIONS:** Smoking cessation therapy with varenicline is cost-saving in El Salvador. These results could help to reduce the tobacco related disease burden and align cost-containment policies.

PRS49

ECONOMIC BURDEN ATTRIBUTABLE TO OBESITY IN ADULT PATIENTS WITH ASTHMA IN THE UNITED STATES

Suh DC[1], La HO[2], Barone J[3], Chang CW[3], Kim CM[2]

[1]*College of Pharmacy, Chung-Ang University, Seoul, NJ, South Korea,* [2]*Catholic University College of Medicine, Seoul, South Korea,* [3]*Rutgers University, Piscataway, NJ, USA*

OBJECTIVES: To estimate annual medical and productivity costs attributable to obesity in adult patients with asthma in the US. **METHODS:** This study used the 2003-2008 Medical Expenditure Panel Survey. Asthma patients(18-64 years) were identified using ICD-9-CM code 493, clinical classification code-128, or physician diagnosis. Patients were classified as normal(BMI:18.5-<25 kg/m2), overweight-(BMI:25-<30 kg/m2) or obese(BMI:≥30 kg/m2). Medical costs were estimated using a generalized linear model(GLM) with a log link function and gamma distribution. Costs associated with productivity loss were calculated based on missed working days due to illness and average hourly wage using a two part model. In the first part, logistic regression was used to estimate the probability of having missed working days due to illness. In the second part, among patients with missed working days, GLM was used with the estimated probability from first part of model to estimate the cost associated with productivity loss. The costs attributable to obesity were estimated by differences between the observed and estimated cost in obese patients, using a distribution of covariates obtained from normal patients. All costs were converted to 2010 US dollars using price indices. **RESULTS:** A total of 8775 adults were identified with asthma. The average treatment cost and lost productivity costs of normal patients were $3154(95%CI:$2689-$3620) and $327(95%CI:$279-$375), and those of obese patients were $5720(95%CI:$5314-$6129) and $699(95%CI:$608-$790), respectively. Obese patients had 38% higher medical cost and 53% higher lost productivity costs after adjusting for other study variable.Additional medical costs attributable to obesity were calculated at $1087 (95%CI:$687-$1487) and lost productivity costs attributable to obesity were $279(95%CI:$191-$368). **CONCLUSIONS:** The economic burden of asthma among US adults is substantial which is only further amplified by the presence of obesity. This study highlights the importance of obesity control to reduce the cost of treating asthma patients and enhance productivity.

PRS50

THE DUTCH 1-YEAR RESOURCE USE RESULTS FROM THE EXPERIENCE STUDY, AN INTERNATIONAL REGISTRY OF REAL-WORLD OUTCOMES FOR ASTHMA PATIENTS TREATED WITH OMALIZUMAB

van Nooten F[1], Thompson C[2], Brown R[2], Groot M[3]

[1]*United BioSource Corporation, London, UK,* [2]*United BioSource Corporation, Bethesda, MD, USA,* [3]*Novartis Pharma B.V., Arnhem, The Netherlands*

OBJECTIVES: The objective is to describe the healthcare resource utilization and cost patterns associated with severe uncontrolled allergic asthma, based on data from Dutch patients collected in the EXPERIENCE study. **METHODS:** EXPERIENCE was a prospective, open-label, observational, multicenter, multicountry study in patients with severe persistent allergic asthma treated with omalizumab. The Global Evaluation of Treatment Effectiveness (GETE) was used to evaluate patient response. Healthcare resource use and number of exacerbations were captured for one year prior to the start of the study for all patients and continued for 104 weeks until end of the study. Hospitalizations, specialist visits and medications were included in this analysis for year before study and first year of study. Unit cost prices taken from 2010. **RESULTS:** A total of 154 subjects were included in ITT population. There were 2.5 clinically significant (CS) exacerbations/patient year prior compared to 0.90 CS exacerbations/patient for year of study on omalizumab. The total number of CS severe (CSS) exacerbation was 0.95 CCS exacerbations/patient for year prior and 0.26 CSS exacerbations/patient for year of study. The results indicate that patients in this study have an average cost of €4257/patient in the year prior to the study and €2583/patient cost during the study year, excluding omalizumab costs. The biggest cost drivers are hospitalization, work days lost and other asthma medications. The total omalizumab costs were €12,652/patient plus €1,171/patient for administration cost. **CONCLUSIONS:** This study reflects real life clinical practice and associated costs for omalizumab treatment of severe allergic asthma patients. It indicates a reduction in CS and CSS exacerbation rates of 64% and 73%, respectively associated with a 40% reduction in treatment costs when using omalizumab. Keeping in mind the study limitations associated with the observational setting, it provides estimated costs for patients with severe uncontrolled allergic asthma based on 'real-world' Dutch practice patterns.

Respiratory-Related Disorders – Patient-Reported Outcomes & Preference-Based Studies

PRS51

THE DEVELOPMENT OF THE EARLY MORNING SYMPTOMS OF COPD INSTRUMENT (EMSCI)

Palsgrove A[1], Houghton K[2], Hareendran A[3], Schaefer M[1], Setyawan J[4], Mocarski M[5], Carson R[5], Make B[6]

[1]*United BioSource Corporation, Bethesda, MD, USA,* [2]*RTI Health Solutions, Manchester, UK,* [3]*United BioSource Corporation, London, UK,* [4]*Shire Pharmaceuticals, Wayne, PA, USA,* [5]*Forest Research Institute, Jersey City, NJ, USA,* [6]*National Jewish Health, Denver, CO, USA*