mixed-treatment comparison) were applied at 2 weeks. Lung function decline after 2 weeks was applied independent of treatment arm but dependant on GOLD stage. Exacerbation risk, health outcomes and costs of COPD management were calculated based on GOLD stage. Cost inputs were taken from published literature. **RESULTS:** The 5-year budget impact of displacement of tiotropium by tiotropium + olodaterol Respimat®was a cost-saving of £25.8 million, £2.7 million, £1.6 million, and £0.9 million, in England, Scotland, Wales, and Northern Ireland respectively. These cost-savings were largely driven by a predicted 0.8% reduction in COPD management costs, and a predicted 0.9% reduction in the costs of exacerbation management. **CONCLUSIONS:** Switching patients with COPD from tiotropium maintenance to tiotropium + olodaterol Respimat® maintenance therapy has the potential to be cost-saving to the UK NHS. These cost-savings largely result from a predicted reduction in primary and secondary care costs. Whilst treatment switching should be driven by clinical rationale and patient preference, this finding has implications for medicine optimisation in the UK.

PRS18

THE BUDGET IMPACT OF AN INHALER WITH IMPROVED FEATURES COMPARED TO SPIRIVA® HANDIHALER® FOR THE MANAGEMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN THE UK: ESTIMATED IMPACT ON UNSCHEDULED HEALTHCARE COSTS AND INHALER SATISFACTION

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OBJECTIVES: Spiriva® Handihaler® (tiotropium) is a single capsule dry powder inhaler (DPI) for the treatment of COPD. A budget impact model was developed to assess the potential economic impact of introducing an inhaler with improved features compared to Spiriva® Handihaler®to treat COPD in the UK. The potential cost benefit of increasing treatment satisfaction, due to the improved characteristics of this new inhaler was investigated. **METHODS:** The eligible patient population presented was based on the number of confirmed COPD diagnoses in the UK, with the proportion of patients receiving Spiriva® Handihaler® based on market research data. The costs of scheduled and unscheduled healthcare events presented within the model were taken from publically available UK sources. Findings from a multinational, cross-sectional, real-world survey of 1,443 COPD patients associating inhaler attributes, inhaler satisfaction, adherence and patient health status were used within the model to determine the correlations between inhaler satisfaction, treatment adherence and unscheduled healthcare events. Using these correlations, an annual number of UK unscheduled healthcare events associated with COPD was calculated for patients using a new improved inhaler and Spiriva® HandiHaler®. **RESULTS:** The annual UK costs of treating COPD patients for unscheduled healthcare events were €1027.05 with Spiriva® HandiHaler®vs. €922.14 with the new inhaler. Potential budgetary savings achieved by using the new inhaler instead of HandiHaler® were calculated at €104.91 per patient and €16.69 million for the UK COPD patient population per year. **CONCLUSIONS:** There is a potential for a new improved tiotropium inhaler to offer budgetary savings compared with Spiriva® Handihaler® resulting from cost benefits due to increased patient satisfaction with their inhaler.

PRS19

ESTIMATING SEASONAL ALLERGIC CONJUNCTIVITIS MARKET SIZE AND SPENDING

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OBJECTIVES: This study estimated the total expenditure on prescribed Seasonal Allergic Conjunctivitis (SAC) medication in the UK and the budget impact of switching patients to alternative treatments. **METHODS:** A budget impact model developed from the UK NHS and Personal Social Services (PSS) perspective was used to evaluate total spending on: olopatadine, generic sodium cromoglicate, branded sodium cromoglicate, nedocromil sodium. A 4-month time horizon was applied (average allergy season duration). Direct to patient data (National Health and Wellness Survey [NHWS]) were used to estimate the number of patients receiving prescription SAC treatment. Published 42-day efficacy data were input for each product, with patients classified as either successfully treated or unsuccessfully treated at 14, 28, 42, and 120 days. Unsuccessful treatment required additional resource use and switch to further therapy. Two approaches extrapolated clinical data to 120 days: A) No decline after 42-days, B) linear decline in efficacy. Cost per treatment was estimated and multiplied by its market size to estimate the total current spend in the UK. Model structure and inputs were validated with clinical KOLs. **RESULTS:** Under scenario A olopatadine treatment was associated with the lowest cost. Olopatadine spending over a four month period was £100.08 versus £104.39 for sodium cromoglicate. Under scenario B, sodium cromoglicate treatment resulted in costs of £114.97 versus £124.07 with olopatadine. An estimated 3,161,807 UK adults are treated in the Rx market (NHWS). Total spending was estimated to exceed £300,000,000 under all scenarios. Under scenario A switching all patients to olopatadine may result in savings of £15,378,769. **CONCLUSIONS:** Increasing olopatadine market share in SAC may be cost-saving when compared against alternative treatments for SAC. The use of direct to patient surveys are an important source in market sizing when considering markets split across prescription and over-the-counter treatments.

PRS20

BUDGETARY IMPLICATIONS OF INTRODUCING THE GSK ELLIPTA PORTFOLIO FOR COPD IN THE UK

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OBJECTIVES: The GSK Ellipta portfolio medicines are licensed for treatment of COPD in the UK and is comprised of fluticasone furoate/vilanterol, umeclidinium bromide/vilanterol and umeclidinium bromide. A budget impact model (BIM) was designed to explore the cost implications of prescribing Ellipta portfolio in appropriate patients versus alternative therapies, in line with clinical guidelines. **METHODS:** a one-year BIM was constructed to explore financial implications of prescribing Ellipta medicines as alternative treatment options to currently prescribed therapies. The BIM is based on UK prescription analysis, epidemiological and resource data. The BIM uses prescription data to generate patient cohorts and progresses them to more intensive therapy based on estimates of symptoms of exacerbation or breathlessness. It also considers medicines optimsation for patients that could benefit from simplified regimens and estimates the budget impact of moving patients using non-licensed ICS/LABA to licensed therapies. The model allows definition of treatment progressions, using appropriate Ellipta devices to target bronchodilator or steroid based regimens. Costs are calculated using market share of current treatments vs. a scenario in which Ellipta medicines are used. Differences in patient outcomes, efficacy or safety are not explored. **RESULTS:** It is estimated that the average health economy in the UK has 5,518 COPD patients of whom 1,320 are eligible to be progressed in their medication. In year 1, compared to a base case of utilising the most routinely used existing COPD therapies (100% implementation rate for new incident patients and 50% for all others) would increase spend by £247,830 compared with a reduced budget impact of -£131,920 if these eligible patients were moved to Ellipta medicines. **CONCLUSIONS:** The introduction of Ellipta portfolio in COPD could potentially reduce the budget impact and total spend on COPD therapies by £379,750 in the average UK health economy compared to current prescribing patterns. Funded by GSK

PRS21

BUDGET IMPACT ANALYSIS OF FORMOTEROL EASYHALER IN THE TREATMENT OF ASTHMA IN CHILDREN IN THE RUSSIAN FEDERATION

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OBJECTIVES: To conduct the budget impact analysis of Formoterol Easyhaler, which allowed to determine the net economic effect of the budget impact in regards of replacement of one medicine to another. **METHODS:** Information search was conducted in the public domain. Pharmacoeconomic analysis method – budget impact and direct cost analysis were performed. **RESULTS:** In this study, given the pharmacoeconomic evaluation of drugs Formoterol Easyhaler, Oxis Turbuhaler, Foradil Aerolizer and Atimos. The study had a time horizon of one year. The daily dose of formoterol was 24 mcg. Cost analysis was conducted on the cost of basic pharmacotherapy, compensation costs for treatment of exacerbations, compensation costs for side effects and adverse reactions. The total direct cost per patient with asthma amounted to 1 262, 17$ to the Easyhaler group, 1 581, 83$ to the Turbuhaler group, 1 498,95 and 1 499,99 to the Foradil (30 and 60 doses), and 1 705, 06$ to the Atimos. The selection of budget impact method of pharmacoeconomic analysis was determined by the advantages of Formoterol Easyhaler in terms of its efficiency and lower value of total direct costs. In the present study, based on the results of the "cost analysis" it was revealed that the replacement formoterol of Oxis Turbuhaler, Foradil Aerolizer (30 and 60 doses) and Atimos on Easyhaler saved per patient respectively 319,66$, 236,78$ (187, 82$ for 60 doses) and 442,89$ for the health care system budget. **CONCLUSIONS:** The budget impact analysis results obtained in this Formoterol Easyhaler versus others drugs of formoterol comparative study demonstrated that Easyhaler therapy resulted in budget saving.

PRS22

COST SAVING STUDY OF FIVE GRASS POLLEN SLIT TABLET VERSUS SCIT'S & SYMPTOMATIC TREATMENT

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OBJECTIVES: Allergic rhinitis (AR) is a chronic disease of the upper respiratory tract caused by exposure to allergens inducing inflammation of the nasal mucosa and of the conjunctiva mediated by antibody Immunoglobulin E (IgE). According to local literature, prevalence of symptomatic AR is around 20% and grass pollen is the most common allergen causing A (%5 of uncontrolled moderate / severe AR) in Turkey. Allergen-specific immunotherapy (AIT) is recommended as a second line treatment for patients with moderate to severe allergic rhinitis not or poorly controlled by symptomatic treatments.The Five Grass Pollen Sublingual Tablet (5GPST) is an alternative AITin Turkey. The aim of this budget impact model (BIM) was to assess the cost saving potential of the 5GPST inthe Turkish reimbursement system. **METHODS:** Cost calculations were madefrom the payer perspective as per the guidelines of the Social Security Institution (SSI). The time horizon considered in the model was one year. The clinical data and Rescue Medication Scores were acquired from published clinical studies. Direct medical costs were considered in this analysis. Pricing and reimbursement prices data are obtained from Ministry of Health Drug Price List and the Price List of SSI Health Implementation Guideline. **RESULTS:** According to the BIM, total cost of AR treatment for a patient treated with symptomatic treatment alone was 373 TL per year and reached 1.607 TL per year for patients receiving subcutaneous immunotherapy. Total cost of AR with5GPSTwith %11discount for the first reimbursement year was 1.168 TL. Total yearly cost of AR with 5GPST with % 41 discount was 864 TL. **CONCLUSIONS::** Compared to subcutaneous AIT, 5GPST is a cost saving alternative fortreatment of seasonal AR in Turkey from a SSI perspective. The treatment is 27% or 46% cheaper applying 11% or 41% discount rates respectively.

PRS24

BURDEN OF COMMUNITY-ACQUIRED PNEUMONIA IN ADULTS OVER 18 YEARS OF AGE

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OBJECTIVES: Knowing the burden of community-acquired pneumonia (CAP) is important for taking preventive measures. This study aimed to calculate the direct costs of CAP in adults >18 years old. **METHODS:** Data of outpatients and inpatients with CAP from 18-month period were retrospectively evaluated. Numbers of radiological and laboratory analyses, hospital stay (day), and specialist visits were multiplied by the relevant unit costs and the cost per patient was calculated. Total drug costs were calculated by multiplying daily drug cost with medication day for each drug for inpatients and by based on packet price of each drug for outpatients. Costs were expressed as median (minimum-maximum). **RESULTS:** The mean ages were 61.56±17.87 years in inpatients (n=208, 51.4% males) and, 53.78±17.46 years in outpatients (n=211, 53.6% males). The ratios of being ≥65 years old in inpatients and outpatients were 48.6% and 28.9%, respectively. Among inpatients, 36.5% had chronic obstructive pulmonary disease (COPD) and18.3% had hypertension. Among outpatients, 22.7% had COPD and 20.4% had asthma. The total cost was 300.01€ (75.11€-9,870.16€) for inpatients and 39.43€ (5.34€-230.34€) for outpatients. Drug cost had the highest share of total cost both in inpatients and outpatients. In inpatients, total cost was 345.21€ (75.11€-9,870.16€) in those ≥65 years old and 283.35€ (79.13€-3,785.71€) in those <65 years old (p=0.014); this difference was not found in outpatients. The total cost was 633.73€ (313.11€-4,375.23€) in inpatients hospitalized more than once and 270.67€ (75.11€-9,870.16€) in those hospitalized once (p<0.001). In inpatients with and without comorbidities, total costs were 308.14€ (75.11€-9,870.16€) and 221.08€ (92.20€-3785.71€), respectively (p=0.016). In outpatients with and without comorbidities, total costs were 44.97€ (5.34€-230.34€) and 26.56€ (5.34€-110.96€), respectively (p<0.001). **CONCLUSIONS:** Costs were higher in patients with advanced age, having comorbidity, and hospitalized more than once. For decreasing the economic burden of CAP on healthcare system, preventive measures should be taken.

PRS25

THE ASSOCIATION BETWEEN SMOKING CESSATION OUTPATIENT VISITS AND TOTAL MEDICAL COSTS: AN ANALYSIS OF JAPANESE EMPLOYEE BASED PUBLIC HEALTH INSURANCE DATA

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OBJECTIVES: The purpose of this study was to estimate short-term medical cost savings, including costs not directly associated with Smoking Cessation Outpatient Visits (SCOVs), from claims data of employee based public health insurance in Japan. **METHODS:** We conducted two analyses using claims data from January 2005 to December 2013 provided by Japan Medical Data Center Co., Ltd. In the first analysis, we compared medical costs composed of inpatient, outpatient, and medications of the SCOV group, smokers having SCOVs, with those of non-SCOV group for each year. The first day of index year 0 is the day of first SCOV for the SCOV group and is the day after one observation year for the non-SCOV group. In the second analysis, among smokers with SCOVs, a mean increase ratio of medical costs was calculated, varying by the number of SCOVs. **RESULTS:** In the first analysis, medical costs per patient per years (PPPYs) of the SCOV group were ¥95,200 at year -1, ¥173,400 at year 0, ¥130,900 at year 1 and ¥116,100 at year 5, and PPPYs of non-SCOV group were ¥95,200 at year -1, ¥100,700 at year 0, ¥108,100 at year 1 and ¥125,900 at year 5. The PPPY of SCOV group at year 0 was higher than that of non-SCOV group at year 0 but the relation was reversed at year 5. In the second analysis, the mean increase ratio of medical costs of the one-SCOV group was the highest, 58%, and that of five-SCOV group was the smallest, 34%. This measure showed a downward trend. **CONCLUSIONS:** Results are suggestive of a possibility that the future medical costs of patients with smoking cessation outpatient visits are lower than those without smoking cessation outpatient visit and increasing the number of smoking cessation outpatient visits decreases the mean increase ratios of medical costs.

PRS26

COST CONSEQUENCE OF PREVENTIVE TREATMENT WITH OM 85 BACTERIAL LYSATE COMPARED TO THE SAME PATIENTS WITHOUT OM 85 THE PREVIOUS YEAR IN ALLERGIC RHINITIS, ASTHMA AND COPD IN ARGENTINA

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OBJECTIVES: To evaluate the cost efficiency of preventive treatment with OM 85 in patients with AR, asthma and COPD compared to the same patients the previous year only receiving standard of care. **METHODS:** This multi-centre, clinical trial was conducted in Argentina in 2010. Eighty-four patients with COPD, allergic rhinitis (AR) and asthma aged 16-65 years who had not received a bacterial lysate in 2009 were included. In 2010, the same patients received OM-85 bacterial lysate capsule. Capsules were administered daily for 10 consecutive days per month for a duration of 3 consecutive months. **RESULTS:** the number of reinfections and exacerbations in the OM 85 arm was decreased from 85% to 45.5% (p< 0.05) and from 65.7% to 34.9% (p<0.05) vs the previous year, respectively. Hospitalizations were 2% in the OM 85 group and 12% for the previous year. The average total cost per patient per month with AR caused by reinfections and exacerbations was 448.9 ARS and 269.9 ARS in the OM 85 arm compared to 660.40 ARS and 574.40 ARS in the previous year. In patients with asthma total cost for reinfections and exacerbations was 487.9 ARS and 473.9 ARS in the OM 85 arm compared to 1'144 ARS and 970 ARS in the previous year. Reinfections and exacerbations total cost in COPD patients was 1356.5 ARS and 1217.5 ARS in the OM 85 patients but amounted to 1'708.2 ARS and 1599.6 ARS, respectively, in the previous year. **CONCLUSIONS:** Preventive treatment with OM 85 in patients with allergic rhinitis, asthma and COPD significantly reduces reinfections rates, exacerbations and hospitalizations compared to the previous year. Associated cost savings have been substantial and ranged from 15% to 60% vs previous year (no prophylaxis).

PRS27

CLINICAL AND ECONOMIC BENEFITS ASSOCIATED WITH LESS USE OF FLUTICASONE IN PEDIATRIC PATIENTS WITH PERSISTENT ASTHMA TREATED WITH HIGH DOSES OF SPECIFIC ALLERGEN IMMUNOTHERAPY TO MITES

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OBJECTIVES: The existing guidelines recommend the minimum effective dose of inhaled corticosteroids in children with persistent asthma. Clinical studies and recent Cochrane reviews stablish the existence of a significant difference in the growth rate of pediatric patients that receive corticoids against those who do not receive them1-5. Another study showed that pediatric patients treated with subcutaneous immunotherapy (IT) to house dust mites required a significant lower dose of fluticasone propionate (PF). Quantify the savings associated with the dose decrease of PF in pediatric patients with allergic asthma treated for three years with high dose specific-allergen immunotherapy to mites **METHODS:** The average reduction of PF comes from an observational, randomized, three years prospective study (N=65; 33 treated with IT+FP). The number of containers per patient were calculated as well as its economical savings regarding the baseline situation. The immunotherapy used and the PF were accounted for by means of RRP. **RESULTS:** The PF accumulated savings is equivalent to 29,3% of the immunotherapy pharmacological costs. Since PF is a reduced contribution medication, the savings for the NHS are 44,9%-67,3% and 5,9%-3,9% for the patient depending on the income range. **CONCLUSIONS:** Adding high dose specific-allergen immunotherapy to mites to pharmacological treatment retains control over the allergic asthma and reduces the use of corticoids, consequently minimizing the impact on the growth rate of the patients and generates economical savings.

PRS28

ECONOMIC ANALYSIS OF COST OF DRUG TREATMENT INVOLVED IN THE MAINTAINANCE THERAPY OF COPD

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OBJECTIVES: To calculate the fluctuation in the drug cost involved in the treatment of Chronic Obstructive Pulmonary Disease (COPD) during 2013-2015. **METHODS:** Standard treatment guidelines (STG), 4th edition were perused to understand the management of COPD. Current Index of Medical Specialities (CIMS) Oct - Jan 2013, 2014 and 2015 issue were used to capture the price of drugs. One day cost of treatment and its variation was studied. **RESULTS:** According to STG, drugs needed for the maintenance treatment of COPD includes Salbutamol inhaler 200mcg 4 times a day or Terbutaline 250mcg inhaler, Ipratropium bromide 200mcg inhaler 2 times a day, Theophylline 100mg tablets 3 times a day, Amoxicillin + Clavulanic acid (500mg + 125mg) injection 3 times a day, Fluticasone 100mcg inhalation once a day, Montelukast tablet 5mg once a day. The minimum and maximum difference in cost of one day maintenance was found to be 136%, 182% and 169% in the year 2013, 2014 and 2015 respectively. This fluctuation was observed by totaling the price of all the drugs mentioned above. **CONCLUSIONS:** Wide variation exists between the minimum and maximum cost of maintainance therapy of COPD. Government should take some step in order to regulate and to bring uniformity in price. So that it can be affordable by a common man which will ultimately improve the compliance and reduce the economic burden.

PRS29

TO STUDY THE CLINICAL CHARACTERISTICS, TREATMENT PATTERN AND FACTORS ASSOCIATED WITH THE TOTAL HOSPITAL COST IN ACUTE RESPIRATORY DISTRESS SYNDROME IN TERTIARY CARE HOSPITAL

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OBJECTIVES: To analyze the clinical symptoms, treatment pattern, outcomes and factors associated with total cost of treatment. **METHODS:** A retrospective cross sectional study was conducted in tertiary care hospital. The patient details such as demographical data, clinical features, treatment and outcome were collected from the Medical Records Department. The total cost of treatment was collected from Finance Department. Data were analyzed by using SPSS 20.0 **RESULTS:** Mean age of the study population was found to be 42.7±18.2 year with majority of male 94(52.2%). Sepsis (59(32.8%)) was the most common etiology for ARDS in our study population. Analysis of 180 cases showed that total number of hospitalization days were 1793 and total cost of treatment was 11,005,448 INR. The patients who received corticosteroid therapy before 48 hours had better recovery rate. Mean ventilation days in the group of patients who received early glucocorticoid therapy were less (9.29±6.06) then those who received late therapy (13.64±6.03) **CONCLUSIONS:** Mortality rate associated with ARDS was relatively high. Management with steroids has no special benefit in reduction in mortality rate. Time of start of steroid therapy plays an important role in the management and was observed that early start of steroid therapy showed better recovery rate as well as reduction in hospitalization and ventilation days. The total treatment cost for the management of ARDS is relatively high.

PRS30

PULMONARY ARTERIAL HYPERTENSION (PAH): REAL-WORLD TREATMENT PATTERNS, OUTCOMES AND COSTS BASED ON WORLD HEALTH ORGANIZATION (WHO) FUNCTIONAL CLASS (FC)

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OBJECTIVES: Retrospective database studies of PAH using US payer claims data have limitations due to lack of specific ICD-9 codes for PAH and ability to identify patient severity. A previous study validated an algorithm including patients with non-specific PH codes and a claim for an advanced PAH drug therapy. This study used provider-reported disease severity – FC – to examine the impact of FC on healthcare