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OBJECTIVES: Chronic obstructive pulmonary disease(COPD) is a highly prevalent disease and the sixth cause of death in Korea. This study examined the national epidemiology and economic impact of COPD in Korea. **METHODS:** This study used the societal cost of illness framework, consisting of epidemiology of COPD, direct medical costs, direct non-medical costs, and indirect costs. National-level health survey results and insurance claim databases were used to analyze annual healthcare utilization, hospitalization costs and outpatient costs of the total Korean population (48 million people). Using a data mining technique, we identified medical claims with international classification of disease 10 codes for COPD and estimated the costs by a macro-costing method. **RESULTS:** The prevalence rate of COPD based on the Global Initiative for chronic obstructive lung disease(GOLD) criteria was estimated at 13.1% and its mortality rate was 14.9 persons per 1,000 population in 2008. According to the classification of the GOLD, for the population over 45 years, the stage 1 group accounted for the largest proportion(55.2%), followed by the stage 2(37.2%), stage 3(6.4%), and stage 4(1.2%). The total societal cost of COPD in 2009 was estimated at $266.4 million for 700,812 patients. The direct medical cost for COPD was $148.7 million, which includes hospitalization cost of $72.8 million and outpatient cost of $75.9 million. The direct non-medical cost, involving transportation cost and caregiver cost, was estimated at $20.4 million. Indirect costs associated with morbidity and mortality of COPD were $97.3 million. **CONCLUSIONS:** The study showed that the COPD had a great effect on health care costs, particularly the direct medical cost. Therefore, appropriate intervention that result in patients with COPD spending less time in the hospital are likely to be cost effective and long-term regular management is also necessary to lower the economic burden of COPD in Korea.

PRS13

ECONOMIC CONSEQUENSES OF USING TULATHROMYCIN, FLORFENICOL, AND TILMICOSIN FOR TREATMENT OF CATTLE AT HIGH RISK OF DEVELOPING BOVINE RESPIRATORY DISEASE IN UNITED STATES FEEDLOTS

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OBJECTIVES: To develop a model which calculates economic consequences of treatment of cattle at high risk of developing Bovine Respiratory Disease (BRD high-risk cattle), the most common and economically detrimental cattle disease in US feedlots. The model had to be easily adaptable to clinical variations and regional and timely changes in cost data. **METHODS:** A decision tree was developed in MS Excel evaluating the consequences of initial treatment of BRD high-risk cattle with tulathromycin, florfenicol, and tilmicosin on total costs and losses associated with BRD and its treatments over an entire feeding period. Clinical data were derived from 5 comparative trials considering success rate of initial treatment of BRD high-risk cattle, occurrence and outcome of subsequent BRD outbreaks, chronic cases, and mortalities. The model allows the estimation of results separately according to outcomes of one of the 5 clinical trials. Cost parameters included cattle purchase, treatment costs (first and re-treatments), costs of chronic and dead cows (perspective of the producer). **RESULTS:** Considering cost data derived from multiple sources as of 2010, total costs over the entire feeding period associated with first and subsequent BRD treatments were lowest with tulathromycin, regardless of the study selected as basis for efficacy data. Total treatment costs for one cattle ranged from $27.78 to $54.38 (tulathromycin), $52.83 to $84.06 (florfenicol), and $41.35 to $141.13 (tilmicosin), and cost savings with tulathromycin were calculated between $19.65 and $43.59 (vs. florfenicol) and $9.77 and $86.75 (vs. tilmicosin), depending on the clinical trial considered as basis for efficacy data. Savings with tulathromycin were attributed to fewer BRD treatments, less chronics and mortalities. **CONCLUSIONS:** The model allows the estimation of total costs of treatment of BRD high-risk cattle considering various clinical outcomes as reported in 5 trials, being easily adaptable to high variability of cost and income data in livestock.

PRS14

A COST-EFFECTIVENESS ANALYSIS ON THE USE OF INDACATEROL FOR THE TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN MEXICO

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OBJECTIVES: Chronic Obstructive Pulmonary Disease (COPD) is a rising concern in high population areas, such as Mexico City, where the prevalence is estimated at around 8%. The objective of this study was to examine if the recently available treatment for COPD, indacaterol, was more cost-effective than the therapeutic alternatives already available. **METHODS:** A cost-effectiveness analysis was performed from an institutional perspective (Mexican Institute of Social Security, IMSS). The comparators used were salmeterol and tiotropium, both alternatives available within the National Formulary and recommended by the National Treatment Guidelines for COPD. Effectiveness data was taken from published literature; the effectiveness parameter used was Forced Expiratory Volume in 1 second (FEV_1); dosage regimens compared were indacaterol 300 μg vs. tiotropium 18 μg, and indacaterol 150 μg vs. salmeterol 50 μg. Resource use data was obtained from the institution; total direct costs of physician consults, lab and image tests, hospitalization and emergency room visits, and treatments were considered. The source of the unit costs was the institution, current for 2010. All costs are expressed in local currency (Mexican Pesos, MXP). The time horizon was less than 1 year; no discount rate was used. The analytical tool used to build the model was a decision tree. A probabilistic sensitivity analysis was performed through a Monte Carlo simulation with 100,000 iterations to confirm the robustness of the model. **RESULTS:** The results show a cost-effectiveness ratio of $13 MXP per mL of FEV_1 increased for indacaterol, compared to $13.7 MXP for tiotropium. Likewise, a cost-effectiveness ratio of $12.9 MXP per mL of FEV_1 increased for indacaterol, compared to $14.3 MXP for salmeterol, confirmed that indacaterol is a more cost-effective alternative (dominant) for the treatment of COPD. **CONCLUSIONS:** From an institutional perspective in Mexico, indacaterol is a more cost-effective (dominant) alternative than either tiotropium or salmeterol for the treatment of COPD.

PRS15

ECONOMIC EVALUATION OF FLUTICASONE FUROATE COMPARED WITH MOMETASONA FUROATE FOR THE PRIMARY TREATMENT OF ALLERGIC RHINITIS PATIENTS

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OBJECTIVES: To evaluate the cost-effectiveness of fluticasone furoate vs. mometasone furoate in the treatment of ocular symptoms in allergic rhinitis patients in Mexico. **METHODS:** A decision-analytic model was developed to estimate the cost-effectiveness of fluticasone furoate vs. mometasone furoate. Patients initiated on treatment either completed initial therapy or switched to second line therapy due to non-response. Probability of a switch and resource use was based on expert panel and literature. Costs were based on local drug acquisition costs, local cost estimates for outpatient and hospitalization. Effectiveness was defined as the net improvement in Total Ocular Symptom Score (TOSS) at 12 weeks from Keith PK. 2009 study. The analysis was carried out from the perspective of the Mexican health care system and all costs are reported in 2010 US dollars. **RESULTS:** The corresponding health effects were 0.47 net improvement TOSS for fluticaone furoate and 0.31 for mometasone furoate regimen. The mean total cost of the fluticaone furoate regimen was $ 627 compared with $ 827 for the furoate mometasone regimen. Treatment with fluticasone furoate compared to treatment with mometasone furoate was less costly and resulted in a greater net improvement of TOSS. Probabilistic sensitivity analyses demonstrated that the cost savings observed were maintained over a wide range of alternative values for costs and resource utilization. **CONCLUSIONS:** Cost-effectiveness analysis indicated the dominance of fluticasone furoate over mometasone furoate because of both lower costs and greater efficacy. Cost savings with fluticasone furoate were attributable to lower drug acquisition costs. In addition, a net improvement in ocular symptoms may be expected in allergic rhinitis patients.

PRS16

COST-EFFECTIVENESS OF VARENICLINE VERSUS EXISTING SMOKING CESSATION STRATEGIES IN CENTRAL AMERICA AND THE CARIBBEAN USING THE BENESCO MODEL

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OBJECTIVES: In Central American countries, the economic burden of tobacco has not been assessed. In Costa Rica, a study demonstrated that tobacco-related diseases represent high costs for the health system. The aim of this study was to assess the cost-effectiveness of varenicline compared to other existing strategies for smoking cessation within a 20-year time horizon in an adult population cohort from Central American and the Caribbean countries using the healthcare payer's perspective. **METHODS:** The Benefits of Smoking Cessation on Outcomes (BENESCO) simulation model was used for an adult cohort in Costa Rica, Panama, Nicaragua, El Salvador and Dominican Republic (n = 19,429,581). Smoking cessation therapies compared were varenicline (0.5–2 mg/day) versus bupropion (300 mg/day); NRT (5-10 mg/day) and unaided cessation. Effectiveness measures were: Life-Year gained (LYG) and quality-adjusted life-year gained (QALY's). Resource use and costs data were obtained from country's Ministry of Health and/or Social Security Institutions (2008-2009). The model used a 3% discount rate for costs (expressed in 2009 US dollars) and health outcomes. Probabilistic sensitivity analyses (PSA) were conducted and acceptability curves were constructed. **RESULTS:** Varenicline reduced smoking-related morbidity, mortality and healthcare costs. Mortality in the varenicline arm was reduced by 5,738, 7,425 and 14,007 deaths compared with bupropion, NRT and unaided cessation. The net average cost per additional quitter showed that varenicline was cost-saving against competing alternatives. The cost per additional quitter on varenicline was US$-269 compared with bupropion and US$2,624 compared with unaided cessation. Cost-effectiveness analyses showed that varenicline was the dominant strategy. At a willingness-to-pay of US$10,000/QALY, the probability that varenicline is cost-effective met 100%. PSA results support the robustness of the findings. **CONCLUSIONS:** Smoking cessation therapy with varenicline is cost-saving for Central American countries. These results could help to reduce the tobacco related disease burden and align cost-containment policies.

PRS17

COST EFFECTIVENESS OF TOP 20 HIGHEST SELLING DRUGS

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OBJECTIVES: The recently made coverage decisions by UK's NICE, Scotland's SMC and the allocation of $1.1Billion for comparative effectiveness research by the United States, are strong indicators of trends in pricing and reimbursement that are likely to be observed in the future. To gain an additional insight into these trends, we analyzed the cost effectiveness studies for the top twenty highest selling drugs (~$80-95B worldwide sales). **METHODS:** The Top 20 drugs were selected based on their worldwide sales. For this analysis, we segmented these drugs into categories as primary care, specialty, small molecules, biologics, therapy areas and availability of generic alternatives. We analyzed the cost effectiveness studies that