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 from 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 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 disease (ICD), 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 (36.4%), 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 CONSEQUENCES OF USING TULATHROMYCIN, FLORFENCIL, AND TELMICILIN 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 a prospective trial of tulathromycin. RESULTS: For all three treatments, the direct risk cost, 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 stage of disease. Cost data were collected from experts in veterinary medicine in North America. CONCLUSIONS: The model estimated the cost of total treatment 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 reduced risk of outbreaks, lower BRD treatments, and subsequent BRD outbreaks. Tulathromycin was the dominant strategy.

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 compare the recently available treatment for COPD, indacaterol, 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 with the National Formulary and recommended by the National Treatment Guidelines (NTGs). Effectiveness data were taken from published literature, and the effectiveness parameter used was Forced Expiratory Volume in 1 second (FEV1); 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 institutional databases of physicians’ consultation lab and inpatient 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, MX). The time horizon was less than 1 year; no discount rate was applied. The model was used to calculate the cost-effectiveness ratio of fluticasone furoate over mometasone furoate because of both lower costs and non-inferiority. CONCLUSIONS: The model estimated the cost of total treatment 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 reduced risk of outbreaks, lower BRD treatments, and subsequent BRD outbreaks. Tulathromycin was the dominant strategy. The objective 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 the Dominican Republic. RESULTS: Varenicline was more cost-effective than competing alternatives. Pharmacologic intervention when compared with varenicline (0.5–2 mg/day) versus bupropion (300 mg/day), NRT (5–10 mg/day) and unaided cessation. Effectiveness measures were: Year-Life gained (LY) and quality-adjusted life-year gained (QALY’s). Resource use and cost data were obtained from several studies. 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 observed in allergic rhinitis patients.

PRS15
ECONOMIC EVALUATION OF FLUTICASONE FUROATE COMPARED WITH MOMETASONE 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 based was estimated 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 fluticasone furoate and 0.31 for mometasone furoate regime. The mean total cost of the fluticasone furoate regime was $5,547 compared with $5,767 for the furoate mometasone regime. 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 observed in allergic rhinitis patients.

PRS16
COST-EFFECTIVENESS OF VARENICLINE VERSUS EXISTING SMOKING CESSATION STRATEGIES IN CENTRAL AMERICA AND THE CARIBBEAN USING THE BENESCO MODEL
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 to 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 the Dominican Republic. RESULTS: The model estimated the dominance of varenicline compared with other strategies. Life-Year gained (LY) and quality-adjusted life-year gained (QALY’s). Cost-effectiveness analyses showed that the model estimated the domain of varenicline was the dominant strategy. At a willingness-to-pay of US$10,000/QALY, the probability that varenicline is cost-effective met 100%.

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 conducted a study focusing on the cost effectiveness of the Top 20 highest selling drugs (~$80-958 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