antimicrobial-susceptible and -resistant pathogens were obtained from the literature or estimated. Resistance and co-resistance prevalence to first- and second-line therapy for the major CAP pathogens were also derived from local surveillance studies. Resource use was obtained from Canadian published sources. Total costs were estimated using standard Ontario sources and a third-party payer perspective. Outcome measures included first-line clinical failure, second-line treatment and hospitalizations avoided. **RESULTS:** The base case incremental cost-effectiveness ratios (ICERs) comparing moxifloxacin/azithromycin with azithromycin/moxifloxacin were CDN$96.04 per clinical failure avoided, CDN$118.71 per second-line treatment avoided, and CDN$502.47 per hospitalization avoided. One-way sensitivity analyses demonstrated that the model is robust to change. The probabilistic sensitivity analysis reported a mean ICER of CDN$133 (Sd601.47) per clinical failure avoided and a 22% probability of a moxifloxacin/azithromycin strategy being cost-saving compared to azithromycin/moxifloxacin. **CONCLUSION:** Antimicrobial failure significantly affected outcomes and costs in empirical outpatient CAP treatment. Despite the higher costs of proprietary antimicrobial treatments in Canada compared to generic treatments, first-line treatment with a fluoroquinolone effective against the major CAP pathogens, including strains resistant to other antimicrobials, produces significantly better clinical outcomes and relatively low total treatment costs compared to generic drugs.

PRS10

ECONOMIC AND CLINICAL OUTCOMES OF OMALIZUMAB USE FOR TREATING ASTHMA IN A MANAGED CARE POPULATION

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OBJECTIVE: The objectives of this analysis were to: 1)Identify a population of asthma patients new to treatment with omalizumab; 2)measure asthma-specific treatment costs and utilization for patients initiating treatment with omalizumab; and compare and quantify, on an annual basis, differences in economics and other measurable outcomes following initiation of treatment with omalizumab. **METHODS:** Using integrated medical and pharmacy claims data (obtained from the IMS/Pharmetrics Patient-centric Database), patients were included in the analysis based on the presence of a diagnosis of asthma (ICD-9 code 493.*) during calendar years 2004 through 2005. Additional requirements included incident (new) use of omalizumab in 2004. Clinical and economic information related to the treatment of asthma were captured using Episode Treatment Group (ETG) episode-building software. **RESULTS:** In 2004, 542 patients (representing 0.1% of the overall asthma population) were identified as being newly treated with omalizumab. Within this group, 66% were diagnosed with extrinsic asthma and 78% with rhinitis. Total annual costs related to the care of asthma for this group was $16,643 with $5,926 in medical expenditures. Following these patients into the next calendar year (2005), pharmacy costs increased by 33% but medical costs decreased by 42% (to $3411), driven primarily by lower inpatient utilization, admission rates (from 6.1% to 3.8%), and emergency room utilization. Additionally, there was decreased use of oral corticosteroids and overall use of asthma controllers. **CONCLUSION:** Treatment with omalizumab represents a significant pharmacy investment, and measurable benefits were observed with respect to medical expenditures and asthma-specific outcomes. However, these observations are limited to a very specific patient population and further study may be necessary to determine applicability to other patient groups.

PRS11

LONG TERM COST-EFFECTIVENESS AND COST-UTILITY ANALYSIS FOR SMOKING CESSATION IN CZECH REPUBLIC

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OBJECTIVE: To compare cost-effectiveness (CE) and cost-utility (CU) for varenicline vs. other interventions used for smoking cessation in Czech Republic. **METHODS:** The Benefit of Smoking Cessation on Outcomes (BENESCO) Markov simulation model was employed to compare different approaches. The model simulates morbidity and mortality for the Czech population of smokers. In our model a 20-years time horizon was used to calculate costs and benefits from the payer's perspective under current conditions (smoking cessation interventions are not reimbursed). Five co-morbidities were considered: chronic obstructive pulmonary disease, coronary heart disease, stroke, lung cancer and asthma exacerbations. Calculations were performed in 2007 costs and prices, assuming that 25% of smokers in each age group make one attempt to quit smoking. Abstinence rates were extrapolated from literature sources. Local costs and data were obtained either from literature or expert panels. Assessed interventions included varenicline, bupropion, nicotine replacement therapy (NRT) and unaided cessation. **RESULTS:** Varenicline dominated all other interventions both in QALY and LYG, and was cost-saving over the assessed period of 20 years. Benefit of varenicline was most significant in comparison with unaided cessation (QALY gained 18,186, LYG 12,243, deaths avoided 2004, costs saved €35.5 million—data for all smokers exposed to intervention). Varenicline was also dominant in comparison to the most frequently used approach—NRT (QALY gained 7358, LYG 4953, deaths avoided 811, costs saved €13 million). Bupropion showed similar results to NRT. Varenicline dominated all other interventions already after five years. **CONCLUSION:** Varenicline is the most effective and cost-effective smoking cessation intervention in Czech Republic from the health care payer's perspective. As the prevalence of smokers is high; health care providers should consider smoking cessation support, including reimbursement strategies. Further scenarios to confirm CE and CU also under these conditions are needed.

PRS12

INCREMENTAL COST-EFFECTIVENESS OF COMBINATION INHALER THERAPY IN MODERATE TO SEVERE COPD

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OBJECTIVE: To assess the incremental cost-effectiveness of combining tiotropium (TIO) with salmeterol (SAL) or salmeterol-fluticasone (SFC) in moderate to severe COPD compared with TIO alone. **METHODS:** A Markov model was constructed to estimate the incremental quality-adjusted life-years (QALYs) of the three treatment arms. Efficacy data were obtained from a recently published large randomized controlled study (Canadian Optimal Therapy of COPD trial). Cost data were obtained from publicly available data. The cycle length for the model was set to 3 months and the maximum time horizon was set to 3 years. The cost-effective analysis was conducted from a third-party payer's perspective in the US health care system. Future costs and effects were discounted at 3%. All costs are reported in 2007 dollars. Multiple one-way sensitivity analyses and a Monte Carlo simulation were performed to handle uncertainty. **RESULTS:** Incremental cost-effectiveness ratios compared with TIO alone were $152,743/QALY in the TIO + SAL group, and $51,610/QALY in the TIO + SFC group. An acceptability curve revealed TIO + SAL was more cost-