ous abstinence rate and intervention costs were estimated. A dynamic population model for COPD was used to project the long-term (cost-)effectiveness of one year of treatment with tiotropium bromide compared to usual care. Time horizon and one-way sensitivity analyses were performed for variations in (the calculation of) the abstinence rates, the type of projection, intervention costs and discount rates. RESULTS: Nine studies were selected. The average 12 months continuous abstinence rates were estimated to be 1.4% for usual care, 2.6% for minimal counseling, 6.0% for intensive counseling and 12.3% for pharmacotherapy. Compared to usual care, the costs per QALY gained for minimal counseling, intensive counseling and intensive counseling plus pharmacotherapy were $16,900, $9,200 and $2,400, respectively. Results were most sensitive to variations in abstinence rates and the discount rate. CONCLUSIONS: Compared to usual care, intensive counseling plus pharmacotherapy resulted in low costs per QALY gained with ratios comparable to results presented for smoking cessation in the general population. Compared to intensive counseling alone, intensive counseling plus pharmacotherapy was cost saving and dominated the other interventions.

A COST-UTILITY ANALYSIS FOR TIOTROPium BROMIDE IN THE LONG TERM TREATMENT OF SPECIFIC SUBGROUPS OF ITALIAN COPD PATIENTS

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OBJECTIVES: The UPLIFT trial demonstrated in 5,993 patients with moderate to severe chronic obstructive pulmonary disease (COPD) that 4 years of tiotropium bromide treatment was associated with improvements in lung function, exacerbations compared with placebo. The aim of this study is the economic assessment of tiotropium when included in COPD routine care (RC) for specific groups of Italian COPD patients. METHODS: A probabilistic patient-level simulation Markov model with a lifetime horizon, with one-year cycles and a 3.5% annual discount rate. Patients were characterized by gender, age, height, smoking status and FEV1. FEV1 time trend was modelled based on the decline recorded in UPLIFT. The mortality of the general Italian population adjusted by smoking status and FEV1 was adopted. Health utilities derived from published Italian studies, while their variation was adapted to include production loss using the friction cost method, and to separate direct and indirect costs. Cost-effectiveness was assessed for the overall cohort and for subgroups of patients by age, sex, GOLD stage and smoking attitude. RESULTS: In the whole cohort, patients treated with tiotropium gained an average (95% CI) 0.50 (−1.63 to −6.27) LYs and 0.42 (−0.25 to 3.03) QALYs with respect to RC. The incremental lifetime cost was $3,357 (−$410,669 to $629,820). The incremental cost-effectiveness ratio (ICER) was $7,816/QALY. In the subgroup analysis the ICER ranged from a minimum of $6,627/QALY (females, GOLD III) to a maximum of $13,187/QALY (age <65 y, GOLD IV). CONCLUSIONS: The inclusion of tiotropium in RC for moderate to very severe COPD patients represents good value for money in Italy. The analysis across subgroups demonstrated a good stability of the model.

ECONOMIC EVALUATION OF FlUTICASONE PROPIONATE/ Salmeterol Combination Therapy and Montelukast in Adult Patients who are Symptomatic on Short-Acting Beta 2-Agonist Alone

Ana VG, Gonzalez SE, Salinas GE, Alexandre PK

OBJECTIVES: To assess the incremental cost-effectiveness of forfluticasone propionate/salmeterol combination therapy and montelukast for the control of persistent asthma in children. METHODS: A decision-analytic model was developed from a randomized, double-blind, double-dummy, 12-week clinical trial were analyzed. Efficacy end points included, symptom-free days (SFDs) during the 12-week period. The study assessed the Mexican health care perspective with costs in 2010 US dollars, and hence only direct costs were included in the analysis. Direct costs included those related to study drugs, emergency room department visits, unscheduled physician visits, and rescue medication. The incremental cost-effectiveness ratio (ICER), which is the mean difference in average costs divided by the mean difference in average effectiveness, was calculated for the effectiveness (EFs). Is issue of uncertainty was addressed by means of a probabilistic Monte Carlo simulation, which attributed stochastic distributions to model inputs. RESULTS: Treatment FSC resulted in a significantly greater improvement in the mean percentage of symptom-free days compared with MON 48.9 and 21.7 respectively (p < 0.001). In the base case, patients initiated on FSC displayed a 45% reduction in overall cost as compared with patients initiated on MON US S18 versus US258, respectively. SFC dominated the use of FSC because of previously demonstrated lower incidence of Asthma exacerbations and rescue free days. Sensitivity analyses determined that univariate changes in all model variables, including medicare cost, and cost of treating exacerbation, did not impact overall results. A Monte Carlo simulation analysis found that use of FSC remains the best overall treatment strategy when taking into consideration the potential variation in costs in accordance with different patients expectations. Compared with MON, SFC is estimated to be both more effective and more economically favourable, with a probability of almost 92%. CONCLUSIONS: The decision model indicated that use of FSC as treatment in patients with asthma should result in lower overall treatment costs relative to the cost of MON.

COUNTRY ADAPTATION OF A NETHERLANDS HEALTH ECONOMIC MODEL: THE CASE FOR ROFLUMILAST IN THE NETHERLANDS

Verner P, Goossens LM, Rutten-Van Middik MP

OBJECTIVES: To transfer an existing UK HE model to the The Netherlands in order to calculate the cost-effectiveness (CE) of roflumilast in patients with COPD, with a history of frequent exacerbations. A health economic (HE) micro-simulation Markov model was used to support its submission in the United Kingdom (UK). Pharmaceutical companies can save significantly on the process of HE evidence development, if models can be adapted for use in more than one country. OBJECTIVES: To transfer an existing UK HE model to the The Netherlands in order to calculate the cost-effectiveness (CE) of roflumilast in patients with severe COPD from a societal perspective. METHODS: The model structure was adapted to include production loss using the friction cost method, and to separate heterogeneity from parameter uncertainty. All input parameters on health care use, costs, utilities, and COPD epidemiology were obtained from Dutch sources, except for the case-fatality rate of an exacerbation-related hospitalization. A direct comparison was made between a combination of a long-acting β2 agonist (LABA) plus roflumilast (ROFLU) and LABA alone. A second, indirect comparison was between LABA + ROFLU and LABA plus an inhaled corticosteroid (ICS). One-way and probabilistic sensitivity analyses were performed. RESULTS: From a societal perspective, the incremental CE ratio (ICER) for LABA + ROFLU compared with LABA alone, was $790. The ICER of LABA + ROFLU versus LABA + ICS was $10,000. The probability that LABA + ROFLU was cost-effective when compared with LABA alone at a threshold of $20,000 versus LABA was 97%. Compared with LABA + ICS this probability was 94%. The original UK model was suitable for adaptation to the Dutch setting. The ICERS of roflumilast were below commonly referred threshold values of a QALY.

ECONOMIC EVALUATION OF Salmeterol/Fluticasone Propionate Combination Versus LEMocolukast in Patients with Persistent Asthma

Roly K, Gonzalez SE, Alexandre PK, Salinas GE

OBJECTIVES: To assess the incremental cost-effectiveness of SFC compared with MON for the control of persistent asthma in children. METHODS: We conducted an economic evaluation on a 12-week prospective randomised open-label parallel group comparison between SFC and MON. MON for the control of persistent asthma in children. METHODS: We conducted an economic evaluation on a 12-week prospective randomised open-label parallel group comparison between SFC and MON.