INTERVENTION may help reinforce health policy worldwide. METHODS: Using a Markov model, we performed a cost-effectiveness analysis to estimate the costs, health gains, and incremental cost-effectiveness (international dollars [I$]) per quality-adjusted life year (QALY) gained of an exercise training program in HF class II and III NYHA patients not meeting standard treatment, assuming a public system perspective in Brazil. QALYs were estimated from an outpatient cohort of 318 patients. Treatment efficacy was obtained from controlled trials and meta-analysis; treatment costs were derived from published data and National Health System reimbursement rates in 2008. Exercise training costs were obtained from a cardiac rehabilitation center. Robustness of results was tested by Monte Carlo simulation and sensitivity analysis. RESULTS: Considering the results of the HF-ACTION trial, in a time-limited exercise program with a 11% combined event (all-cause mortality or hospitalization) reduction and an annual cost of I$ 1,176 per patient, this strategy had a total cumulative cost of I$ 16,758 and 4.34 QALYs, the incremental cost per QALY of exercise training was I$ 14,965. Results were sensitive to intervention-related costs and effect size. Considering the results of the HF-ACTION trial, in a time-limited exercise program with a 11% combined event (all-cause mortality or hospitalization) reduction and an exercise cost of I$ 470 per patient, incremental cost-effectiveness ratio would be I$ 19,828/QALY. CONCLUSIONS: Under several assumptions, exercise training appeared to be cost-effective, and to offer good value for money compared to other well-accepted HF treatment strategies. The results support implementing such intervention as part of public health efforts to improve HF management.

PCV93 COST-EFFECTIVENESS ANALYSIS OF EZETIMIBE/SIMVASTATIN COMPARED WITH DOUBLING THE STATIN DOSE: ANALYSIS OF THE INFORCE STUDY IN THE UK

Rennie JP1, Davies GM2, Tuncali K3, Hsu HF4, Brud P5
1Royal University Hospital, UK, 2Merck Research Laboratories, West Point, PA, USA, 3Merck & Co, Inc, Whitestone Station, NJ, USA, 4Merck & Co, Inc, Whitestone Station, NJ, USA, 5Merck-Schering-Plough Cholesterol Partnership, Whitestone Station, NJ, USA

OBJECTIVES: In the INFORCE study, treatment with ezetimibe/simvastatin (Eze/ Simva) 10/40 mg/day was superior to doubling the statin dose in reducing total cholesterol (TC) among inpatients with suspected coronary events already receiving a statin (stratified into 3 potency strata at baseline). The purpose of this analysis was to evaluate the cost-effectiveness of Eze/Simva in this population by translating reductions in the observed TC; high-density lipoprotein cholesterol ratio into projected lifetime costs and benefits. METHODS: A Markov model (Cook et al 2004) was used to project lifetime costs and benefits on patients' cardiovascular risk factors profiles and actual lipid values at baseline and endpoint (12 weeks); Inputs for cardiac events and age-specific utilities for health states were based on a 2006 National Institute of Health and Clinical Excellence submission for ezetimibe and age-specific non-CHD mortality rates (2006) derived from UK National Statistics mortality data. RESULTS: At baseline, the Eze/Simva group (N = 195) had a higher mean TC (4.33 [0.89] mmol/L) than the double-statin group (N = 189; 4.16 [0.80] mmol/L). In the pooled-data analysis adjusted for baseline profile, Eze/Simva conferred a 0.218 discounted (3.5%) incremental quality-adjusted life year (QALY) at a discounted (3.5%) incremental cost of £2,524, for an Incremental Cost-Effectiveness Ratio (ICER) of £11,930/QALY. Similar data were observed in each baseline profile category. Among UK inpatients evaluated for coronary events, switching to Eze/Simva 10/40 mg is projected to be a cost-effective treatment alternative (vs doubling the statin dose) based on commonly applied UK ICER threshold (<£20,000–£30,000).

PCV94 THE COST-EFFECTIVENESS OF TITRATION TO GOAL WITH BRAND ROSUVASTATIN COMPARED TO GENERIC SIMVASTATIN IN PATIENTS WITH ELEVATED LOW-DENSITY LIPOPROTEIN CHOLESTEROL: PRIMARY AND SECONDARY PREVENTION IN THE BELGIAN HEALTH CARE SETTING

Van den Steen D1, Petit C2, Lamotte M3
1Exigo Consultores, Alhos Vedros, Lisbon, Portugal, 2Servier Nederland Farma BV, Leiden, CC Leiden, The Netherlands, 3Servier, SURESNES, France

OBJECTIVES: Statin dose escalation to reach low-density lipoprotein cholesterol (LDL-C) goals is an established practice. This study analyzes the health economic impact of titrating patients to a target LDL-C of 100 mg/dl as recommended by current guidelines. First-time brand rosuavstatin and first-line generic simvastatin protocols were compared. METHODS: A published state-transition model was used, linking age-smoking status, systolic blood pressure, and total cholesterol (TC) to fatal CVD using the Belgian SCORE (primary prevention) and Framingham (secondary prevention) equations. Non-fatal risk was based on landmark prevention trials. QALYs were compared using health insurance claim data and records in the Korean Cause of Death Registry for the years 2001–2003. RESULTS: The long-term Markov model analysis revealed that the effect of clopidogrel and aspirin CT compared with aspirin monotherapy in ACS patients was 0.207 life-years gained (LYG) and that the incremental cost-effectiveness ratio analyzed as incremental costs per LYG was US$ 1,154.07. In addition, sensitivity analysis demonstrated that the relative risk and discount rate for cardiovascular events (acute myocardial infarction, stroke and cardiovascular death) were the variables that mainly affected the study results. CONCLUSIONS: A 38-year follow-up study of the 3-years effect of clopidogrel/aspirin CT in Korea reveals that clopidogrel CT is a cost-effective alternative to aspirin monotherapy. Additionally, these results provide an economic justification for recommending clopidogrel CT in the treatment of ACS patients within the Korean context.

PCV95 COST-EFFECTIVENESS OF IVABRADINE IN CHRONIC STABLE ANGINA PATIENTS IN A FINNISH SETTING

Felix J1, Almeida J1, Joustenso J2, Alegre P3
1Exigo Consultores, Alhos Vedros, Lisbon, Portugal, 2Server Finland OY, Vantaa, Finland, 3Server, SURESNES, France

OBJECTIVES: High resting heart rate (HR) has been progressively accepted as a modifiable cardiovascular risk factor. Ivabradine is a specific HR lowering agent indicated in chronic stable angina (SA) patients with normal sinus rhythm, contraindicated or intolerant to beta-blockers. This study aimed to estimate the cost-effectiveness of ivabradine versus generic amiodoline and amiodoline-specific HR lowering agent in Finnish perspective. METHODS: A Markov chain Monte Carlo stochastic simulation model was used to estimate the influence of HR lowering in cardiovascular morbidity and mortality and its economic consequences. Ivabradine, 7.5 mg twice a day, was compared once a day HR distribution was modelled as a gamma function and survival and time to hospitalization were modelled with weibull functions. Only patients with resting HR > 70 bpm were included. Events considered were acute myocardial infarction, stroke, heart failure and death, as well as revascularization procedures (coronary artery bypass graft and percutaneous coronary interventions). Finnish setting was considered, including only direct costs, derived from the 2006 Finnish Guidelines for Healthcare Unit Costs. Effectiveness was measured in lives lost (LY) and quality-adjusted life years (QALY). Time horizon was set at 20 years and discount rate was 5%/year for costs and effectiveness. RESULTS: For each 100 patients using ivabradine in comparison with amiodoline we estimate a 3.6 LYS (95% CI [18.57] to 30 QALYs (95% CI [17.47]) gain. Annual incremental cost per patient was 6224 (95% CI [201,243]). Incremental cost-effectiveness ratios for ivabradine utilization were £12,886/£Y and £15,060/QALY. For high levels of certainty (>90%), willingness to pay for ivabradine’s benefits didn’t exceed £24,000, regardless of the effectiveness measure considered. CONCLUSIONS: Ivabradine is a cost-effective alternative for the treatment of SA when compared to generic amiodoline in a Finnish setting of patients with contraindication or intolerance to beta-blockers and resting HR > 70 bpm.

PCV96 COST-EFFECTIVENESS OF IVABRADINE IN PATIENTS WITH CHRONIC STABLE ANGINA IN A DUTCH SETTING

Almeida J1, Felix J1, Rankens M2, Alegre P2
1Exigo Consultores, Alhos Vedros, Lisbon, Portugal, 2Server Nederland Farma BV, Leiden, CC Leiden, The Netherlands, 3Servier, SURESNES, France

OBJECTIVES: High resting heart rate (HR) has been increasingly accepted as a modifiable cardiovascular risk factor. Ivabradine is a specific HR lowering agent indicated in chronic stable angina (SA) patients with normal sinus rhythm, contraindicated or intolerant to beta-blockers. This study aimed to estimate the cost-effectiveness of ivabradine versus generic amiodoline and amiodoline-specific HR lowering agent in Dutch perspective. METHODS: A Markov chain Monte Carlo stochastic simulation model was used to estimate the influence of HR lowering in cardiovascular morbidity and mortality and its economic consequences. Ivabradine, 7.5 mg twice a day, was compared once a day HR distribution was modelled as a gamma function and survival and time to hospitalization were modelled with weibull functions. Only patients with resting HR > 70 bpm were included. Events considered were acute myocardial infarction, stroke, heart failure and death, as well as revascularization procedures (coronary artery bypass graft and percutaneous coronary interventions). Dutch setting was considered, including only direct costs, derived from the 2006 Dutch Guidelines for Healthcare Unit Costs. Effectiveness was measured in lives lost (LY) and quality-adjusted life years (QALY). Time horizon was set at 20 years and discount rate was 5%/year for costs and effectiveness. RESULTS: For each 100 patients using ivabradine in comparison with amiodoline we estimate a 3.6 LYS (95% CI [18.57] to 30 QALYs (95% CI [17.47]) gain. Annual incremental cost per patient was 6224 (95% CI [201,243]). Incremental cost-effectiveness ratios for ivabradine utilization were £12,886/£Y and £15,060/QALY. For high levels of certainty (>90%), willingness to pay for ivabradine’s benefits didn’t exceed £24,000, regardless of the effectiveness measure considered. CONCLUSIONS: Ivabradine is a cost-effective alternative for the treatment of SA when compared to generic amiodoline in a Dutch setting of patients with contraindication or intolerance to beta-blockers and resting HR > 70 bpm.