COST-EFFECTIVENESS OF PREHOSPITAL VERSUS INHOSPITAL THROMBOLYSIS FOR ACUTE MYOCARDIAL INFARCTION

Teich VD,1 Pavão ALB,2 Vianna D2
1MedInsight Consulting, Rio de Janeiro, Brazil, 2University of Rio de Janeiro, Rio de Janeiro, Brazil

OBJECTIVES: This study aimed to model the cost-effectiveness of pre-hospital compared with in-hospital thrombolysis for ST-elevation myocardial infarction (STEMI) from the Brazilian National Health System perspective. METHODS: A decision-analytic model was used to model these two strategies. Study endpoint was life-years gained. Resources use and costs were estimated from the National Health System perspective. Decision tree and Markov Model were constructed using the results from published clinical trials. Costs were applied in Real (R$), 2005 year values. RESULTS: At the time horizon of 20 years, pre-hospital thrombolysis had an average life expectancy of 11.48 years and in-hospital thrombolysis had an average life expectancy of 11.32 years. Total costs were R$ 5640 for pre-hospital thrombolysis and R$ 5816 for in-hospital thrombolysis. In-hospital thrombolysis led an additional cost of R$ 176 per patient. Pre-hospital thrombolysis led an additional 0.15 years of life-expectancy gained compared with in-hospital thrombolysis. CONCLUSION: This model suggests that, from National Health System perspective, implementing pre-hospital thrombolysis for ST-elevation myocardial infarction (STEMI) may lead to extra survival and less cost than in-hospital thrombolysis.

ECONOMIC EVALUATION OF NEBIVOLOL COMPARED WITH PLACEBO IN ELDERLY PATIENTS WITH HEART FAILURE – A MODEL BASED ANALYSIS ALONGSIDE THE SENIORS TRIAL

Yao G1, Freemantle N1, Flather M1, Thamanathan P1, Coats A1, Poole-Wilson PA1
1University of Birmingham, Birmingham, UK, 2Royal Brompton and Harefield NHS Trust, London and Imperial College of Science Technology and Medicine, London, UK, 3University of Sydney, Sydney, Australia, 4Imperial College of Science Technology and Medicine, London, UK

OBJECTIVES: Nebivolol was demonstrated to be clinically effective in patients with chronic heart failure (CHF) in the SENIORS, the trial mirroring the real life CHF population. The aim of this analysis is to assess the cost effectiveness of nebovilol compared with standard treatment in elderly patients with heart failure. METHODS: An individual patient simulation model, based on a Markov modeling framework, was developed to estimate life time costs and quality adjusted life years (QALYs) for patients starting treatment at the age of 70. The model consisted of five health states defined by NYHA class and death. Patient faced different risks of cardiovascular events or death. The risk of each event in a given cycle was based on patients’ baseline characteristics and time on treatments. Input data for the model were populated using individual patient data from the SENIORS trial. Sensitivity analysis explored the implications of different starting treatment cohort groups and lengths of treatment benefit. Internal validation compared model and trial based results for different durations of treatment. RESULTS: In the base case analysis, the total cost per patient was ≤4568 and ≤6287; mean life-years were 7.547 and 8.378; and QALYs were 5.2 and 5.844 over life time per patients aged 70 at starting of treatment for the standard treatment and nebivolol groups respectively. The probabilistic sensitivity analysis provided the incremental cost effectiveness ratio was ≥2069 (95% CI 1947 to 2217) per life year, and ≥2670 (95% CI 2475 to 2918) per QALY. CONCLUSION: This analysis indicates that nebivolol is highly cost-effective treatment for elderly patients with heart failure compared to placebo. Strengths of our analysis included being based on individual patient simulation, extending the Markov modeling framework to enable the risk of events to be varied over time.

COST-EFFECTIVENESS ANALYSIS OF THROMBOPROPHYLACTIC STRATEGIES AFTER HIP FRACTURE REPAIR (HFR)

Raisch DW, Campbell HM, Taylor Z
Department of Veterans Affairs Cooperative Studies Program, Albuquerque, NM, USA

OBJECTIVES: Following HFR, deep vein thrombosis (DVT) and pulmonary embolism (PE) are venous thromboembolic events (VTE) associated with increased costs. Effectiveness of thromboprophylactic strategies (TS) vary. Our objective was to compare TS used in HFR for VTE outcomes and cost effectiveness (CE), from the Veterans Affairs (VA) perspective. Comparative CE of fondaparinux was assessed, using outcomes from clinical trials and estimated costs from VA data. METHODS: Using retrospective, nationwide VA data; TS used among HFR patients (3/1/2003 to 2/29/2004) were documented. We identified VTEs using International Classification of Disease, Version 9 codes. VA costs...