PCV7 IMPACT OF GENERIC CLOPIDOGREL IN THE ACUTE CORONARY SYNDROME MANAGEMENT OF HONG KONG Lee YY* Tsai RPC, Chow IH, Yan BP, Lam YY

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OBJECTIVES: This study conducted to identify the impact and cost outcomes utilizing either Ticagrelor versus Flaxivax in the management of acute coronary syndrome (ACS) patients, and impact of generic Clopidogrel used in Hong Kong. METHODS: A decision analytic model was used to perform a cost-effectiveness analysis of treating ACS patients for one year with Ticagrelor plus aspirin strategy compared with Flaxivax (or generic Clopidogrel) plus aspirin strategy from Hong Kong health care provider perspective. To estimate discounted (3%) lifetime costs, quality-adjusted life years (QALYs) were estimated. The incidence estimates in the model included patients in ACS without event, myocardial infarction (MI), and death from vascular cause. The model simulated a cohort of 45-year-old patients with ACS with a 20 year perspective. One year was the base-case lifetime. Event rates were adopted from the PLATO study, and the ACS registry in the Prince of Wales Hospital (PWH) in Hong Kong. Probabilistic sensitivity analyses using Monte Carlo simulations were conducted to assess parameter uncertainty. RESULTS: Compared with the Flaxivax (or generic Clopidogrel) treatment strategy, the Ticagrelor treatment strategy for ACS, STEMI, and UA/NSTEMI patients was associated with ICERs of HK$34,441(35,304), HK$27,523(33,567), HK$39,343(40,417) (1US$ = 7.94HK$) per QALY gained, respectively. Ticagrelor treatment strategy was cost-effective under 99% of the Monte Carlo simulation using a cost-effectiveness threshold of < 1x GDP per capita of Hong Kong. CONCLUSIONS: The Ticagrelor strategy is considered cost-effective at three times per capita GDP threshold compared with Flaxivax or generic Clopidogrel monotherapy management of ACS patients in Hong Kong. The impact of ICER values of generic clopidogrel compared with Flaxivax is not significant even the same cost in Hong Kong.

PCV80 COST-EFFECTIVENESS ANALYSIS OF MRI GUIDED ABLATION BASED ON THE DECAF TRIAL Singhpal M1, Biskupiak J1, Ghate SR2, Marronchi N1

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OBJECTIVES: Catheter ablation, an expensive procedure with high Atrial Fibrillation (AF) recurrence rate, is indicated in patients refractory to drug therapy or in patients with drug tolerability issues. The study examines the CE of MRI-guided ablation vs. current standard of care (SoC) of ablating all eligible patients in preventing AF. METHODS: A decision tree model was developed with a payer perspective over a 1-year time horizon. Participants of the DECAF trial (n=260), prospective multicenter-blinded study, were categorized to Utah Stage I (19%), II (41%), III (31%), and IV (9%) based on the degree of atrial remodeling quantified using delayed enhancement MRI. Proportion of patients with post ablation AF recurrence for Utah Stage I-IV was 16.33, 30.84, 45.68, and 58.33 respectively. Survival from outcomes was considered as effectiveness. Selective ablation was defined as ablating Stage I and II with AF patients and medically managing Stage III and IV patients. Recurrence rates from the DECAF trial and other costs and probabilities from the literature were used in the model. Probabilistic sensitivity analysis was conducted on all variables in the model. RESULTS: The mean total per patient annual cost in the MRI-guided selective ablation cohort was $23,238 compared to $28,659 for the SoC ablation. The incremental cost associated with higher AF recurrence and costs of AF treatment. Probabilistic sensitivity analysis demonstrated the similar substantial difference between two procedures. The probability associated with AF recurrence in SoC was most sensitive variable. CONCLUSIONS: MRI-guided selective ablation is economically beneficial with annual savings of $5,421 per person with same effectiveness compared to current SoC. Future research taking QoL and age into account is warranted to help payer assess the CE of ablation procedure in AF patients.

PCV90 AN ECONOMIC ANALYSIS OF A HYPOTHETICAL VALUE-BASED INSURANCE DESIGN PROGRAM USING THE ARCHIMEDES MODEL Bael MB

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OBJECTIVES: Value-based insurance design (VBID) programs aim to encourage patient use of high value health care services, often with the goal of reducing overall cost. We investigate a hypothetical VBID program of copy elimination for statins to determine if it cost saving and cost effective. METHODS: Archimedes Model was used to simulate the outcomes of increased statin adherence due to copy elimination. 10,000 individuals representative of US population who were prescribed statins were modeled over a 10 year timeframe, subject to a two-arm virtual trial: one arm represents current care and the other arm represents copy elimination. Based on a literature review, statin adherence rates were increased by 3% in the copy elimination arm. Statin prices, based on government cost (September 2011) foratorvastatin $42.00/mo for SoC, and $3/mo for all other Simvastatin doses. RESULTS: The VBID program failed to be cost saving, costing insurers $20 per person per year over the 10 year timeframe. The program increased costs under 40 years old to $555 per person per year in men and 2% in men older than 80. [2] This study assessed the cost-effectiveness (CI) of Aixapran versus other anticogulation therapies for prevention on NVAF, from the private health care perspective. METHODS: A Markov decision-tree model was made to compare Aixapran (2 mg/24 hours and 1 mg/24 hours), Dabigatran (110 mg/12 hours and 150 mg/12 hours), and Rivaroxaban (20 mg/24 hours) in a simulated cohort of 1000 patients with AF. Effectiveness measures were stroke, bleeding, mortality, and major bleeding. Costs were gathered from Trinidad's Private Health System databases (US$, 2013) and only consistent with the published observational studies. To achieve cost savings VBID programs should be targeted according to individual risk.

PCV92 COST-EFFECTIVENESS OF RIVAROXABAN VERSUS DABIGATRAN FOR THE PREVENTION OF TOTAL HIP REPLACEMENT SURGERY IN THE UNITED STATES Raval A1, Vyss A1, Kamal K2

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OBJECTIVES: American College of Chest Physicians (ACCP) guideline recommends the use oral medication either rivaroxaban or dabigatran in patients who are undergoing major orthopedic surgery and decline injections. This study assessed the cost-effectiveness of rivaroxaban versus dabigatran for prevention of venous thromboembolism (VTE) and bleeding episode after total hip replacement (THR) surgery from the health care perspective. METHODS: The prophyaxis medication cost for rivaroxaban and dabigatran was $422.51 and $392.61, respectively for per person per event. The cost of treating major bleeding episode and VTE were $14,548.09 and $14,114.80, respectively per person per event. There were absence of any head-to-head studies comparing the dabigatran and rivaroxaban. Compared to standards heparin regimen, rates of bleeding events did not differ significantly between dabigatran etexilate and rivaroxaban. However, the rates of having VTE event were higher in VTE compared to THR. The prophyaxis treatment with dabigatran was $164.40 less costly than rivaroxaban for prevention of VTE and bleeding episode in patient undergoing THR. CONCLUSIONS: Dabigatran and rivaroxaban share similar adverse events profiles, however, dabigatran was found to be more cost-saving compared to rivaroxaban.

PCV93 THE COST-EFFECTIVENESS OF DETECTING ARRHYTHMIA WITH IMPLANTABLE LOOP RECORDERS IN THE UNITED STATE OF AMERICA Rogers J1, Chang S2, Quinone ME3, Madden T4, Diamantopoulos A5, Mollenkopf SA6

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OBJECTIVES: To evaluate the cost-effectiveness of diagnosis with an ILL following standard Testing (ST) after a syncopal event from a United States payer perspective. METHODS: This analysis considers all costs of diagnosis via ST and ILL, the costs and consequences of recurrent syncope, and the cost of arrhythmia treatment following diagnosis. A Markov model was developed to reflect the recurrence of syncope and events in unexplained cases. Due to documented differences in the prevalence of arrhythmia between patients with suspected arrhythmia and patients with unexplained syncope we considered the two populations separately, each with their individual costs and consequences were discounted at 3% annual rate. RESULTS: The results are similar for suspected arrhythmia and unexplained syncope. In the unexplained arrhythmia population, the incremental cost of ILL compared to ST is $1,472. The increment of cost of ILL compared to ST is $2,086. The incremental cost-effectiveness ratio (ICER) is between $34,440 and $52,400. The syncopal events avoided with ILL are 402 per 1,000 patients. In the unexplained syncope population the incremental costs and effects are lower compared to the previous case - $91 per person per event. More arrhythmia cases compared to ST in the two populations. CONCLUSIONS: When considering all costs in combination with the syncopal events avoided and quality of life (Qol), ILL arrhythmia diagnosis is a cost-effective alternative to ST. The use of ILL increases the diagnostic yield in both populations and guides treatment in more patients compared to ST.

PCV94 COST EFFECTIVENESS EVALUATION OF APIXABAN, DABIGATRAN RIVAROXABAN AND WARFARIN FOR PREVENTION OF TROMBOEMBOLISM IN PATIENTS WITH ATRIAL FIBRILLATION IN TRINIDAD AND TOBAGO Gajraj M1, Peralta M2, Dookie T1

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OBJECTIVES: The incremental cost-effectiveness of treatments for AF is stroke prevention since the annual risk of stroke is 5–6 times greater in patients with AF than in people with a normal heart rhythm. [1] The incidence of AF increases from less than 0.1% per year in a normal heart rate to 0.5% per year in an AF heart rhythm. [2] The incidences of all-cause death and stroke and death were lower in patients with AF who were 65 years of age and older than those without AF. [3] This study assessed the cost-effectiveness (CI) of Aixapran versus other anticogulation therapies for prevention on NVAF, from the private health care perspective. METHODS: A Markov decision-tree model was made to compare Aixapran (5 mg/24 hours and 8 mg/24 hours), Dabigatran (100 mg/12 hours and 150 mg/12 hours), and Rivaroxaban (20 mg/24 hours) in a simulated cohort of 1000 patients with AF. The effectiveness measures were stroke, bleeding, mortality, and major bleeding. Local costs were gathered from Trinidad Private Health System databases (US$, 2013) and only