therapy for primary CVD prevention saves patients money and increases QALYs, but at the expense of lost life years.

PCV112

COST EFFECTIVENESS OF RIVAROXABAN AND DABIGATRAN ETEXILATE FOR THE PROPHYLAXIS OF VENOUS THROMBOEMBOLISM AND ASSOCIATED LONG TERM COMPLICATIONS POST TOTAL HIP REPLACEMENT IN IRELAND

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OBJECTIVES: To evaluate the cost-effectiveness of rivaroxaban and dabigatran compared to enoxaparin as venous-thromboembolism prophylaxis post total hip replacement (THR), from the Irish health payer perspective. **METHODS:** A hybrid model combing an acute phase decision tree (180 days post-surgery) and a chronic phase Markov model (patient lifetime) was developed using TreeAge Pro 2008®. Outcome measures were QALYs and LYGs. Future costs and outcomes were discounted at 4%. Treatment efficacy and major bleeding probabilities were derived from pivotal clinical trials. Thromboprophylaxis independent probabilities were identified via a literature search. A one-way sensitivity analysis of all probabilities was completed using the upper/lower bounds of the 95% confidence interval where available; otherwise point estimates were varied ± 50%. A probabilistic sensitivity analysis (PSA) using second order Monte Carlo simulation was performed. Probabilities were assigned beta distributions. Dirichlet distributions were adopted for multibranch nodes. Utilities and direct costs were given beta and lognormal distributions respectively. **RESULTS:** Basecase Analyses: Rivaroxaban dominated both dabigatran and enoxaparin. The incremental cost-effectiveness ratios for dabigatran relative to enoxaparin were €1885 per LYG and €1811 per QALY. One-Way Sensitivity Analysis: The model was robust to all but three probability variations; the probabilities that a proximal deep vein thrombosis (DVT) will occur on dabigatran, a pulmonary embolism or proximal DVT will occur on enoxaparin. PSA: At a €45,000/QALY threshold, the probability that rivaroxaban was the most cost-effective strategy was 67%, followed by dabigatran (19%) and enoxaparin (14%). A cost-effectiveness plane illustrating scatterplots for rivaroxaban versus enoxaparin and dabigatran versus enoxaparin was produced. Overlap indicates uncertainty that rivaroxaban is more cost-effective than dabigatran. **CONCLUSIONS:** Basecase analyses indicate that rivaroxaban is more cost-effective than enoxaparin or dabigatran. PSA indicates that rivaroxaban is the most cost-effective strategy at a €45,000/QALY threshold; however there is uncertainty regarding this strategy being more cost-effective than dabigatran.

PCV113

COST-EFFECTIVENESS OF FONDAPARINUX VS ENOXAPARIN IN EXTENDED PROPHYLAXIS OF VENOUS THROMBOEMBOLISM IN MAJOR ORTHOPEDIC SURGERY IN POLAND

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OBJECTIVES: To assess clinical effectiveness and cost–effectiveness of fondaparinux vs enoxaparin (40 mg or 30 mg twice a day) in extended prophylaxis (administration for 30 days) of venous thromboembolism in patients after major orthopedic surgery (knee arthroplasty, hip arthroplasty, hip fracture) in Poland. **METHODS:** Systematic review and clinical effectiveness analysis according to Polish HTA Guidelines were performed. Only RCTs with high credibility assessment were included in the systematic review (according to EBM). Costs valid from public payer's perspective (National Health Fund) were taken into account and were based on data from 2007. Costs of pharmacotherapy were estimated with 100% reimbursement (lump sum patient payment 3.2 PLN). Both health effects and costs were discounted with five percent rate applied. Analysis was performed within five percent year time horizon. Sensitivity analysis was performed. **RESULTS:** The analysis showed that prophylaxis with fondaparinux was more expensive than treatment of enoxaparin in greater (40 mg) and in smaller (30 mg) doses by 211 PLN or 98 PLN respectively; however brought better health outcomes by 0.01 LYGs and 0.003 LYGs per patient. ICERs were estimated at 21,603 PLN and 29,950 PLN, respectively, both below cost-effectiveness threshold in Poland (91,000 PLN = 3 times GDP per capita). The sensitivity analysis proved that costs of pharmacotherapy with fondaparinux and enoxaparin had the biggest impact on results. **CONCLUSIONS:** Extendeding prophylaxis of venous thromboembolism with fondaparinux compared with enoxaparin in patients undergoing major orthopedic surgery is cost-effective option from public payer's perspective in Poland.

PCV114

DABIGATRAN ETEXILATE IS COST-SAVING FOR THE PRIMARY PREVENTION OF VENOUS THROMBOEMBOLIC EVENTS FOLLOWING MAJOR ORTHOPAEDIC SURGERY IN THE NETHERLANDS

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OBJECTIVES: Dabigatran etexilate (DBG) is a new oral direct thrombin inhibitor for prophylaxis of venous thromboembolism (VTE) in patients who have undergone total hip replacement (THR) or total knee replacement (TKR) surgery. Advantages of DBG over parenteral prophylaxis might include but are not limited to reduced resource use for 1) teaching patients to self-inject; 2) home-care visits for parenteral administration; and 3) absence of Heparin Induced Thrombocytopenia (HIT). Based on proven non-inferiority, the aim of this study was to conduct a cost-minimization analysis of oral DBG versus parenteral low-molecular weight heparin (LMWH) and Fondaparinux formulations from the perspective of the Dutch National Health Service. **METHODS:** A retrospective cohort study was conducted to measure resource use associated with parenteral prophylaxis. Drug-utilization data were combined with local unit costs. Probabilistic sensitivity analysis was performed to account for uncertainty around relevant parameters included. **RESULTS:** Home-care visits for parenteral administration problems were required by 9.9% (95%CI: 6.4–13.4) and 9.6% (95%CI: 5.8–13.4) of THR and TKR patients, respectively. Based on costs for 1000 patients treated with DBG versus LMWHs, per patient cost-savings with DBG were estimated at €24.63 (95%CI: −0.56–54.19) and €18.39 (95%CI: −2.54–41.52) for THR and TKR, respectively. The probability that DBG would be cost-saving is 97.1% and 95.6% for THR and TKR, respectively. These cost-savings were even higher when including Fondaparinux with per patient cost-savings of €84.87 (95%CI: 58.04–117.64) and €33.41 (95%CI: 12.27–57.36) for THR and TKR, respectively. Separate calculations for DBG versus Nadroparin and Dalteparin in THR resulted in a probability of achieving cost-savings with DBG of 19.0% and 100%, respectively. For TKR these probabilities for DBG versus Nadroparin and Dalteparin were estimated at 37.0% and 100%. **CONCLUSIONS:** Thromboprophylaxis with DBG is cost-saving in patients undergoing THR/TKR for the perspective of the Dutch National Health Service.

PCV115

TIROFIBAN IS MORE COST-EFFICIENT THAN ABCIXIMAB IN ACHIEVING ST-SEGMENT RESOLUTION FOLLOWING ACUTE MYOCARDIAL INFARCTION

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OBJECTIVES: Glycoprotein IIb/IIIa inhibitors are highly effective inhibitors of platelet aggregation. The MultiStrategy trial showed Tirofiban or Abciximab were similarly efficacious in resolving ST-segment elevation at 90 min post intervention following Acute Myocardial Infarction. As combination therapy to inhibit platelet function and the coagulation cascade to improve cardiovascular outcome is increasingly common in Acute coronary settings, the focus is turning to cost efficient approaches. We undertook a pharmaco-economic analysis of the MultiStrategy study to identify the most cost-efficient therapy. **METHODS:** Cost-minimization analysis of a randomized controlled trial, where costs are calculated only when between group statistical differences are identified. Direct medical resources (drugs, procedures, investigations, adverse effects and duration of stay) were prospectively collected within the case report form. Drug costs were average wholesale prices obtained from the manufacturer. **RESULTS:** Drug utilization and major procedural resources between groups was similar; Clopidogrel ($p = 0.71$), Aspirin ($p = 0.18$), Heparin ($p = 0.14$); PCI; stents ($p = 0.81$), guidewires ($p = 0.45$), non serious adverse events ($p = 0.41$), Bleeding ($p = 0.775$), # Days in hospital ($p = 0.95$). Duration of Tirofiban infusion was longer 19.97h vs. 11.44h ($p < 0.000$) whereas, amount of Glycoprotein inhibitor and number of required vials of drug was higher for Abciximab 23,491µg v. 14,328µg ($p < 0.000$) and 2.933 v. 1.707 ($p < 0.000$) respectively. The average calculated cost of Abciximab was higher than Tirfiban 876.93 vs. €348.20 ($p < 0.000$) or €196,787 total cost difference between study arms ($n = 361$ patients per arm). **CONCLUSIONS:** All resource variables were similar between arms except for the randomized medication. No resource implications of medication side-effects or treatment duration were seen. Tirofiban is the more cost-efficient Glycoprotein IIb/IIIa inhibitor in achieving ST-segment resolution at 90min post intervention.

PCV116

COST-EFFECTIVENESS OF BIVALIRUDIN VERSUS HEPARIN PLUS GLYCOPROTEIN IIB/IIIA INHIBITOR IN THE TREATMENT OF ACUTE ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION—A HORIZONS TRIAL ANALYSIS USING UK VALUATIONS

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OBJECTIVES: Primary percutaneous coronary intervention (PPCI) has become the preferred treatment option for acute ST-segment elevation myocardial infarction (STEMI). In the HORIZONS randomised controlled trial, anticoagulation with bivalirudin versus heparin plus glycoprotein IIb/IIIa inhibitor (GPI) was associated with similar ischemic event rates and significantly reduced bleeding events. Mortality at 30 days and 1 year, in this indication. We estimated the incremental cost-effectiveness of bivalirudin in the HORIZONS trial. UK National Health Service valuations and perspective were applied. **METHODS:** A decision tree model compared the bivalirudin and heparin plus GPI strategies investigated in HORIZONS. It was combined with a Markov module to achieve a life-long time horizon. The health economic endpoint was cost per quality-adjusted life-year (QALY) gained. One-year clinical event rates and medical resource use parameters were derived from the HORIZONS dataset. Remaining life expectancy and long-term cardiovascular treatment costs of first-year survivors, unit costs, and utilities were drawn from published UK sources. Costs and effects were discounted at 3.5%. Extensive sensitivity analyses were performed. **RESULTS:** In the base case analysis, the bivalirudin strategy was dominant with an average saving of £450 per patient and an average survival gain of 0.09 QALYs per patient. Cumulative costs in the bivalirudin and heparin plus GPI strategies were £12,318 and £12,769 per patient, respectively. Patients lived 6.05 and 5.96 QALYs. A dominant or highly