A Markov model was developed to predict the occurrence of myocardial infarction, stroke, coronary revascularization, and death. The model considered both a lifetime horizon and a 3.5% discount rate. Clinical inputs were derived from the JUPITER trial and from a cohort of the MESA study fulfilling JUPITER inclusion criteria. Event costs were obtained from the literature. Rosuvastatin 20mg cost incorporates a discount to reflect non-perpetual costs within a maximum of 5 years. RESULTS: Coronary calcium score determination and subsequent primary prevention in individuals with a score exceeding 100 dominates no treatment. Implementing primary prevention in individuals with concomitant procedures, a score above 100 implies a willingness to pay around 40,000€ per QALY. Finally, primary prevention in all individuals is not cost-effective when compared to primary prevention in those with positive calcium score as it is associated with a cost of per QALY of more than 600,000€. CONCLUSIONS: Determination of coronary calcium score is cost-effective as it allows to identify those patients that will benefit most from primary prevention. Primary prevention in patients with calcium score greater than 100 should be implemented. Incremental values have been calculated. Direct medical expenses have been evaluated. Value of triple GDP per capita per year (10790 euro) has been used as threshold. RESULTS: Research showed clinical advantage of treatment scheme with ivabradine as compared to “traditional therapy” concerning the rate of patients who stayed alive by the end of the last cycle of model (7275 vs. 6421 persons in total population and 8136 vs 6993 in patients with heart rate >70 bpm) and QALY number (77635 vs 69253 in total population and 84138 vs 78090 in patients with heart rate >70 bpm). This showed that in 9.09% of cases ivabradine was the prevailing technology, in 90.91% the cost per QALY did not exceed the threshold. The average counted incremental cost per QALY was 3836€. CONCLUSIONS: The analysis showed the pharmacoeconomic advantage of ivabradine in comparison with optimal dosing of ivabradine.

PCV110 LIFETIME COST-EFFECTIVENESS OF ISOLATED AND CONCOMITANT AORTIC VALVE REPLACEMENTS IN GERMANY

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OBJECTIVES: Aortic valve replacement (AVR) is the most common heart valve operation, accounting for a conspicuous part of all valve surgery performed in the elderly. Methods: The cross-clamping times and varying degrees of aortic cross-clamping times and to expenses that are associated with early reoperation (MedAVR) among isolated AVR candidates. Aim of this simulation study was to predict costs and outcomes of isolated AVR procedures associated with this new valve in Germany. RESULTS: The Perceval S is a new sutureless valve technology for use in the third party payer. METHODS: A previously published probabilistic, patient-level simulation model fully coded in WinBugs was updated with new clinical data and the third party payer. To conduct a systematic review of cost-effectiveness studies of newer oral anticoagulants dabigatran, rivaroxaban and cost of concomitant AVR and traditional valve implants, from the cost perspective of the third party payer. Two price scenarios were evaluated, one in which the sutureless valve is sold at the double, and one at the triple price of its competitor. Unit costs and health state-specific utilities were retrieved from official and literature sources. The price of the sutureless valve is hypothesised as much as for traditional valves. Future costs and outcomes are discounted at a yearly 3.5% rate. RESULTS: The model predicts that on average the use of the Perceval S in MAVR instead of traditional sutured valves in full sternotomy among isolated AVR candidates, would yield incremental 0.29 LYs (0.20 QALYs) per patient, with an associated saving around 3,500€, thus representing a dominant option when compared to traditional surgical AVR. In concordant procedures, on average the use of the Percval S valve instead of traditional sutured valves is expected to yield incremental 0.21 LYs (0.16 QALYs) per patient, with an associated saving of over 4,400€, also representing a dominant alternative. CONCLUSIONS: Sutureless valves may improve outcomes in AVR at a reduced cost to the third party payers.

PCV111 STROKE PREVENTION IN NON-VALVULAR ATRIAL FIBRILLATION: SYSTEMATIC REVIEW OF COST-EFFECTIVENESS STUDIES

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OBJECTIVES: To conduct a systematic review of cost-effectiveness studies of newer oral anticoagulants for stroke prevention in atrial fibrillation versus warfarin and under the perspective of the payer and other researchers. We searched DARE, Cochrane, NICE, Tufts, NHS EED, Science Direct and PubMed through May 2013 to identify studies of oral anticoagulants dabigatran, rivaroxaban and apixaban versus warfarin for stroke prevention in non-valvular atrial fibrillation in patients at a moderate-to-high risk of stroke initiating anticoagulation for near lifetime using either a societal or health care perspective. A separate analysis was performed for ISPOR abstracts. RESULTS: Ten studies were identified, most based on one randomized trial per therapy, 3 supported an ICER above commonly accepted WTP levels. ICERS ranged from $99,096–$98,000 for dabigatran and $3,190–$55,757 for rivaroxaban. Apixaban was found to be cost-effective $1,400–$242,312. Upon PSA, dabigatran was cost-effective 40% to 98%, apixaban 41% to 60%, and rivaroxaban 21% to 80% of the time, for the lowest reported WTP Variations in ICERs occurred between studies that used the same efficacy data. Key variables influencing variations include differences in costs; assumptions for INR monitoring and utilization of health care resources, and the probabilities of adverse event. Effectiveness compliance, adverse events and INR management were derived from clinical trials. Additional data from recent abstracts reported similar trends. CONCLUSIONS: For this indication, novel agents seem to be cost-effective alternatives to warfarin, despite variations across countries. However, cost-effectiveness may depend on prices of medicines in each country; the proportion of actual patients’ time within the INR therapeutic range; and the actual real-world effectiveness, safety, and utilization of therapies due to the more than 100 CTs and pragmatic trials are required. Future cost-effectiveness studies of these new therapies should be periodically repeated during the lifetime of medicines under real-world utilization and should also incorporate budget impact analysis.

PCV112 PHARMACOECONOMICS ANALYSIS OF IVABRADINE USE IN BELARUS

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OBJECTIVES: To conduct economic-efficacy and cost-effectiveness analysis of ivabradine use in patients with stable angina with left ventricular systolic dysfunction has been performed to determine economic advisability of its applying in Belarus. METHODS: Markov model with 12-month cycle duration and 10-year time horizon has been constructed on the basis of a systematic review of literature, national surveillance data, local health services market and drugs market estimation. Four conditions were included: stable process, non-fatal event (cardiac infarction or unstable angina), surgical revascularization, death. Number of patients with stable angina who stayed alive and QALY till the end of the last analyzed cycle of the model has been used as a measure of efficiency and utility. One-sided determine sensitivity analysis has been conducted. Incremental values have been calculated. Direct medical expenses have been evaluated. Value of triple GDP per capita per year (10790 euro) has been used as threshold. RESULTS: Research showed clinical advantage of treatment scheme with ivabradine as compared to “traditional therapy” concern the rate of patients who stayed alive by the end of the last cycle of model (7275 vs. 6421 persons in total population and 8136 vs 6993 in patients with heart rate >70 bpm) and QALY number (77635 vs 69253 in total population and 84138 vs 78090 in patients with heart rate >70 bpm). This showed that in 9.09% of cases ivabradine was the prevailing technology, in 90.91% the cost per QALY did not exceed the threshold. The average counted incremental cost per QALY was 3836€. CONCLUSIONS: The analysis showed the pharmacoeconomic advantage of ivabradine in comparison with optimal dosing of ivabradine.

PCV113 LIFETIME COST-EFFECTIVENESS OF CONCOMITANT AORTIC VALVE REPLACEMENTS IN FRANCE AND THE UNITED KINGDOM

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OBJECTIVE: To define hospital and post discharge-related resource use for patients undergoing transcatheter aortic valve implantation (TAVI) and conventional Aortic Valve Replacement (AVR) surgery within a single UK hospital. METHODS: The sutureless valve offers the opportunity to improve outcomes in concomitant AVR at a reduced cost to the third party payers. CONCLUSIONS: The sutureless valve offers the opportunity to improve outcomes in concomitant AVR at a reduced cost to the third party payers.
service evaluation of patients undergoing TAVI or AVR between January 2011 and May 2013, followed up to 6 months post-procedure, collected from hospital records and via a General Practitioner questionnaire. The main endpoints were mortality, hospital length of stay (LoS), discharge destination, readmission and post-discharge resource use. Subgroup analyses were performed for AVR patients aged >70 and those aged ≤70 and with EuroSCORE ≤20 (%AVR >50). RESULTS: Results given as means (standard deviation) for TAVI (n=51), AVR (n=188), AVR80 (n=48) and AVR10 (n=47) respectively, unless otherwise stated. Age in years was 83 (3.0), 71 (13.1), 84 (6.7) and 72 (12.7), respectively. Time was 74.6 (29.1), 31.7 (22.7), 15.4 (10.5) and 16.7 (12.8) years. CONCLUSIONS: Despite TAVI being performed in an older, higher risk population the LoS is similar to AVR. Most strikingly there were no cardiac-related readmissions within 30-days of discharge. Time was 74.6 (29.1), 31.7 (22.7), 15.4 (10.5) and 16.7 (12.8) years.

PCV115
PERSISTENCE WITH MEDICATIONS: A DISCRETE CHOICE EXPERIMENT OF PREFERENCES AMONG HYPERTENSIVE PATIENTS
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OBJECTIVES: To examine patients’ stated preferences for persisting with medications using a discrete choice experiment (DCE) and to explore the relationship with clinical, demographic, and psychosocial variables. METHODS: The DCE was designed to elicit patients’ preferences for different attributes: side-effects, potentiality life-threatening but rare side-effects, dose frequency, treatment benefits) with 3-levels identified from literature and expert opinion was developed using a fractional factorial design. Scenarios were folded into nine forced binary choices with which medication would you be most likely to continue taking? The survey was translated, piloted and approved for eleven European countries. Target sample was 105≥c≥323 patients prescribed anti-hypertensives per country, recruited by posters in community pharmacies or general practices. Results were analysed in STATA using a random effects logit model. RESULTS: A total of 2856 patients from Austria (n=323), Belgium (n=180), England (n=323), Germany (n=265), Greece (n=289), Hungary (n=323), The Netherlands (n=257), Poland (n=323) and Wales (n=323) completed the online questionnaire. Age and sex attributes influenced medication treatment (p<0.01). Patients were willing to forego chance of improvements in treatment benefits (%) in order to improve other attributes: -36.10% (95% CI: -41.24 to -32.94) for a very rare risk of life-threatening side-effects, -18.66% (95% CI: -21.51 to -16.74) for once daily dose frequency, -0.74% (95% CI: -0.85 to -0.67) to reduce the risk of mild ADR by 1%. Likelihood ratio tests showed that models controlling for clinical, demographic and psycho-social variables were significantly different from the base-case. There was limited evidence that self-reported adherence influenced stated preferences to persist. CONCLUSIONS: Patients were willing to trade potential benefits, harms, and convenience in responding that they would persist with treatment. Clinical, demographic and psychosocial variables influence the trade-offs of these attributes. Persistence may therefore be enhanced directly, through selection of medications meeting preferred levels of attributes, or indirectly through targeting modifiable psycho-social factors that affect trade-off choices.

PCV117
ILLUSTRATION OF THE COMBINED EFFECT OF PATIENT’S ADHERENCE AND INDIVIDUAL/HETEROGENEOUS CHARACTERISTICS ON BLOOD PRESSURE
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OBJECTIVES: With the recognition that adherence is commonly imperfect, even with once daily regimen, ‘forgiveness’ is becoming acknowledged as an important characteristic in predicting real-world effectiveness. Forgiveness is typically reported as a continuous variable in the literature. Two simple methods of measuring adherence, the single query and VAS, are described in the literature to estimate the proportion of time patients who were adherent to the medication. Thse attributes. Persistence may therefore be enhanced directly, through selection of medications meeting preferred levels of attributes, or indirectly through targeting modifiable psycho-social factors that affect trade-off choices.

PCV118
TWO SAMPLE METHODS OF MEASURING ADHERENCE IN HYPERTENSIVE PATIENTS ARE PREDICTIVE OF BLOOD PRESSURE CONTROL: POOLED ANALYSIS OF 17,516 PATIENTS FROM SEVEN VALSARTAN STUDIES
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OBJECTIVES: Hypertension is a common chronic disease and risk factor for many other conditions. Effective treatment, few patients achieve recommended blood pressure targets. Among the variables related with poor antihypertensive outcomes, patient adherence appears to be especially influential. Adherence assessment can be one of the clinical endpoints in randomized clinical trials as well as in routine medical practice. Two simple methods. We evaluated whether adherence assessments through a single-item query and a visual analogue scale (VAS) are independent predictors of controlled systolic (SBP), diastolic (DBP), and combined systolic/diastolic (SBP/DBP) blood pressure on-treatment. METHODS: Pooling four results to total AVRs without surgery with the high risk associated with surgery.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PCV119
VALIDITY OF SELF-REPORTED DOSE OF PATIENTS USING WARFARIN IN CLINICAL PRACTICE
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OBJECTIVES: Warfarin is an oral anticoagulant used for the prevention of thrombosis, and many adjustments are needed to achieve a therapeutic INR. The dose of warfarin is important to establish an association between clinical and safety outcomes and the exposure. To evaluate the validity of the weekly dose of warfarin as reported by the patient compared to the weekly prescribed dose. METHODS: This study was based on an ongoing prospective cohort of new warfarin-users to assess the genetic and clinical risks associated with the effectiveness and safety of warfarin. Demographic and clinical data were collected from 219 patients who began the treatment between May 1st, 2010 and Oct. 31st, 2011 at the Montreal Heart Institute. Each week, the correlation of the primary outcome is the concordance between the reported and prescribed weekly dose of warfarin. The secondary outcome is the difference between the means of reported and prescribed warfarin weekly dose. Sensitivity analyses are used for the secondary outcome and a generalized mixed linear model with random effects are used for the primary outcome. RESULTS: Patients had a mean age of 67.7, 58.9% were men and 70.3% had atrial fibrillation. No significant difference between the means of reported and prescribed warfarin weekly dose (Pearson coefficient = 0.806 and 0.829, respectively). Mixed linear model was protected to be associated with the covariates and the concordance. CONCLUSIONS: This study demonstrates that the weekly reported dose correlates well with the prescribed dose patients in a prospective cohort study. Furthermore, the effect was similar whether measured in new-onset users of warfarin and up to 12 months of use.