A Markov model was developed to predict the occurrence of myocardial infarction, stroke, coronary revascularization and death. The model considers 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 the introduction of generics 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 those patients with positive score, and not just those with 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 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. The implementation of this strategy in other patients with positive calcium score depends on the willingness to pay for a QALY.

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. Prolonged aortic cross-clamping times are an independent risk factor. Perceval S is a new aortic valve which is implanted without need for suturing and a collapsed profile, thus allowing a significant reduction of cross-clamping times and to expand the pool of patients operable with mini-invasive aortic valve replacement (MiAVR) 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, as compared to traditional valve implants, from the cost perspective of 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 evaluation extended to evaluate lifetime cost-effectiveness from the perspective of the third party payer. Unit costs and health state-specific utilities were retrieved from official and literature sources; the price of the sutureless valve is hypothesised twice 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 MiAVR 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 AVRs. In concomitant procedures, on average the use of the Perceval 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 understand its implications for policy and for further research. **METHODS:** 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 reported an ICER above commonly accepted WTP levels. ICERs ranged from $9,099–$86,000 for dabigatran and $3,190–$55,757 for rivaroxaban. Apixaban was found to be cost-effective $11,400–$24,312. Upon PSA, dabigatran was cost-effective 40% to 98%, apixaban 44.1% to 60%, and rivaroxaban 2.1% 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 these therapies. More head-to-head RCTs and pragmatic trials are required. Future cost-effectiveness studies of these new therapies should be periodically repeated during the lifecycle of medicines under real-world utilization and should also incorporate budget impact analysis.

PCV112

PHARMACOECONOMIC ANALYSIS OF IVABRADINE USE IN BELARUS

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OBJECTIVES: Cost-effectiveness and cost-utility 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 infraction 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 determinate 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" concerning the amount 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 pbm) and QALY number (77635 vs. 69253 in total population and 84138 vs. 73031 in patients with heart rate >70 pbm years). The sensitivity analysis 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 Euro. **CONCLUSIONS:** The analysis showed the pharmacoeconomic acceptability of ivabradine use by patients with stable angina with left ventricular systolic disfunction and heart rate $\geq$ 70 bpm at prescription of the medication in optimal dosage which ensures minimal market value of the medication.

PCV113

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

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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. Prolonged aortic cross-clamping times are an independent risk factor for worse outcomes. Perceval S is a new aortic valve which is implanted without need for suturing and a collapsed profile, thus allowing a significant reduction of cross-clamping times. **METHODS:** A patient-level simulation model fully coded in WinBugs was updated and extended to predict lifetime effectiveness and costs of concomitant AVR procedures associated with this new valve in France and UK, as compared to 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 comparator. Unit costs and health state-specific utilities were retrieved from official and literature sources. Future costs and outcomes are discounted at a yearly 3.5% rate. Uncertainty is evaluated through the incorporated probabilistic sensitivity analysis and deterministic threshold analyses. **RESULTS:** The model predicts that on average the use of the Perceval S valve instead of traditional sutured valves would yield incremental 0.21 LYs (0.16 QALYs) per patient, with an associated saving of about 5,100 € and 4,400 £ in France and UK, respectively, in the first scenario, and of 2,600 € and 1,900 £, in the second. Deterministic threshold analysis indicates that the sutureless valve would remain averagely dominant as long as its price does not exceed 4.1 and 3.8 times that of the traditional valve, in France and UK, respectively. **CONCLUSIONS:** The sutureless valve offers the opportunity to improve outcomes in concomitant AVR at a reduced cost to the third party payers.

PCV114

IMPACT OF CARDIOVASCULAR DISEASE ON LABOUR FORCE PARTICIPATION: BIVARIATE PROBIT ANALYSIS

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OBJECTIVES: Health status plays an important role in individuals' labour supply decision. Chronic diseases, such as cancer, diabetes mellitus, cardiovascular disease, mental illness and disabilities are reported to have strongest effect on individual transitions on the labour market. Among them, cardiovascular disease (CVD), in addition to being the leading cause of death, is likely to affect individuals' employment decision. The aim of this study is to investigate the impact of clinically diagnosed cardiovascular disease on labour supply, taking account of the observed and unobserved factors that influence the risk of cardiovascular disease and labour force participation. **METHODS:** Study subjects were randomly selected from Gazi University general internal medicine outpatient clinic. Demographic, health and employment status data have been compiled for five hundred and fifteen study subjects who applied to the clinic between December 2012 and February 2013. The bivariate probit method has been utilized to investigate the impact of incidence of cardiovascular disease on employment status. **RESULTS:** Empirical results indicate that cardiovascular disease have a strong negative impact on labour market outcomes, particularly for men, and that education level, gender, hypertension have significant indirect effects on labour force participation. Analysis results suggest that there is a correlation between the labour force participation and the incidence of cardiovascular disease, revealing that single equation models might be misspecified. **CONCLUSIONS:** As cardiovascular disease has a significant negative impact on employment status, public health programs need to address this issue and provide treatment strategies and prevention efforts to alleviate the destructive impact on societal productivity.

PCV115

REAL WORLD RESOURCE USE ASSOCIATED WITH TRANSCATHETER AORTIC VALVE IMPLANTATION AND CONVENTIONAL AORTIC VALVE REPLACEMENT SURGERY

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OBJECTIVES: 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:** A local