priate anticoagulation are recognised, but full implementation can be difficult and costly. Therefore the development of models such as this can support the planning process allowing stakeholders to discuss how best they can reach the target of full implementation. The model is flexible and can be adapted to suit different payers.

PCV48

COST EFFECTIVENESS ANALYSIS OF MITRACLIP IN MITRAL REGURGITATION FOR HIGH RISK PATIENTS

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OBJECTIVES: Mitral Regurgitation (MR) is a cardiac disease resulting in backflow of blood from the left ventricle to the left atrium which could increase the risk of heart failure and mortality. Half of severe MR patients are not considered eligible to surgery (valve repair or replacement) and receive a medical treatment. MR patient management could benefit from usage of Mitraclip, a transcatheter device, which enables percutaneous edge-to-edge repair to treat MR. The cost-effectiveness model presented here compares Mitraclip therapy versus medical standard care treatment. **METHODS:** A four-state Markov model (Death, MR grade 0, MR grade I /II, MR grade III/ IV) has been developed. In each state patients could be hospitalized or not. A national payer's perspective was chosen with a 5 year time horizon. Primary and secondary endpoints were respectively the number of deaths and of hospitalizations avoided. Data were obtained from the EVEREST II high-risk study and from french cost analysis. **RESULTS:** Within the time horizon analyzed, 276 further deaths could be avoided by using Mitraclip strategy out of 1000 patients with MR, compared to medical treatment. The Incremental Cost Effectiveness Ratio (ICER) is estimated at €93,000 per death averted with cumulative cost on five years. Sensitivity analysis shows that the cost of the initial surgery and the cost of the device where the two most sensitive variables. Costs of managing MR are higher for the Mitraclip option during the first year (€29,894 for Mitraclip compared to €8,557 for medical treatment) option due to the cost of the device and surgery, whereas this is inversed from the second year onwards (€8,557 for the medical option vs. €3,122 for Mitraclip). Therefore, an average ICER (20 720€ per death averted) has also been calculated. **CONCLUSIONS:** Mitraclip might represent a new economically attractive treatment option for MR patients at high-risk which increases survival.

PCV49

COST-EFFECTIVENESS AND BUDGET IMPACT ANALYSES OF RISK STRATIFICATION OF PATIENTS WITH MODERATE RISK OF CARDIOVASCULAR EVENTS USING LP-PLA2 TESTING

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OBJECTIVES: 1) Analyze whether a testing strategy using the biomarker Lp-PLA$_2$would improve clinical and economic outcomes vs. ESC-SCORE alone in Germany for 50-70 year-olds. 2) Evaluate the potential budget impact for payers. **METHODS:** To decide the treatment strategy for patients with moderate risk for cardiovascular events is a challenge. They would usually not receive statin treatment in Germany. For further risk stratification there is a need to identify patients with vulnerable plaques. When an arterial plaque becomes unstable Lp-PLA$_2$is released, which indicate that these patients could benefit from treatment to prevent future cardiovascular events. An integrated cost-effectiveness and budget impact model was constructed. Lp-PLA$_2$increased the adjusted risk for CVD events in the moderate ESC-SCORE population by >2 fold in the German LURIC Study Cohort (HR 2.23,95% CI 1.15-4.32; P= 0.018). Efficacy of statin treatment relevant costs were obtained from literature. A range of sensitivity analyses were performed. **RESULTS:** The cost-effectiveness and the budget impact analyses used a theoretical population of 1 million, of which 14% were 50-70 year olds with moderate cardiovascular risk. The total 10-year discounted and adherence adjusted net cost savings from implementing the Lp-PLA$_2$ testing strategy was €19 million, or €156 per Lp-PLA$_2$tested patient. The 10-year accumulated number of deaths averted by the Lp-PLA$_2$ testing strategy was 611, or 17 incremental discounted life-days and 2.2 incremental discounted event-free life-months per Lp-PLA$_2$tested patient. Projected to whole of Germany's population aged 50-70 the potential annual discounted savings from the Lp-PLA$_2$testing strategy would be €180 million. The potential number of deaths averted per year would be 5,030. **CONCLUSIONS:** Our results indicate that the Lp-LPA$_2$ testing strategy is both cost saving and provide reduction in mortality and morbidity. The implementation of Lp-LPA$_2$ testing strategy should be considered in Germany.

PCV50

COMPARING ACTUAL PATIENT LEVEL HOSPITAL COSTS TO THE CANADIAN CMG+ COSTING ESTIMATES FOR ACUTE MYOCARDIAL INFARCTION

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OBJECTIVES: This study compares differences in actual hospital costs and Case Mixed Group (CMG+) costs (Canadian version of the Diagnosis Related Group), for patients with acute myocardial infarction (AMI) in Edmonton, Alberta. **METHODS:** New AMI (ICD-10 code I21) patients (no AMI hospitalization within one year) hospitalized in Edmonton area hospitals between April 1,2006 and March 30,2009 were segmented into CMG+ categories by the Canadian Institute for Health Information. The differences between actual hospital cost and CMG+ cost were analyzed by comparing the mean and median differences between costs for each patient and trimming out 5% of high and low cost patients and excluding patients with longer than 90 days of hospitalization. 15 comorbidities were derived from secondary diagnostic codes and regressed against CMG+ costs and actual costs independently. The coefficients between the two separate regressions are then tested for statistical equivalence using the Wald test. **RESULTS:** The data included 4,734 new AMI patients, and after excluding the outliers and longer than 90 days LOS, the data included 3,428 patients. The estimated mean difference using the average CMG+ estimate for the whole hospital episode costs were about $500 higher than actual costs. The median CMG+ cost were most accurate estimates for per diem costs, which was about $20 higher than actual cost. 2 comorbidities were dropped from the regression due to multicollinearity. Using average CMG+ estimate for whole hospital episode costs, 10/13 comorbidity coefficients were found to be statistically equivalent to the coefficients in a separate regression using actual cost. **CONCLUSIONS:** This study shows that various derivations of costing proxies using the CMG+ methodology produce relatively accurate cost estimates for AMI patients when actual cost are not available. Based on the available patient data and the context of use of the cost estimates, different methods will be optimal.

PCV51

COST ESTIMATION OF HOME BLOOD PRESSURE MONITORING VERSUS COMBINED OFFICE AND AMBULATORY MEASUREMENTS IN HYPERTENSION MANAGEMENT

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OBJECTIVES: Hypertension is a chronic condition, directly linked to cardiovascular diseases. Therefore, the monitoring of blood pressure (BP) is of utmost importance in order to avoid BP-related adverse clinical outcomes. This study aimed at comparing the health resources consumed and the subsequent costs for hypertension management using home blood pressure monitoring alone (HBPM) vs combined office measurements and ambulatory blood pressure monitoring (C/ABPM). **METHODS:** A total of 116 previously untreated, hypertensive subjects were randomized to use either HBPM or C/ABPM for antihypertensive treatment initiation and titration. The analysis involved all health resources (BP measurements/outpatient visits, laboratory and other tests, pharmaceutical therapy) utilized within 12-months follow up, their respective costs, and efficacy (hypertension control). A 5-year projection was applied assuming (a) continuation of stable treatment as in the end of first year (for both arms), (b) single ABPM/year in C/ABPM group, (c) 2 visits/year in HBPM group and 3 in ABPM. **RESULTS:** The total cost of hypertension management regardless of BP measurement method was calculated at 1,404.8€/patient (laboratory tests: 50.4%, BP measurements+outpatient visits: 32.4%, pharmaceuticals: 17.1%). In HBPM group, total cost was 1,336.0€/patient vs 1,473.5€/patient in C/ABPM group (p<0.001). Findings suggested that the cost of treatment did not differ between the two groups (233.1 vs 247.6€/patient respectively, p=NS), while BP measurements+outpatient visits were estimated at 393.9€/patient in HBPM arm and 516.9€/patient in C/ABPM arm (p<0.001). For subsequent years (>1), expenditures were estimated at 348.9€/patient for HBPM vs 440.2€/patient for C/ABPM group (p<0.001), whereas for a 5-year projection, 2,731.4€/patient and 3,234.3€/patient respectively (p<0.001). **CONCLUSIONS:** C/ABPM strategy presented a higher first year cost compared to HBPM, while the same trend was unveiled in 5-year projection. Effective hypertension management through the appropriate strategies is of paramount importance considering its high prevalence; ergo, even small differences in the cost of applying them could have substantial impact on health expenditures.

PCV52

THE COST COMPARISON OF DRUG-ELUTING STENTS (DES) AND BARE-METAL STENTS (BMS) - A RETROSPECTIVE COHORT MATCHED STUDY

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OBJECTIVES: Literature has failed to demonstrate the clear superiority of Drug-Eluting Stenting (DES) for stable coronary artery diseases on survival as compared to the bare-metal stenting (BMS). This study aimed to compare the health care utilization and the costs between drug-eluting stenting (DES) and bare-metal stenting (BMS). We also examined factors that influenced cumulative costs of these two groups. **METHODS:** We conducted a retrospective cohort study based on the NHI program. Patients who had coronary stenting between Jan. 2007 and Dec. 2008 were recruited and followed through the end of 2010. Both groups were matched on 2: 1 by propensity score which adjusted sex, age, stent number and Charlson comorbidity index (CCI). We estimated cumulative medical cost for these two matched group by conducting the Kaplan-Meier Sample Average (KMSA) estimates. Regression analysis was used to explore the predictors of cost. **RESULTS:** The mean age in both groups was around 66 years. After propensity score matching, we had a total of 966 patients; 644 in BMS group and 322 in DES group. KMSA estimates (discounted 3.5%) showed that DES group had a higher 3-year cumulative total outpatient cost at US$ 6,867 and heart related outpatient cost at US$ 2,548 as compared to BMS group, which were US$7,668 and US$ 3,302 respectively (1US$= 30 NTD). The heart related inpatient cost was similar between two groups. The significant predictors of heart-related outpatient costs were stent type, premium and CCI. The predictors of heart-related inpatient costs were stent type, stent number, CCI and procedure for acute coronary syndrome (ACS). **CONCLUSIONS:** In Taiwan, NHI reimburses DES and BMS at the same price, and hospitals can balance billing for the DES. We found that even after adding the extra national average out-of-pocket payment to DES, DES still was a cost-effective procedure.

PCV53

GOAL DIRECTED PERFUSION (GDP): A DIFFERENTIAL COST ANALYSIS IN UK AND US

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OBJECTIVES: High oxygen delivery (DO2) during cardiopulmonary bypass (CPB) is associated with better renal outcome in cardiac surgery. Traditional perfusion (TP) techniques, targeted on body surface area and CPB temperature, achieves high DO2 in about 50% of the cases while a goal directed perfusion (GDP) approach can lead to more than 90% of cases achieving high DO2 with a consequent reduction