age was 72.8 ± 8.9 yrs, 65.1% were male and 78.7% had a history of hypertension. LTB was calculated as the proportion of patients receiving antihypertensive therapy who were not attaining guideline BP control targets. A hypertensive intervention to lower blood pressure to the normal range was applied to those individuals identified with the number of cardiovascular disease events which could be prevented. Logistic regression was used to find the predictors of LTB and event rates were compared using Chi squared tests. RESULTS: Among the 2856 Australian REACH participants, 70.1% (n = 2002) had uncontrolled blood pressure (>130/80 mmHg) and 88.3% (2202) had been taking antihypertensive medication. LTB was 70.7% (1784). The major uninfluential predictors of LTB were gender, age, diabetes, hypertension, carotid plaque, cholesterol, BMI and congestive heart failure. Assuming a hypertensive blood pressure intervention is applied to the LTB group resulting in controlled blood pressure (<130/80 mmHg), 9 cardiac events per 1000 people and 21 cardiovascular disease events including coronary heart disease intervention per 1000 people could be prevented. CONCLUSIONS: Improving BP control in patients receiving antihypertensive medication may prevent 9 cardiac events per 1000 people and 21 CVD events per 1000 people within this study group. At a population level, this would represent a major cardiovascular event reduction strategy.

RELATIONSHIP BETWEEN THE COST AND HOSPITAL QUALITY

Baser C

University of Michigan and STATinMed Research, Ann Arbor, MI, USA

OBJECTIVES: Inpatient surgery is a major component of overall health care spending. We examined variation in outlier payment across US hospitals and the extent to which variation is explained by quality of care. METHODS: We used the 2006 Medicare Provider Analysis and Review (MEDPAR) file. We identified coronary artery bypass grafting (CABG) patients and used mean cost and outlier payment amount for each hospital. We then examined hospital variation using fixed-effects logistic regression models. RESULTS: The proportion of patients associated with outlier payment was 11%. Average outlier payments were considerable: $26,064. Outlier payment for CABG cost CMS approximately $480 million in 2006. Outlier payments were more than twice CABG cost. CONCLUSIONS: Higher outlier payment rates are associated with higher hospital costs. The variation is likely due to differences in quality of care. We showed that variation in outlier payments across hospitals, described the distribution of outlier payment prevalence (proportion of patients associated with outlier payments) by hospital. We then assessed hospital variation using fixed-effects logistic regression models. RESULTS: The proportion of patients associated with outlier payment was 11%. Average outlier payments were considerable: $26,064. Outlier payment for CABG cost CMS approximately $480 million in 2006. Outlier payments were more than twice CABG cost. CONCLUSIONS: Higher outlier payment rates are associated with higher hospital costs. The variation is likely due to differences in quality of care.

AN ASSESSMENT OF THE COST OF PERCUTANEOUS PULMONARY VALVE IMPLANTATION USING MELODY VERSUS SURGICAL VALVE REPLACEMENT IN PATIENTS WITH RIGHT VENTRICULAR OUTFLOW TRACT DYSFUNCTION

Rabou M1, McGuire A1, Lura P1, Bonhoeffler P1, Wegmueller Y1

1London School of Economics and Political Science, London, UK, 2Great Ormond Street Hospital, London, UK, 3Medtronic Trading Srl, Geneva, Switzerland

OBJECTIVES: To assess the cost of percutaneous pulmonary valve implantation (PPVI) in 2009 as a less invasive alternative to surgical replacement for patients with right ventricular outflow tract dysfunction (RVOT dysfunction), and the cost of surgical valve replacement in patients with right ventricular outflow tract dysfunction using a cohort simulation model. METHODS: A cost analysis was performed from the perspective of the purchaser (the UK NHS). The cost of PPVI was estimated using data based on a total of 141 patients who had undergone PPVI from 2000 to 2008. The cost of surgical valve replacement in a similar group of patients was estimated using a cohort simulation model populated with data drawn from the literature and expert opinion, given that PPVI has supplanted this procedure in the clinical setting analysed. The model is a cohort simulation model and assesses the cost of surgery using a hypothetical population of 1000 individuals with right ventricular outflow tract dysfunction starting when first valves were surgically placed was surgically placed and following them for a period of 25 years assuming that 1) PPVI is not available as an option, and 2) that PPVI is available for those eligible for it. RESULTS: The model resulted in an estimate of mean cost per patient of £5276 in the absence of PPVI and in an estimate of mean cost per patient of £7958 in the presence of PPVI over the 25 years period of analysis. CONCLUSIONS: PPVI although more costly than the surgical alternative, it appears to delay surgery thus having a significant impact on the health and the quality of life of this patient population. More research is needed to quantify the magnitude of the impact on the quality of life and to assess the role of modelling generally in assessing costs and effects in medical devices.

COST CONSEQUENCES OF REDUCED CVD RISK THROUGH IMPROVED SBP CONTROL: A COMPARATIVE ANALYSIS OF VALSARTAN VERSUS LOSARTAN

Baker DP1, Gibb J1, Dennes HB2, Borda Y1, Fahey L1, Gessens D1

1United BioSource Inc., Bethesda, MD, USA, 2Novartis Pharmaceuticals Corp, East Hanover, NJ, USA, 3Novartis Pharma AG, Basel, Switzerland, 3United BioSource Corporation, Lexington, MA, USA

OBJECTIVES: The effect of hypertension on increased risk of cardiovascular disease events has been demonstrated through population based studies, and the predictive value of this has been repeatedly demonstrated in risk prediction models derived from such studies. A recent meta-analysis of evidence regarding SBP reduction by ARB antihypertensives has demonstrated ARB's ability to significantly reduce the SBP reduction observed in patients treated with valsartan, compared to those treated with losartan. An economic model has been constructed to evaluate the effect of this difference on the risk of a first CVD event, and the resulting costs. METHODS: Inputs for the model are drawn from published sources and publicly available databases. CVD risk prediction was performed using equations derived from the Framingham Offspring Study cohort. The model evaluated an untreated group, and groups treated with valsartan, and losartan. Each treatment group was stratified into those with mild hypertension or moderate hypertension. RESULTS: Baseline analyses represent outcomes over 20 years from baseline moderate HTN classification in a US population of age 18 and over. Valsartan was associated with a marginal cost of $1,983 vs. the untreated arm, and a marginal cost of $466 in comparison to losartan. These costs resulted in estimates of 33,540 per event avoided vs. untreated and $37,484 vs. losartan. Incremental costs per CVD were $7,067 vs. no treatment and $8,807 vs. losartan. CONCLUSIONS: Analysis results indicate that reduction in SBP from baseline is associated with small reductions in primary CVD rates, and overall CVD treatment costs. Valsartan performed better than losartan because it was associated with a greater decrease in SBP from baseline to meta-analysis. Overall Valsartan is calculated effective cost ratios for treatment with valsartan indicate that valsartan is likely to be cost-effective when compared to no treatment or treatment with losartan in control of SBP.

COST-EFFECTIVENESS OF TRANSCATHETER AORTIC VALVE IMPLANTATION IN HIGH-RISK PATIENTS WITH SYMPTOMATIC AORTIC VALVE STENOSIS IN FRANCE

Fagnan P1, Lister PY2, Betchannhoff H3, Cribier A4, Banz K5

1Cemka-Ival, Bourg-La-Reine, France, 2CHU Charles Nicole, Rouen, France, 3Outcomes International, Basel, Switzerland

OBJECTIVES: To investigate the efficiency of minimally-invasive Transcatheter Aortic Valve Implantation (TAVI) delivered through the transfemoral or transapical approach compared with open-heart conventional aortic valve replacement or medical management alone in high risk patients with aortic stenosis in France. METHODS: A longitudinal cohort model was developed to predict clinical and economic outcomes over three years in four cohorts of patients treated by either: transfemoral (TF) or transapical (TA) aortic valve implantation, surgical aortic valve replacement (AVR) or medical management (MED). Clinical outcomes included early perioperative complications (30 days) and late events (stroke, MI, endocarditis, valve reoperation, pacemaker implantation, hospitalization for acute heart failure, and death). In the absence of head-to-head clinical trials, efficacy data for the alternative approaches were extracted from various sources including clinical studies, registries, national health statistics and expert opinion. QALYs were assessed by mapping health utilities to NYHA class distribution. Direct medical costs were assessed by multiplying the number of resource items consumed with French unit costs (2008 values). RESULTS: In terms of predicted mean life years and QALYs per patient over 3 years, TAVI appears to be superior to the other approaches; 2.42 years or 1.76 QALYs for TF, 2.16 years or 1.63 QALYS for TA, versus 2.06 years or 1.50 QALYs for AVR, and 1.73 years or 0.98 QALYS for MED. Modeled average discounted (3%) cumulative direct medical costs per patient amount to €46,677 (TF), €45,468 (TA), €50,630 (AVR), and €78,208 (MED). These findings imply that both transcatheter approaches appear to be dominant versus conventional-high risk AVR as well as medical management. Probabilistic sensitivity analyses confirmed the robustness of these model results. CONCLUSIONS: TAVI appears to be economically promising technology. However, additional data from on-going clinical studies and registries need to be awaited to confirm these preliminary results.

COST-EFFECTIVENESS OF PRASUGREL VS. CLOPIDOGREL IN PATIENTS WITH ACUTE CORONARY SYNDROMES AND PLACED PCI: RESULTS FROM THE TRITON-TIMI 38 TRIAL FROM THE GERMAN PERSPECTIVE

Mahler-Cerny F1, Wang K1, McCollam PL1, Schmitt C2, Cohen DJ1

1Sart-Luka’s Mid America Heart Institute, Kansas City, MO, USA, 2‘Lilly and Company, Indianapolis, IN, USA, 3‘Lilly and Company, Windesheim, Surrey, UK

OBJECTIVES: In patients with acute coronary syndromes (ACS) and planned PCI, the TRITON-TIMI 38 trial demonstrated that treatment with prasugrel compared with clopidogrel was associated with a reduced rate of cardiovascular death/MI/stroke and an increased risk of major bleeding. We evaluated the cost-effectiveness of treatment with prasugrel vs. clopidogrel for the duration of the trial, from the perspective of the German health care system, based on data from TRITON-TIMI 38. METHODS: