developed from the perspective of a Belgian hospital. Costs are discounted at 3%, in line with Belgian guidelines for pharmacoeconomic evaluation. The model takes into account device acquisition costs and other direct and indirect costs associated with NSIs occurring from infusion, injection, blood collection and insulin administration for diabetes care. Model input data were derived from the Institut National d'Assurance Maladie-Invalidité (INAMI), published studies, clinical guidelines, and market research. For a 420 bed hospital, an estimated 394,720 sharp procedures occur annually. Over five years, the total cost of conducting these procedures using conventional devices was estimated to be €580,700, of which €265,700 or 56% was spent managing 310 NSIs. If all procedures were instead conducted using SEDs, the model estimates that the number of NSIs would be reduced to 75. Total costs with SEDs are estimated to be €258,500, representing an overall cost saving of €52,200 or 9%. Greater acquisition costs for SEDs are offset by a decrease in NSI management costs.

CONCLUSIONS: Costs associated with conventional NSIs are a significant constraint cost of conducting surgical procedures. SEDs may help reduce the economic burden of managing NSIs, which may partially or completely offset any increase in device acquisition costs.

PMD13 PROJECTED ECONOMIC IMPACT OF UTILIZING FRACTIONAL FLOW RESERVE (FFR)-GUIDED VERSUS ANGIOGRAPHY-GUIDED PERCUTANEOUS CORONARY INTERVENTIONS (PCI) IN PATIENTS WITH MULTIVESSEL CORONARY DISEASE: A BUDGET IMPACT MODEL

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OBJECTIVES: Coronary angiography is the current gold standard in diagnosing coronary lesions. However, coronary angiography does not definitively determine whether a lesion is ischemic or not. Compared to angiography alone, Fractional Flow Reserve (FFR) demonstrated clinical superiority in diagnosing coronary lesion functional severity, while concurrently providing cost savings. The goal of this model is to demonstrate the hospital budgetary implications of utilizing FFR to guide clinical decision making in PCI cases compared to angiography alone.

METHODS: A customizable Excel®-based hospital budget impact model was developed for a hypothetical cohort of 500 patients with multivessel coronary disease. Cost components included procedural, device, hospital stay and cardiovascular complication costs during the one-year period after PCI. A decision tree model was utilized to convert the expected incidence of cardiovascular complications into expected costs. Probabilities and costs were derived from The Fractional Flow Reserve versus Angiography for Multivessel Evaluation (FAME) clinical trial data. Costs were converted to 2011 US dollars. Sensitivity analysis was carried out over reported ranges of values of model inputs. RESULTS: Using Fractional Flow Reserve in 20% of the multivessel cases resulted in estimated cost savings of €297,247 per year compared to using angiography alone in all of the multivessel cases. Fractional Flow Reserve usage resulted in reduced costs of the procedure, hospital stay and complications. Potential cost savings were most sensitive to variations in the cost of hospitalization and the probabilities of cardiovascular complications. CONCLUSIONS: Analyses show that compared to angiography alone, FFR-guided coronary intervention for patients with multivessel disease both (1) reduces rates of adverse events and (2) reduces total costs including procedural, hospital, and complication costs. As such, FFR provides hospitals a cost saving technology with significant clinical outcomes as compared to angiography alone.

PMD14 POTENTIAL IMPACT OF REGIONAL CEREBRAL OXYGEN SATURATION MONITORING DURING CORONARY ARTERY BYPASS SURGERY ON THE PATIENT REIMBURSEMENT MODEL IN TURKEY

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OBJECTIVES: Care for cardiovascular diseases is an important issue for health care systems. Coronary artery bypass grafting surgery (CABG) is utilized to treat coronary artery disease. Intensive care stays (ICS) and acute stroke (AS) are important drivers of post-operative costs. In Turkey, ICS and AS receive add-on payments to the packaged payment for CABG from the Social Security Agency (SGK). Effective use of regional cerebral oxygen saturation monitoring (rSO2) during CABG reduces intensive care stays (ICS) from 1.87 to 1.25 days and acute stroke (AS) incidence from 2.21% to 0.61%. We modelled the potential impact of SGK add-on payment for rSO2 on SGK add-on payments for ICS and AS after CABG. METHODS: Turkish volume of CABG was estimated as 47,973 procedures for 2012 (Covidien ICD-10 study of Turkey), increasing at 7.2% per year (National Cardiology Policy Report). SGK was assumed to cover 75% of procedures. ICS cost was taken from SGK. AS cost was taken from published payment for care obtained as 400TL per patient (cost of Covidien INVOS™ disposable sensor). Utilization of rSO2 in CABG with add-on payment was estimated as 15% in 2013, 30% in 2014, and 50% in 2015. Discount rate was 5%. RESULTS: Under current care paradigms, estimated SGK cost for ICS and AS following CABG was 94,542 and 63,637 TL in 2013, 2014 and 2015, respectively. However, if add-on payment facilitates utilization and benefits of rSO2 in CABG, potential SGK cost for ICS and AS following CABG would decrease to 78,753, 75,706 and 70,756 TL in those years. CONCLUSIONS: The cost of ICS and AS after CABG is substantial in Turkey. Add-on payment for rSO2 during CABG may decrease cumulative ICS and AS from 258,460 TL between 2013 and 2015.

PMD15 BUDGET IMPACT ANALYSIS OF VASCULAR CLOSURE DEVICES (VCDs) IN ITALY AND SPAIN

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OBJECTIVES: Recent literature suggests complication rates associated with current Vascular Closure Devices (VCDs) are comparable or reduced when compared to manual compression. However, well-documented differences exist among VCDs regarding the type and frequency of complications. A recent global budget impact model based on a naïve indirect treatment comparison (ITC) estimated the cost-savings associated with use of the VCD EXOSEAL™ vs. Perclose™ for the cost of manual compression. This analysis was adapted to Italy and Spain from the National Health System (NHS) perspective over a one year time horizon. METHODS: The ITC was used to calculate the potential impact of reinterventions (AMI), endovascular procedure (EP), transfusion (TR) and ultrasound guided interventions (UGI) following complications associated with each VCD. The annual number of VCDs used and costs of reinterventions were obtained from local databases. The means and 95% confidence intervals (95%-CI) for the budget impacts were estimated using bootstrap methods (1,000 simulations) assuming 100% use of Exoseal™ vs. 100% use of another VCD, and 100% use of Exoseal vs. 2010 VCD market-share for percutaneous coronary interventions (PCI) procedures. Device acquisition costs were assumed identical. RESULTS: Savings per procedure for EXOSEAL™ (Italy/Spain) would be approximately of (22,911,194) vs. Angioseal™, (15,5613,94) vs. Starclose™, (83,1672,66) vs. Perclose™ and (11,216,64) vs. Mynx™. Considering 90.239 and 37.064 annual PCI procedures with VCDs in Italy and Spain respectively (15,591,307€ per procedure), 100% use of EXOSEAL™ would result in a total annual estimated savings of €2,680,870€ (95%-CI: 2,538,334€ - 2,823,405€) for the Italian NHS and 797,070€ (95%-CI: 734,236€ - 859,906€) for the Spanish NHS. CONCLUSIONS: This analysis suggests use of EXOSEAL™ in patients undergoing PCI procedures may result in important cost savings for the Italian and the Spanish NHS. Additional data will be required to confirm cost-savings with complications rates of EXOSEAL™.