effective. Univariate sensitivity analyses showed that changes in the costs of atorvas-
tatin, and in treatment duration have the biggest impact on the results. Subsequent probabilistic analyses will be used to further explore uncertainties around the estimates.

PCV86

COST-UTILITY ANALYSIS OF RIVAROXABAN COMPARED WITH ENOXAPARIN IN PREVENTION OF VENOUS THROMBOEMBOLISM AFTER TOTAL HIP REPLACEMENT IN SLOVAKIA

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OBJECTIVES: To estimate the cost effectiveness of rivaroxaban against enoxaparin for the prophylaxis of venous thromboembolism (VTE) in patients after total hip replacement (THR) in Slovakia from payer perspective. METHODS: A cost-utility model based on results of large randomized controlled trial (RECORD 1) was developed. In RECORD1, patients received 35 days prophylaxis with rivaroxaban or enoxaparin. Rivaroxaban reduced total VTE (composite: any DVT, non-fatal PE, all-cause mortality) by 70% versus enoxaparin after 35 days prophylaxis. The model was divided into three parts: prophylaxis, post-prophylaxis, and long-term complications. The first two parts represent acute phase and were modeled as a decision tree. Third part represents the long-term complications and was developed as a Markov model. The first part of the model is populated by RECORD 1 trial, while published epidemiological and clinical data estimating the incidence of further VTE events and post-thrombotic syndrome beyond the trial period were used in second and third part of the model. Local cost data was based on published price lists, clinical guidelines, product labels and expert opinion. VTE related utilities were used from literature. Effectiveness was measured in quality-adjusted life years (QALY). Time horizon was set at 5 years and payers perspective was used. Discount rate was 7% per year for costs and effects according to Ministry of Health (MoH) guidelines for health economic evaluation valid in 2008. One-way and probabilistic sensitivity analyses were performed. RESULTS: Rivaroxaban was cost-effective versus enoxaparin, with an incremental cost per QALY of €9672.10. This is significantly below officially published €62,500 QALY threshold for willingness to pay in Slovakia. Over 1,000 samples of probabilistic sensitivity analysis, 633 simulations were below a threshold of €26,500. CONCLUSIONS: Rivaroxaban is a cost-effective alternative to enoxapa-
rin for the prevention of VTE following THR in Slovakian setting.

PCV87

COST-EFFECTIVENESS OF PROTON PUMP INHIBITORS FOR PREVENTION OF GASTROINTESTINAL ADVERSE EVENTS WHEN USING ASPIRIN FOR PRIMARY CARDIOVASCULAR PREVENTION

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OBJECTIVES: Aspirin prevents myocardial infarction (MI), but increases gastrointestinal bleeding (GIB) and dyspepsia. Proton pump inhibitors (PPIs) reduce GIB risk and dyspepsia, but economic implications of use with aspirin has not been studied. We examine cost-utility of low-dose aspirin + PPI (omeprazole) 20 mg daily; low-dose aspirin alone; or no therapy for primary cardiovascular (CVD) prevention. METHODS: We develop a Markov model and performed a lifetime analysis of middle-aged and older men without history of CVD at levels of 10-year risk for coronary heart disease (CHD) events from 2.5% to 25%, using a third-party payer perspective. Baseline risks of MI, stroke, and CHD death were estimated from Framingham equations. Baseline risks of GIB and dyspepsia were estimated from cohort studies. Non-cardiovascular mortality obtained from US life tables. From systematic reviews, aspirin reduced CHD events by 10%, increased total stroke risk by 6%, increase risk of dyspepsia by 80%, and increase risk of GIB 2-fold for patients without history of GIB and 10-fold for patients with history of GIB. Addition of PPI reduced GIB risk by 90% and dyspepsia by 50%. RESULTS: For the base case of 45-year-old men with 10-year risk for CHD events of 10%, aspirin alone was more effective and less costly than no treatment. Aspirin + PPI (compared with aspirin alone) had cost/QALY of $473,673 when dyspepsia is not modeled and $51,039 when the effects of treating dyspepsia are included. The incremental cost/QALY of adding PPI was found to improve as CHD risk increases. CONCLUSIONS: Adding PPI to aspirin is not cost-effective as a routine means to guide treatment decisions for ACS patients is cost effective, especially for Maori and Pacific peoples, and that prasugrel alone is not cost effective in New Zealand.

PCV88

ECONOMIC EVALUATION OF THE USE OF REGADENOSON IN MYOCARDIAL PERFUSION IMAGING IN CARDIOVASCULAR LABORATORY PERSPECTIVES

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OBJECTIVES: Regadenoson, a newer adenosine derivative, has improved pharmaco-
logic properties that may improve safety profile and administrative requirements compared to adenosine and dipyridamole. This study assessed the economic benefits of utilizing regadenoson in myocardial perfusion imaging (MPI). METHODS: Data on the overall laboratory and individual staff time spent on MPI procedures and managing adverse events was collected from 141 cardiovascular laboratories. Direct laboratory MPI cost was estimated by applying hourly labor and fringe benefit rates to the amount of time each staff spent assessing the results of the MPI procedure, and its administration also was applied. Regression analysis was used to examine the association between laboratory characteristics and the weekly number of tests. The estimated adjusted mean values were used to test the sensitivity of results to this parameter. RESULTS: Assuming a set number of 20 tests/week with regadenoson and dipyridamole, shorter overall test time with regadenoson (mean ± SD) of 156 ± 46 minutes vs. 182 ± 63 minutes with adenosine and 191 ± 61 minutes with dipyridamole) and utilization less of laboratory resources resulted in an additional 177 ± 244 tests/week with regadenoson vs. other two agents, respectively. The average cost per test with regadenoson was $17,377 vs. adenosine and $36,677 vs. dipyridamole in laboratory personnel cost and $91,165 vs. adenosine in total cost. Regadenoson resulted in $112,134 higher annual total cost compared to dipyridamole due to higher drug
cost would reduce the direct cost of MPI by decreasing the procedure and monitoring time and increasing patient throughput. These findings will be of interest to laboratory administrators and payers.

PCV89

COST-EFFECTIVENESS OF PRASAGREL OR CHOPIDOGREL FOR TREATMENT OF ACS PATIENTS BASED ON GENETIC TESTING FOR CYPC219VARIANTS

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OBJECTIVES: Previous studies suggest prasugrel may be cost effective when com-
pared to clopidogrel for treating acute coronary syndrome patients (ACS). Recent research has shown that the reduced function allele CYPC219*2 (C*2 allele) is associ-
ated with an increased risk of adverse events for ACS patients taking clopidogrel and a decreased risk for patients taking prasugrel. The purpose of this paper is to test whether using clopidogrel for all patients is cost effective compared to prasugrel for *2 allele patients in combination with clopidogrel for non *2 patients and to prasugrel only for New Zealand. METHODS: Effectiveness of clopidogrel and prasugrel from published TRITON-TIMI 38 clinical trials was combined with rates of 2 occurrence in Maori, Pacific Islanders, Asian and NZ European and national hospitalisation rates and costs of hospitalisations 15 months post ACS for stroke, MI, bleeding, stent thrombosis and cardiovascular death. Decision tree modelling and Monte Carlo simu-
lations examined the robustness of the results. RESULTS: Rates of the *2 allele differ significantly between NZ European (15%), Maori (24%), Asian (29%) and Pacific People (45%). Analysis of hospital records suggests that rates of MI, stroke, bleeding, stent thrombosis and cardiovascular death were much higher in the general New Zealand population than in the clinical trial population. The cost effectiveness analysis suggests that use of a genetic test to guide combined use of clopidogrel and prasugrel was cost effective for most age and ethnic groups, but particularly for Maori males (NZS$3184/QALY), Maori females (NZS$3687/QALY), Pacific men (NZS$4617/QALY) and Pacific women (NZS$7605/QALY). Prasugrel is more costly and less effective than clopidogrel. CONCLUSIONS: The results here suggest that the use of a genetic test to guide treatment decisions for ACS patients is cost effective, especially for Maori and Pacific peoples, and that prasugrel alone is not cost effective in New Zealand.
HEALTH CARE RESOURCE UTILIZATION AMONG ADULTS WITH TYPE 2 DIABETES MELLITUS, HYPERTENSION, AND OBESITY

OBJECTIVES: Individuals with type 2 diabetes mellitus (T2DM) utilize more health care resources than those without diabetes, yet a portion of the increased use may be due to comorbid conditions. This study compared health care resource utilization among adults with T2DM plus hypertension (HTN) and obesity versus T2DM only. METHODS: Respondents to the Study to Help Improve Early evaluation and management of risk factors Leading to Diabetes (SHIELD), a large US survey, self-reported their height, weight, comorbid conditions, number of hospitalizations, emergency department and ambulatory visits. The SHIELD study included 12,500 respondents reporting T2DM and HTN and obesity (body mass index [BMI] ≥30 kg/m²) and were identified and compared with a T2DM-only group. RESULTS: T2DM respondents with comorbid HTN, and obesity (n = 1186), were younger, more likely to be men, and had lower income but were similar to T2DM-only respondents (n = 293) in race, education, smoking, and cardiovascular disease history. Respondents with T2DM, HTN, and obesity had significantly more physician visits (mean of 8 vs. 6, p = 0.001), especially 10 or more visits (21% vs. 15%), than respondents with T2DM only (p = 0.03). No significant differences (p > 0.05) were reported for percentage hospitalized (21% vs. 20%) and number of days hospitalized (mean of 7 vs. 11 days) in the past 12 months. Respondents with comorbid HTN and obesity reported significantly more ED visits (9% vs. 2-13 visits) compared with T2DM-only group (15% with 2-5 visits, p = 0.02). CONCLUSIONS: Respondents with comorbid conditions of T2DM, HTN, and obesity have greater health care resource utilization in physician office visits and ED visits than those with T2DM only.

ARE DOUBLE-BLEND, DOUBLE-DUMMY STUDIES SUITABLE FOR RESOURCE UTILISATION ANALYSES? AN EXAMPLE FROM A NEW ORAL ANTICOAGULANT FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM (VTE) FOLLOWING ORTHOPAEDIC SURGERY

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OBJECTIVES: Resource utilisation data were collected in all three Dagabatran et aliae (DACB) Phase II primary VTE prevention studies. This study aimed to, within trial, summarise resource use by treatment group and compare resource use separately for each dose of orally-administered DBG (150 mg od, 220 mg od) versus subcutaneous enoxaparin. METHODS: The RE-MOBILIZE study included 25% knee-surgery patients and compared DBG to enoxaparin 30 mg bid. The RE-MODEL and RE-NOVATE studies evaluated 2076 and 3463 patients undergoing knee and hip surgery, respectively, and compared DBG with enoxaparin 40 mg od. All studies used a randomised, double-blind, double-dummy non-inferiority design. Duration of treatment differed by study. Data collected for all patients included hospitalisation (main and re-admission), non-protocoled diagnostics, blood transfusions, reoperations, concomitant medications and health care contacts for enoxaparin injections. Each resource use category was summarised, separately for each study, by treating between means and standard errors. Two sample t-tests were used to examine differences between treatments. RESULTS: There were no consistently significant differences between treatments (within each study). The percentages of patients requiring domiciliary nurse visits to administer thromboprophylaxis following discharge from hospital (i.e. administer subcutaneous enoxaparin or placebo because the patient was unable to self-inject) were 5.6% (DBG 150 mg od), 5.0% (DBG 220 mg od) and 5.4% (enoxaparin) in RE-MOBILIZE, 1.0% and 1.3% in RE-MODEL, and 4.4%, 1.5% and 5.0% in RE-NOVATE. All domiciliary nurse visit comparisons for each DBG arm versus enoxaparin were statistically non-significant (p > 0.15). CONCLUSIONS: Double-blind, double-dummy study designs appear to be unhelpful in the identification of differences that might arise from changes in treatment formulation and route of administration. In this study, a hypothesised difference in domiciliary nurse treatment administrations remained undetected due to the double-dummy nature of the trials.

PREDICTIVE MODELS TO IDENTIFY NON-ADHERENCE TO DYSLIPIDEMIC MEDICATIONS USING PHARMACY AND MEDICAL CLAIMS DATA FROM A COMMERCIAL HEALTH PLAN

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OBJECTIVES: To develop predictive models for medication compliance in dyslipidemia that will aid health care decision makers in targeting compliance intervention programs. METHODS: Pharmacy and medical claims data from a commercial health plan were analyzed for all currently enrolled members who received their first dyslipidemic medication between May 1, 2007 and April 30, 2008. Percentage of days covered (PDC) defined as days supply of dyslipidemic medication per 365 days. PDC < 80% was used to categorize non-compliant patients. Potential covariates included patient demographics, pharmacy utilization and medical conditions. Stepwise logistic regression was used to predict the odds of non-compliance. RESULTS: A total of 83,633 patients were included. Sixty-five percent of patients were non-compliant (PDC = 0.33, SD = 0.22). The most significant predictor of non-compliance was treatment with bile acid sequestrants (OR: 6.75; p < 0.0001, compared to statins). Significant predictors of non-compliance also included age category, increasing from an OR = 1.11 for age 45–55 to OR = 3.23 for age ≥80 (p < 0.0001 for all estimates compared as grouped); prior diabetes diagnosis (OR: 1.11, p < 0.0001) and the number of unique pharmacies used (OR = 1.10 additionally per pharmacy; p < 0.0001). Factors reducing non-compliance included male gender (OR: 0.77, p < 0.0001); previous heart attack (OR: 0.62, p = 0.0221); prior compliant behavior (OR: 0.888, p < 0.0001); number of unique medications (OR: 0.9969 per additional physician; p < 0.0001) and copayment categories (relative to no copayment). Compliance significantly improved by 12%, 12% and 6% for copay categories $5–$10, $10–$20 and $20–$30, respectively to no copayment. (p < 0.01). CONCLUSIONS: The results may