PCV90

THE COST-EFFECTIVENESS OF ROSUVASTATIN VERSUS SIMVASTATIN FOR THE PREVENTION OF CARDIOVASCULAR MORBIDITY AND MORTALITY IN PATIENTS WITH HIGH BASELINE RISK—A SWEDISH ECONOMIC EVALUATION BASED UPON THE JUPITER TRIAL

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OBJECTIVES: To assess the long-term cost-effectiveness of various doses of rosuvastatin (R) versus relevant doses of simvastatin (S) (R20 mg versus S40 mg (primary analysis), R10 versus S20 and R10 versus S40) in a patient population with high risk of cardiovascular events (10-year Framingham CVD risk ≥ 20%). **METHODS:** A Monte Carlo simulation model was developed based on the JUPITER (Justification for the Use of statins in Primary prevention: an Intervention Trial evaluating Rosuvastatin, NCT00239681) trial findings and includes modeling of cardiovascular events and death over the lifetime of patients. The relative efficacy of S20, S40 and R10 compared with R20 (as observed in JUPITER) was estimated by computing relative 10-year Framingham cardiovascular event risks based on reported differences in Total Cholesterol/High-Density Lipoprotein cholesterol ratio. Epidemiological data specific for the Swedish setting were utilized to model post-event mortality and long-term overall mortality in event-free patients. Incremental effectiveness was primarily measured as quality-adjusted life-years (QALYs) gained. Cost-effectiveness was assessed based upon direct costs. All effects and costs (in 2008/09 Swedish unit prices) were discounted at annual 3%. **RESULTS:** The model estimated that treating a cohort of 100,000 patients (66 years, 60% males) with R20 mg avoided 2642 CVD events over lifetime compared with S40 mg. This translated into an estimated gain of 9515 years in full health (QALYs). The incremental cost per QALY gained was SEK161,712 (16,434). The cost per QALY gained was SEK228,655 (€23,237) for R10 versus S20, and SEK234,932 (€23,875) for R10 versus S40. Probabilistic sensitivity analyses supported base-case results. **CONCLUSIONS:** Treatment with rosuvastatin 10 and 20 mg is cost-effective compared with relevant doses of simvastatin in the primary prevention of CVD for patients with high baseline cardiovascular risk (10-year Framingham CVD risk ≥ 20%).

PCV91

THE COST-EFFECTIVENESS OF ROSUVASTATIN VERSUS ATORVASTATIN FOR THE PREVENTION OF CARDIOVASCULAR MORBIDITY AND MORTALITY IN PATIENTS WITH HIGH BASELINE RISK—A SWEDISH ECONOMIC EVALUATION OF THE JUPITER TRIAL

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OBJECTIVES: To assess long-term cost-effectiveness of various doses of rosuvastatin (R) versus relevant doses of generic atorvastatin (A) (R20 mg versus A40 mg (primary comparison), R10 versus A20 and; R40 versus A80) in patients with a high risk of CV events (10-year Framingham CVD risk ≥ 20%). **METHODS:** A Monte Carlo simulation model was developed based on JUPITER (Justification for the Use of statins in Primary prevention: an Intervention Trial evaluating Rosuvastatin, NCT00239681) trial findings and modeled cardiovascular events and death over the lifetime of patients. The relative efficacy of the A20, A40, A80, R10, and R40 mg compared to R20 mg (as observed in JUPITER) were estimated by computing relative 10-year Framingham cardiovascular event risks based on reported differences in Total Cholesterol/High-Density Lipoprotein cholesterol ratio. Epidemiological data specific for the Swedish setting were utilized to model mortality. Incremental effectiveness was primarily measured as quality-adjusted life-years (QALYs) gained. Cost-effectiveness was assessed based upon direct costs. All effects and costs (2008/09 Swedish unit prices) were discounted at annual 3%. An 80% price reduction was assumed for generic versus branded statin. **RESULTS:** The model estimated that treating a cohort of 100,000 patients (66 years, 60% males) with R20 avoided 1121 CVD events over lifetime compared with atorvastatin 40 mg. This translated into an estimated gain of 4090 years in full health (QALYs). The estimated incremental cost per QALY gained was SEK366,763 (€37,273). This estimate was SEK428,060 (€43,502) for R10 versus A20, and SEK582,241 (€59,171) for R40 versus A80. Probabilistic sensitivity analyses supported base-case results. **CONCLUSIONS:** Treatment with rosuvastatin 10 mg, 20 mg and 40 mg is cost-effective compared with relevant doses of generic atorvastatin (20 mg, 40 mg, 80 mg, respectively) for the primary prevention of cardiovascular events for patients with high baseline cardiovascular risk (10-year Framingham CVD risk ≥ 20%) in Sweden.

PCV92

THE HEALTH AND ECONOMIC IMPACT OF SWITCHING FROM ATORVASTATIN TO GENERIC SIMVASTATIN IN BELGIUM

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OBJECTIVES: Containing pharmaceutical budgets has encouraged generic prescribing policies. Across Europe, many patients have been switched from atorvastatin to generic statins, particularly simvastatin, but often at lower therapeutic doses. This study sought to estimate the potential clinical and economic effect if policy-induced switching to first generation statins occurred in Belgium as per previously observed patterns. **METHODS:** A Markov micro-simulation model was populated with 80 primary prevention Belgian patients from a 2007 observational study. Risks of first-onset cardiovascular disease (CVD) were estimated using a calibrated Framingham risk equation. With a baseline of January 2010, follow-up was simulated for 20 years. Decision analysis estimated the marginal effects of switching all patients from atorvastatin (weighted average daily dose [WADD] 20.7 mg) to simvastatin (WADD 31.6 mg). Dose-specific, lipid-modifying effects of the two statins, CVD costs and utilities were sourced from published data. Annual discount rates of 3% and 1.5% were applied to costs and health effects, respectively. **RESULTS:** Of the 80 subjects on atorvastatin, 23 (28.9%) were predicted to develop CVD over 20 years. In the switched-to-simvastatin group, the predicted number was 26 (32.0%), equating to a "number needed to harm" of 32. Switching was estimated to lead to a net cost saving of €581 per subject, but also a loss of 0.04 QALYs. These equated to an ICER of €13,608 per QALY gained (atorvastatin vs. simvastatin). Sensitivity analyses indicated the results to be robust. **CONCLUSIONS:** Our preliminary analyses indicate that there would be an increase in the burden of CVD if Belgian patients are switched from atorvastatin to generic simvastatin at non-equipotent doses, as has happened in neighbouring countries like The Netherlands. This study highlights the need to consider the potential health and health economic impact of population-based switching policies.

PCV93

THROMBOPROPHYLAXIS AFTER TOTAL KNEE REPLACEMENT: COST-UTILITY ANALYSIS OF RIVAROXABAN VERSUS ENOXAPARIN 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 knee replacement (TKR) in Slovakia from payer perspective. **METHODS:** Previously published cost-utility model based on results of large randomized controlled trial (RECORD 3) has been adapted to Slovakian settings. In RECORD 3, patients received 12 days prophylaxis with rivaroxaban or enoxaparin. Rivaroxaban reduced total VTE (composite: any DVT, non-fatal PE, all-cause mortality) by 49% versus enoxaparin after 12 days prophylaxis. The model was divided into three parts: prophylaxis, post-prophylaxis, and long-term complications. The first two parts represents 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 3 trial, while published epidemiological and clinical data estimating the risk 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 5% per year for costs and effects according to valid Ministry of Health (MoH) guidelines for health economic evaluation. One-way and probabilistic sensitivity analyses were performed. **RESULTS:** Rivaroxaban produced improved outcomes (QALY) and cost savings of €28 per patient versus enoxaparin in Slovakian setting (dominance). Probabilistic sensitivity analysis showed dominance of rivaroxaban compared to enoxaparin in more then 99% of cases. **CONCLUSIONS:** Prophylaxis of VTE with rivaroxaban following TKR may improve health outcomes and reduce direct medical costs when compared to enoxaparin in Slovakian setting.

PCV94

POTENTIAL COST-EFFECTIVENESS OF A BIOMARKER TEST TO STRATIFY PATIENTS INDICATED FOR A CORONARY STENT

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OBJECTIVES: Patients requiring a coronary stent can receive a bare-metal stent (BMS) or a drug-eluting stent (DES), but both have their advantages and disadvantages. We estimated the potential one-year cost-effectiveness of a test to decide which stent a patient should receive based on the risk of restenosis after a BMS implantation. **METHODS:** This study was performed as part of a Dutch large-scale five-year study ("Circulating Cells") now underway to identify blood biomarkers to facilitate the prevention and treatment of coronary heart disease. a Markov chain Monte Carlo model was developed to estimate costs and effectiveness for three strategies: DES for all patients, BMS for all patients, and use of a test (80% sensitivity & 80% specificity). Input values were based on the literature and expert opinion. Costs were calculated according to the health care sector perspective. Scenario and sensitivity analyses were performed to test the robustness of the results. **RESULTS:** The DES-for-all strategy was the most effective (0.840 QALYs), followed by the test strategy (0.839) and the BMS-for-all strategy (0.838). However, it was also more costly (€8189) than the other two (test strategy, €7475; BMS, €6905). These results meant high incremental cost-effectiveness ratios for the test and DES-for-all strategies. Implanting DES in all patients would have an important budget impact (€46,000,000) for the The Netherlands, given 36,000 interventions annually. Various input parameters had an important influence on the results, including the sensitivity, specificity and costs of the test. **CONCLUSIONS:** Both DES and BMS stents are often used for PCIs in the The Netherlands. a stratifying test has the potential to reduce costs and still achieve accept-