(RRRs) in VTE events with rivaroxaban against enoxaparin of 70–79% (p < 0.001) following THR and 49% following TKR (p < 0.001). However, the effect of rivaroxaban relative to alternative prophylaxes is also important, including those presently in development. A systematic literature review identified RCTs comparing enoxaparin with warfarin, fondaparinux or dabigatran in THR or TKR. Indirect comparisons of rivaroxaban to each were conducted, using enoxaparin as common comparator. Whenever the comparison included more than three studies, a meta-regression was performed. Results presented are RRRs from those analyses. RESULTS: Rivaroxaban showed statistically significant reductions in the incidence of key endpoints. In THR, when compared with fondaparinux, rivaroxaban was associated with RRRs of 56% in total VTE (p = 0.015) and 89% (p = 0.015) in symptomatic VTE. When compared with dabigatran, RRRs with rivaroxaban were 86% (p = 0.0018) in symptomatic VTE and 77% (p < 0.001) in total VTE. Similarly, when compared with warfarin, the RRR in symptomatic VTE with rivaroxaban was 92% (p = 0.003). In TKR, rivaroxaban produced 67% (p < 0.001) and 66% (p < 0.001) reductions in total VTE and deep vein thrombosis (DVT) respectively, versus warfarin, and 50% (p < 0.001) reductions in total VTE and DVT versus dabigatran. No other statistically significant differences were found. Importantly for a new anticoagulant, there were no increases in major bleeding so safety endpoints are unlikely to influence cost-effectiveness. CONCLUSION: Rivaroxaban reduced the incidence of overall or symptomatic VTE events relative to alternative prophylaxes without increased major bleeding, reflecting a better clinical profile. These risk reductions may have implications for cost-effectiveness analyses.

PCV40

COST-EFFECTIVENESS ANALYSIS OF DRUG-ELUTING STENT VS BARE METAL STENT IN PATIENTS WITH ISCHAEMIC HEART DISEASE IN SOCIAL SECURITY MEXICAN INSTITUTE. González-Díaz B1, Contreras-Hernández I2, Salinas-Escudero G2, Garduño-Espinosa J1, Arguero-Sánchez R3, Castaño-Guerra R4, Farell-Campa J1
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OBJECTIVE: To estimate the cost-effectiveness of the use of drug-eluting stent compared to bare-metal stent in a cohort of patients with coronary disease in the Social Security Mexican Institute (IMSS). METHODS: Cost-effectiveness in a cohort of patients with ischemic disease with indication of PCI (Percutaneous Coronary Intervention). The measure of effectiveness was the rate of clinical success without major cardiovascular adverse events. The cost and effectiveness of the treatment were obtained from clinical follow-up of the cohort from 104 patients in the Cardiology Hospital of IMSS. The micro-costing technique was used, and the costs come from bases institutional costs. The results are expressed in US dollars (US$) in 2007. Given the time horizon of the study (12 months), the discount rate was not applied. We performed a sensitivity analysis probabilistic, and I think the curve of acceptability. RESULTS: The 61.5% of patients in the cohort used bare-metal stent and 38.5% drug-eluting stent, drug-eluting stent showed the highest average cost per patient US$15,452.9 ± 12,996.8 compared with bare-metal stent US$14,254.4 ± 10,826.5. However, the effectiveness drug-eluting stent found were 97.44% (95% CI 92.48–91.46). The RCE was US$17,453.5 in the case of drug-eluting stent and US$15,829.6 with bare-metal stent, the RCEI was US$7419. The acceptability curve shows that the treatment of drug-eluting stent becomes the dominant cost-effectiveness alternative from WTP US$15,109.9. The probabilistic analysis shows that drug-eluting stent is more cost effective when it exceeds US$21,153.8 WTP per patient. CONCLUSION: Drug-eluting stent is an alternative treatment interventional revascularization with better outcomes in health, and depending from the availability to pay can be a cost-effectiveness alternative to the institution.

PCV41

COMPARISON OF COST-EFFECTIVENESS OF POM (PRESCRIPTION ONLY) STATINS, OTC (OVER THE COUNTER) STATIN AND PLANT STEROL / STANOL PRODUCTS FOR PRIMARY CVD (CARDIOVASCULAR DISEASE) PREVENTION IN THE UNITED KINGDOM FROM THE PATIENT'S PERSPECTIVE Amirsadri-Naeini M1, Jackson PR2
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OBJECTIVE: To consider the cost-effectiveness of POM statins, OTC statin and plant sterol/stanol products from the perspective of middle aged males when used according to current UK guidance for the primary prevention of CVD. METHODS: We used a Markov-Model to obtain the outcomes for an illustrative cohort up to 100 years old or death, whichever come sooner. For the base-case we assumed that all would receive POM statins from 70 years old and all had to pay for their prescription charge up to 59 years. The main outcomes for effects were QALYs (quality-adjusted life-years) and LYG (Life Years Gained). The main costs included were prescription charges, product costs, travel costs and gross weekly incomes. The NICE technology assessment report “Statins for the Prevention of Coronary Events” published in 2005 was used for transition probabilities and utility values. Updated costs for 2007 values extracted from NHS and “HM Revenue & Customs” databases, and average retail prices of the UK market. RESULTS: Estimated discounted incremental cost/QALYs were ≥2970.63, ≥8026.37 and ≥16,536.84 for POM statins, OTC statin and plant stanol/sterol products, respectively. Estimated discounted incremental cost/LYGs were ≥5339.02, ≥14,458.69 and ≥30,076.96, respectively. Cost/QALYs ranged from ≥1318.03 to ≥7814.44, ≥4289.46 to ≥11,763.28 and ≥3961.10 to ≥29,112.59 for POM statins, OTC statin and plant sterol/stanol products, respectively in the univariate sensitivity analyses. CONCLUSION: From the patient’s viewpoint, the most cost-effective intervention is a POM statin (≥2970.63/QALY). There are considerable differences between the most (POM statins) and the least (plant sterol/stanol products) cost-effective interventions. However, for individual patients non-eligibility for free prescription or a strong desire to avoid medicalising disease prevention may overturn the main results.

PCV42

COST-EFFECTIVENESS ANALYSIS OF EDUCATIONAL PREVENTIVE TECHNOLOGIES FOR PATIENTS WITH CARDIOVASCULAR DISEASES IN RUSSIA Kontsevaya A1, Kalinina A2
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OBJECTIVE: To study preventive technologies economic efficiency for patients with cardiovascular diseases in Russia. METHODS: The study consisted of two parts. The first part involved 303 hypertensive patients without serious complications. The second part involved 100 patients with coronary heart disease (CHD). In both substudies, patients were randomized to treatment and control groups. Patients of the treatment group participated in a structured education program for hypertensive
patients or for patients with CHD, and patients of control group were in routine clinical practice. All patients were observed during 12 months. Economic efficiency in both cases was evaluated on the basis of “cost of illness” and “cost-effectiveness” analysis. RESULTS: In hypertensive patients we received the following results. The cost-efficiency ratio for decreasing blood pressure on 1% was $216.6 in the treatment group and $1179 in the control group. The results of patients’ education in CHD patient were the following: The cost-efficiency ratio for decreasing angina attacks frequency on 1% was $974 in treatment group and $2835 in control group. The cost-efficiency ratio for decreasing cholesterol on 1% was $2857 in the treatment group and $4365 in the control group. The cost-efficiency ratio for decreasing blood pressure on 1% was $1606 in the treatment group and $9316 in the control group. CONCLUSION: Educational preventive technologies for patients with cardiovascular diseases are cost-effective over a one-year period.

**PCV43**

**OPTIMIZATION OF DIAGNOSIS AND TREATMENT OF CORONARY ARTERY DISEASE IN CHINA WITH USE OF CORONARY CT ANGIOGRAPHY**

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OBJECTIVE: Diagnosis of coronary artery disease (CAD) in China using coronary angiography (CA) is challenging due to high disease prevalence and limited resources. It has been estimated that up to 50% of Chinese patients are negative for CAD upon CA. Coronary CT Angiography (CTA) may provide an opportunity to minimize unnecessary invasive diagnostic procedures and increase patient access to diagnosis of CAD in a cost-effective manner. This study was conducted to evaluate the potential costs and efficiency of utilizing CTA in combination with CA to optimize diagnosis and care of patients with suspected CAD in China. METHODS: We conducted a cost-consequences analysis from the perspective of Fuwai Hospital in Beijing. We developed a decision-analytic model comparing a diagnostic strategy of CA only with a strategy of CTA in combination with CA for patients with low to moderate pre-test probability (based on Duke Clinical Score) of significant disease. All CA-positive patients were assumed to receive percutaneous coronary intervention (PCI). CTA diagnostic accuracy data and cost estimates were obtained from Fuwai Hospital and other inputs were derived from the published literature. RESULTS: In the base-case analysis, assuming a CAD prevalence of 39% (range 18–64%) in the low to moderate risk patient population, utilization of CTA in combination with CA lead to a cost savings of $559 (USD) per patient (range $680–$416) compared to the CA only diagnosis strategy. The hospital cost per diagnosis of CAD was $12,483 (CTA + CA) (range $14,197–$11,900) and $13,418 (CA only) (range $17,406–$12,100), and the proportion of catheter lab diagnoses leading to PCI increased from 39% (range 18–64%) to 73% (range 48–88%). CONCLUSION: Our study suggests that CTA implementation in China could optimize the patient population that undergoes invasive CA procedures and provide cost-savings for Chinese hospitals.

**PCV44**

**RELATIONSHIP BETWEEN THE OBESITY PARADOX AND HEALTH CARE EXPENDITURES IN SUBJECTS WITH CARDIOVASCULAR DISEASE USING THE MEDICAL EXPENDITURE PANEL SURVEY**

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OBJECTIVE: To examine how found ‘obesity paradox’—a paradoxical decrease in morbidity and mortality with increasing BMI in subjects with cardiovascular disease (CVD)—relates to health care-expenditures using Medical Expenditure Panel Survey (MEPS). METHODS: We performed cross-sectional analyses of 11,383 adults from the 2005 MEPS, a national survey of noninstitutionalized civilian population in the United States. Subjects with CVD (coronary heart disease, myocardial infarction, stroke, and hypertension) were determined from self-reports. Mean expenditures per capita were estimated for NIH BMI categories (under, normal, overweight, obese I, II, and III) using a two-part exponential conditional model (ECM) adjusted for age, race, wage, occupation, type of health insurance, degree level, and smoking status. The first part of the model was logistic regression to predict the probability of incurring any expenditures. For the second part, we used ECM since the log-scale expenditure data was not leptokurtotic and was heteroscedastic. We performed Box-Cox test and Park test to find the link function and distribution family. Average expenditures in 2005 U.S. dollars were calculated by multiplying each person’s probability of incurring any expense and expenditures. RESULTS: About 67% of subjects with CVD (N = 2596) and 65% of subjects without CVD (N = 8789) were overweight or obese. Using gamma distribution with log link function, mean expenditures in CVD-group by BMI categories were $3247, $3040, $3098, $2966, $3500, and $3375 ($p = non-significant). Those in subjects without CVD were $1837, $2327, $2389, $2534, $3179, and $3783 ($p < 0.001). Age, smoking status, and Medicare were associated with expenditures in CVD-group. CONCLUSION: Health care-expenditures did not significantly differ among BMI categories in subjects with CVD whereas health care-expenditures were increasing with BMI in subjects without CVD. This could be due to the influence of CVD-care costs across weight categories in CVD-group. We did not find a obesity paradox in health care-expenditures in subjects with CVD.

**PCV45**

**ECONOMIC IMPACT OF STROKE-RELATED COMORBID CONDITIONS ON THE TREATMENT OF STROKE: AN ANALYSIS OF MEDICARE BENEFICIARIES IN THE UNITED STATES**

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OBJECTIVE: Few cost-of-illness studies in stroke have examined the incremental impact of comorbid condition(s). The aim of this study was to assess the costs of stroke management attributable to stroke and comorbid conditions using data from the Medicare program in the United States (U.S.). METHODS: Medicare beneficiaries diagnosed with hemorrhagic (HS) and ischemic (IS) stroke from 2002–2005 were identified from a 5% random sample of Medicare outcomes and care database. Direct costs were assessed from the perspective of the Medicare program. Descriptive and multivariate analyses were performed. Data were analyzed from one year prior to the index event through four