with chronic left ventricular dysfunction at increased risk for sudden cardiac death as compared to current risk stratification methods for selection of patients for implanted cardiac defibrillators (ICD) versus medical therapy. **METHODS:** A Markov model was developed to evaluate the impact of using AdreView for evaluating NYHA II or III heart failure (HF) patients with LV ejection fraction (EF) <50% for treatment with an ICD. AdreView risk-stratification was used to guide the treatment decision between ICD and medical therapy. The source of data for predicted probabilities, expected mortality rates, and treatment costs in year 2009 dollars are from the published literature and the AdreView Myocardial Imaging for Risk Evaluation in Heart Failure (ADMIRE-HF) study. The model was developed from a societal perspective using a one-month cycle time, 3% discount rate and a lifetime time horizon. Sensitivity analysis was completed on cost, efficacy and relative risk ratios. **RESULTS:** AdreView had an incremental cost-effectiveness ratio (ICER) of $100,910 versus standard stratification methods. The number needed to screen to prevent one death over 5 years was 20. The model was sensitive to changes in utility values ($91,737–$112,123 / QALY), efficacy of ICD in low risk patients ($95,805–$107,388 / QALY) and efficacy of ICD in high risk patients ($81,578–$166,086 / QALY). The model was not sensitive AdreView cost, even at 200% of baseline ($104,068 / QALY). **CONCLUSIONS:** AdreView is a relatively cost-effective screening strategy versus current methods that can prevent sudden cardiac deaths within as few as 20 patient screenings. Further research on the use of AdreView in real-world settings is warranted.

PCV72

COST-EFFECTIVENESS OF ROSUVASTATIN FOR THE PRIMARY PREVENTION OF VASCULAR EVENTS ACCORDING TO FRAMINGHAM RISK SCORE IN PATIENTS WITH AN ELEVATED C-REACTIVE PROTEIN

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OBJECTIVES: Compare the cost-effectiveness of rosuvastatin versus standard management according to Framingham risk for the primary prevention of vascular events in JUPITER-like patients that had LDL levels less than 130 mg/dL and CRP levels of 2.0 mg/L or higher. **METHODS:** TreeAge Pro 2009 software was used to design 2 Markov-type models from a third party payer perspective to calculate the incremental cost-effectiveness ratio (ICER) of rosuvastatin 20 mg versus standard management over 10 years in patients with a Framingham Risk Score greater than 10% and less than or equal to 10%. Cost data were obtained from CMS and the Redbook. Quality of life measures were obtained from the literature. Event data were obtained directly from the JUPITER Study Group. One-way sensitivity analysis and probabilistic sensitivity analysis were conducted on many possible ranges of cost, quality of life measures, and event rates. **RESULTS:** Treating patients with rosuvastatin to prevent vascular events would result in an estimated ICER of $37,232/QALY and $95,000/QALY in those with Framingham Risk Scores greater than 10%, and less than or equal to 10%, respectively. Results of 1-way sensitivity analysis were especially sensitive to the price of the rosuvastatin and the probability of a primary endpoint event in the standard management group. Results of a probabilistic sensitivity analysis suggest that in patients with a Framingham score greater than 10%, the probability that rosuvastatin would be considered cost-effective at a $50,000/QALY threshold is approximately 97.5%. In those patients with a Framingham Risk Score less than or equal to 10%, the probability that rosuvastatin would be considered cost-effective is less than 1%. **CONCLUSIONS:** Compared with standard management practices, statin therapy with rosuvastatin may be a cost-effective strategy over a 10-year time horizon for preventing vascular events in patients with a Framingham Risk Score greater than 10% that have normal LDL levels and elevated CRP levels.

PCV73

CONSIDERING THE COST-EFFECTIVENESS OF STATINS IN FAMILY PRACTICE IN TURKEY FROM A PAYER PERSPECTIVE

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OBJECTIVES: In Turkey, there is Atorvastatin, Fluvastatin, Pravastatin, Rosuvastatin and Simvastatin in the statin market. And all statins are reimbursed by health insurance companies.The aim of this study is to determine the cost-effective statins which are reimbursted by the Social Security Foundation,the biggest reimburestment foundation in Turkey. **METHODS:** A cost-effectiveness analysis was designed from the perspective of the insurance company view. For insurance company data; Social Security Foundation which is the biggest reinburstment foundation in Turkey was chosen. The assumed treatment protocol depended on the one in the Republic of Turkey Health Ministery Primary Care Diagnosis and Treatment Guide which was published in 2003.The values of the mean effectiveness of statins are taken from a published meta-analysis. **RESULTS:** Simvastatin had the lowest cost in the first year of therapy ($166), followed by pravastatin ($300),fluvastatin ($365),rosuvastatin($437) and atorvastatin($448). When the drugs were compared for the incremental cost-effectiveness, simvastatin dominated pravastatin and fluvastatin,whereas rosuvastatin dominated atorvastatin.The first year incremental cost of rosuvastatin was $271 compared to simvastatin, or $30 per additional 1% reduction in LDL-C, $225 per additional 1% increase in HDL-C and $1856 per additional patients to ATP II goal. **CONCLUSIONS:** Because simvastatin had a lower acquisition cost than all statins and its all dosages cost approximately 1/3 of the nearest alternative statin, in our base case and alternative scenarios simvastatin was the least costly alternative. Thus depending on actual acquisition prices and following costs such as doctor visits and laboratories the payer may achieve substantial cost savings and greater effectiveness by using rosuvastatin or simvastatin instead of these agents in Turkey. Therefore, simvastatin and rosuvastatin comprise of the optimal two statin formulary. Formulary desicion based on these results should be revisited periodically, as new pricing, outcomes and safety data become available.

PCV74

COST-EFFECTIVENESS OF STATIN THERAPY FOR THE PRIMARY PREVENTION OF CARDIOVASCULAR EVENTS PREDICTED BY THE REYNOLDS RISK SCORE IN HEALTHY MEN AND WOMEN AGED 40 TO 80 YEARS OF AGE

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OBJECTIVES: To evaluate the cost-effectiveness of treating patients without traditional risk factors for cardiovascular disease with statins. **METHODS:** Cost-effectiveness was evaluated using a backward induction model. A hypothetical cohort of men and women aged 40 to 80 years was evaluated for their first acute myocardial infarction (AMI) or cardiovascular accident (CVA). The Reynolds Risk Score (RRS) was used to generate event risks and risk reductions as the impact of therapy on lipids and c-reactive protein (CRP) could be calculated independently. Covariates for the RRS were adapted from the JUPITER trial and national health statistics. Life expectancies, quality of life adjustments, and event costs for AMI and CVA were ascertained from the primary literature. Direct and indirect treatment costs were based on the primary literature, Adult Treatment Panel III (ATPII) protocols and the Bureau of Labor Statistics. Medication costs were adapted from the Federal Supply Schedule. Costs were inflated to 2009 US$ using the medical component of the CPI and discounted at a rate of 3%. A sensitivity analysis was also performed. **RESULTS:** Using a threshold of $150,000 per QALY, treatment was cost-effective with generic statins in all men and women, aged 40 to 80 years when both CRP and LDL levels were affected. It was cost-effective to treat men >60 years with a hypothetical medication that only affected CRP levels. In the base case (65 year old men/women), the model was sensitive to adherence, smoking status (women), premature family history of AMI, brand rosuvastatin price, and the level of LDL reduction. **CONCLUSIONS:** In this population, it is cost-effective to treat all patients for the primary prevention of AMI and CVA with a generic statin that confers therapeutic benefits similar to what was modeled in this study. Selectively lowering CRP levels is only cost-effective in males >60 years.

PCV75

ROBUST UNIVARIATE AND MULTIVARIATE SENSITIVITY ANALYSIS CONFIRM THAT ENOXAPARIN IS COST-SAVING TO THE PAYERS COMPARED WITH UFH FOR VTE PREVENTION IN PATIENTS WITH ISCHEMIC STROKE: ANALYSIS OF THE PREVAIL DATA

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OBJECTIVES: A decision-analytic model using cost data and clinical information from the PREVAIL study showed that enoxaparin was cost-saving from the payer perspective compared with unfractionated heparin (UFH) for the prevention of venous thromboembolism (VTE) in patients with acute ischemic stroke (overall costs of clinical events plus drug costs: $2018 vs. $2913, respectively; difference $895 per patient). To test the robustness of the cost difference of enoxaparin versus UFH for VTE prevention after an acute ischemic stroke, univariate and multivariate sensitivity analyses were performed. **METHODS:** In the univariate analysis, the payer cost (2007$) for each clinical event (deep-vein thrombosis [DVT], pulmonary embolism [PE]; intracranial hemorrhage [ICH], major extracranial hemorrhage [MjEH] and minor extracranial hemorrhage [MnEH]) was adjusted individually, increasing or decreasing by 20%, while other parameters (drug costs, event rates) remained unchanged. The multivariate analysis was a Monte Carlo simulation (Crystal Ball software), where all the parameters were simultaneously varied in a random fashion within a range of ± 20% over 10,000 trials. **RESULTS:** The cost of DVT was $13,499. When increased by 20% to $16,199, the difference between UFH and enoxaparin groups was $1,104; when decreased by 20% to $10,799, the difference was $686. The baseline costs were $20,635 for PE, $26,037 for ICH, $22,765 for MjEH and $815 for MnEH. When these were increased by 20%, the difference between enoxaparin and UFH groups was $928, $907, $859 and $896, respectively. When decreased by 20%, the difference was $862, $883, $932 and $894. Using the Monte Carlo simulation multivariate analysis, the difference varied between $615 and $1,177, with mean (SD) $896 ($91) and median of $897. Enoxaparin was less costly than UFH across all analyses, with DVT being the main cost driver. **CONCLUSIONS:** Univariate and multivariate sensitivity analysis confirmed that enoxaparin is more cost-saving than UFH for VTE prevention after an acute ischemic stroke.

PCV76

SYSTEMATIC REVIEW OF ECONOMIC EVALUATIONS OF SELECTED CARDIAC IMAGING TECHNOLOGIES IN THE DIAGNOSIS OF CORONARY ARTERY DISEASE

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OBJECTIVES: To identify, retrieve, and summarize studies evaluating the cost-effectiveness of selected cardiac imaging tests for the diagnosis of CAD. **METHODS:**

Medline and the National Health Service Economic Evaluation Database (NHSEED) were searched from their inception up to October 2009. Included studies were those full economic evaluations describing both costs and consequences of a) CT angiography; b) MRI; c) SPECT; and d) stress ECHO in the diagnosis of CAD. Article selection was performed by independent pairs of researchers. Target data for extraction included: study first author and year of publication, imaging tests compared, type of economic analysis, reported costs and outcomes, incremental cost-effectiveness ratio (ICER), currency, and patient characteristics (i.e., known or suspected CAD and risk of CAD). The primary outcome of interest for the present systematic review was the ICER of each imaging test in relation to another test of interest being compared. **RESULTS:** A total of 12 studies were identified. Overall, of the selected strategies, stress ECHO was the most compared, followed by SPECT, and CT angiography and MRI. Results showed that (despite fewer studies) CT angiography was considered cost-effective in all comparisons, however in specific situations such as in the presence of high likelihood or prevalence of CAD or versus stress ECHO and MRI (no comparison was found against SPECT). Under base-case (average) situations, stress ECHO was reported to be relatively cost-effective, especially in contrast with SPECT and MRI, but not CT angiography. SPECT follows with few positive cost-effectiveness results, and MRI did not achieve any cost-effectiveness over the other remaining strategies. **CONCLUSIONS:** Therefore, according to the published economic data from the literature, a cost-effectiveness ranking is proposed for the four analyzed cardiac imaging strategies as follows: CT angiography (in the presence of high likelihood or prevalence of CAD) > stress ECHO > SPECT > MRI.

PCV77

COST EFFECTIVENESS ANALYSIS THE PREVENTION OF VENOUS THROMBOEMBOLISM IN IMMOBILIZED PATIENTS (PREVENT) TRIAL: THROMBOPROPHYLACTIC TREATMENT WITH DALTEPARIN VERSUS PLACEBO IN ACUTELY ILL PATIENTS

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OBJECTIVES: Use of venous thromboembolism (VTE) prophylaxis among hospitalized patients is very low at approximately 42% (Goldhaber 2004). This analysis quantifies whether thromboprophylactic treatment with dalteparin in acutely ill patients is cost saving due to avoided VTE. **METHODS:** Randomized clinical trial VTE data from the Prevention of Venous Thromboembolism in Immobilized Patients (PREVENT) trial were used to determine dalteparin and placebo VTE event rates. Costs were obtained from two published sources Oster *et al.* (2004) and MacDougall *et al.* (2006). Oster *et al.* reports on short term charged costs (90 days) while MacDougall *et al.* on long term (one year) paid costs. Costs were converted to 2008 US dollars using the CPI. Cost for dalteparin was calculated as $29.34 (2009 WAC pricing) for 5000 IU once daily for 14 days, while the cost of placebo is zero. **RESULTS:** In PREVENT, 2991 patients were randomized (1518 to dalteparin, 1473 to placebo). Dalteparin patients experienced 32 VTE events while placebo had 64. The short term cost of in-hospital VTE was $17,552 higher than matched controls ($P < 0.01$) and short term post-discharge VTE cost was $5765 higher than matched controls ($P = 0.01$) (Oster *et al.*), while the long term annual adjusted mean total claims cost was $30,400 (MacDougall *et al.*). In aggregate, VTE events cost $1,393,914 for dalteparin patients versus $1,550,112 for placebo in the short term with a cost savings of $156,197 for patients utilizing dalteparin. The total annual costs for treating 32 VTE patients plus cost of dalteparin was $1,783,425 as compared to $2,329,132 for treating 64 VTE patients on placebo, giving an annual cost savings of $545,708 for utilizing dalteparin. **CONCLUSIONS:** Thromboprophylactic treatment with dalteparin reduces short term costs by $156,197 ($102.89 per person) and long term annual costs by $545,708 ($359.49 per person) in acutely ill patients at risk for VTE.

PCV78

A PHARMACOECONOMICS ASSESSMENT OF SILDENAFIL IN THE MANAGEMENT OF PULMONARY ARTERIAL HYPERTENSION IN PEDIATRICS: THE MEXICAN CASE

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OBJECTIVES: Pulmonary arterial hypertension (PAH) is a chronic disabling condition that affects both adults and children. The aim of this study was to evaluate the cost-effectiveness of sildenafil to manage PAH in pediatric (<18 years), functional class III, patients, who have failed previously to calcioantagonists, from the Mexican institutional perspective. **METHODS:** A five-state Markov model was performed to estimate one year costs and health consequences (one-month cycle). Effectiveness measures were: increase in cardiac index (%) and exercise tolerance (%), as well as reduction in pulmonary vascular resistance (%), hospital length of stay (LOS, days) and discontinuation rate due to adverse events. Transition probabilities were obtained from a meta-analysis involving national and international published literature. Doses of comparators used in the assessment were sildenafil (60 mg/day) and bosentan (125 mg/day, reference alternative). Resource use and costs were obtained from hospital records (n = 120) from the Instituto Mexicano del Seguro Social. Costs include hospital stay, laboratory and respiratory function tests, imagenology, drugs and adverse events management. The model was validated according to international guidelines. Sensitivity analyses were performed employing bootstrapping techniques. **RESULTS:** Per patient associated costs for sildenafil, and bosentan were [CI 95%]: US$13,373 [US$11,965–US$15,495] and US$20,110 [US$19,589–US$20,631], respectively. Sildenafil is associated to an increase of 8.05% [7.87%–8.24%] in cardiac index and of 10.14% [9.96%–10.33%] in exercise tolerance, as well as to a reduction of 1.5% [1.32%–1.68%] in pulmonary vascular resistance, 11.54 [11.36–11.72] in discontinuation rate (per 1000) and 8.90 days [8.72 days–9.09 days] in LOS, respectively. In consequence, sildenafil represents the most attractive therapy to manage PHA in terms of cost-effectiveness. **CONCLUSIONS:** In the Mexican institutional setting, sildenafil demonstrated to be a cost-saving therapy to manage PHA in pediatric, functional class III, patients,wich should be considered in order to allocate institutional resources efficiently.

PCV79

COST-EFFECTIVENESS OF DALTEPARIN IN THE MANAGEMENT OF UNSTABLE ANGINA/NON-ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION (UA/NSTEMI) EVENTS IN ADULT PATIENTS IN MEXICO

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OBJECTIVES: Updated clinical practice guidelines recommend antithrombotic agents to minimize complications and deaths following UA/NSTEMI events. The purpose of this study was to estimate the cost-effectiveness of different antithrombotic agents in the management of UA/NSTEMI, from the institutional perspective. **METHODS:** A seven-state Markov model was performed to estimate health and economic consequences during a time horizon of five weeks (one–week cycles). Effectiveness measures were reduction in incidence of acute myocardial infarct (AMI) and recurrence of angina, as well as avoided events of myocardial revascularization and deaths associated to acute coronary syndrome. Transition probabilities were obtained from a meta-analysis employing international published literature. Doses of comparators were: dalteparin (240 UI/kg/day); enoxaparin (2 mg/kg/day); fondaparinux(5 mg/day); nadroparin(172 IU/kg/day) and unfractionated heparin(UFH 15,000 IU/day). Resource use was obtained from the Social Security Mexican Institute hospital records (n = 5000). Costs were extracted from government and institutional sources and include hospitalization, drugs, medical procedures, imagenology, laboratory tests and adverse events management. Probabilistic sensitivity analyses were performed employing bootstrapping techniques. Acceptability curves were constructed. **RESULTS:** Dalteparin, enoxaparin, fondaparinux, nadroparin and UHF (reference alternative) associated costs per patient were: US$2501 (+19%), US$2531 (+20%), US$2226 (+6%), US$2556 (+21%) and US$2179, respectively. Dalteparin is the only alternative that exhibits better health outcomes than reference in all considered effectiveness measures ($p < 0.05$ in AMI and myocardial revascularization). Incremental cost-effectiveness ratios (ICER [CI95%]) for dalteparin compared to UHF were US$10,916 [US$10,703-US$11,128] and US$3,509 [US$3,440-US$3,577], per additional AMI reduced and additional myocardial revascularization avoided, respectively. At a willingness to pay of US$15,800 per additional AMI avoided, acceptability curves showed that the probability that dalteparin be cost-effective is close to one, while for enoxaparin is negligible. **CONCLUSIONS:** Regarding AMI reduction and avoided myocardial revascularization, dalteparin represents a cost-effective antithrombotic therapy in Mexican patients who suffered UA/NSTEMI due its higher efficacy and reasonable incremental costs.

PCV80

ECONOMIC ANALYSIS OF ENOXAPARIN IN COMPARISON WITH FONDAPARINUX IN THE TREATMENT OF DEEP-VEIN THROMBOSIS (DVT)

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OBJECTIVES: The purpose was to conduct a cost-effectiveness analysis (CEA) of enoxaparin versus fondaparinux in the treatment of deep-vein thrombosis (DVT) in Poland. **METHODS:** Data concerning efficacy and safety of compared therapies were taken from the clinical-effectiveness analysis which was based on the systematic literature review. Due to lack of statistically significant differences in comparison of enoxaparin versus fondaparinux, economic profitability estimation was performed as a cost-minimisation analysis. Decision model was created by using MS *Excel*. Total costs of analysed therapies were estimated from the perspective of both payers in Poland (National Health Fund and patient). The minimisation analysis involved comparison of treatment with enoxaparin (1 mg/kg body mass, twice daily) versus fondaparinux (5; 7,5 or 10 mg—depending on the patient's body mass, once daily). The time horizon of the analysis was 3 months (consistent with clinical trials). It was assumed that efficiency of interventions in that period of observation was constant. The costs were not discounted. The stability of obtained results was checked in one-way and two-way sensitivity analysis through change of key parameters and assumptions of the model. **RESULTS:** The results of the cost-minimisation analysis are as following: treatment of one patient using enoxaparin in the 3 month time horizon is 312.50 PLN cheaper than fondaparinux therapy. Clinical effects of assessed treatment strategies are comparable, based on the data from randomised clinical trials. One-way and two-way sensitivity analysis proved that therapy with enoxaparin is a less costly than with fondaparinux in the treatment of deep-vein thrombosis for most parameters taken into account in the sensitivity analysis. **CONCLUSIONS:** Treatment of deep-vein thrombosis using enoxaparin is a less expensive option in comparison with fondaparinux from both payers' perspective (National Health Fund and patient) in Poland.