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PCV53

COST-EFFECTIVENESS ANALYSIS COMPARING IVABRADINE WITH ISOSORBIDE MONONITRATE, AMLODIPINE, DILTIAZEM AND VERAPAMIL, IN THE TREATMENT OF STABLE ANGINA PECTORIS

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OBJECTIVES: Ivabradine prevents myocardial ischemia by decreasing heart rate in stable angina pectoris (SAP) patients. This analysis presents the cost-effectiveness analysis of ivabradine in the treatment of SAP. **METHODS:** A Markov-chain model, in which, patients with SAP treated with ivabradine and comparators are followed for twenty years, was built. Annual rates of revascularization, other cardiovascular events and mortality were calculated. Direct costs were taken into account from the perspective of social security institution. Randomized clinical studies, other comparative studies and meta-analysis were taken as sources of inputs. **RESULTS:** Annual revascularization rate was 5.0% for ivabradine and 6.5-7.0% for comparators. Estimated number of revascularizations within 20 years was 120 procedures per 100 patients with ivabradine as compared to 135-139 with others. Annual cardiovascular event rate was 7.5% for ivabradine and 10.4-10.9% for comparators. Total number of cardiovascular events within 20 years was 151 events per 100 patients with ivabradine as compared to 207-219 with others. Duration of event-free life years was 9.9 years with ivabradine and 7.7-8.1 years with others. Incremental Cost Effectiveness Ratio for ivabradine decreased down to cost-effectiveness threshold (three times GDP per capita per one event-free life year) within the first year versus isosorbide mononitrate and verapamil, and in the second year versus amlodipine and diltiazem. Annual mortality rate was 1.7% with ivabradine, while it was 2.2% with comparators. Life-years gained per 20 years with ivabradine was 0.8 years (16.4 vs 15.7 with ivabradine and with comparators, respectively). **CONCLUSIONS:** When savings provided by the decreases in revascularization and cardiovascular event rates are taken into account, annual treatment cost difference between ivabradine and other drugs decreases. Longer life years and event-free life years provided by ivabradine makes it a cost effective choice for SAP.

PCV54

EFFECTIVENESS OF DISEASE MANAGEMENT CARE IN THE CASE OF HEART FAILURE

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OBJECTIVES: The main objective of this study was to evaluate the cost effectiveness of the managed care in the case of heart failure. Also, the proportion of patients with a hospital free year was compared using managed care and non-managed care the non-managed care. **METHODS:** A meta-analysis was used to estimate the effectiveness (hospital free years). Cost effectiveness was analyzed in two perspectives: the program's and the payer's. In the program's perspective, the literature was used to estimate the cost. In the payer's perspective, Thomson Reuter's MarketScan data were used to estimate the cost. **RESULTS:** It was found that, in the program's perspective, a hospital free year's cost was $8,872.60 while in the payer's perspective by using managed care; it saved an average of $53,109.22. The proportion of individuals with a hospital free year in managed care and in the usual care were not found to be statistically significant. **CONCLUSIONS:** Even though managed care did not have a different hospitalization usage than standard care, it was found to be cost-effective for the payer.

PCV55

COST-MINIMIZATION ANALYSIS OF THROMBOPROPHYLAXIS FOLLOWING ELECTIVE TOTAL HIP ARTHROPLASTY

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OBJECTIVES: To model the costs of thromboprophylaxis following total hip arthroplasty (THA) with either low-intensity warfarin, enoxaparin, or fondaparinux. **METHODS:** This was a cost-minimization analysis of anticoagulants expected to have equivalent tolerability and effectiveness. Data were obtained from an HMO's joint replacement registry. Patients were included if they had THA between August 2005 and March 2009, continuous enrollment in the 180 days prior to and 90 days following THA, utilized low-intensity warfarin thromboprophylaxis, and had not been chronically anticoagulated previously. Patients received warfarin therapy supervised through a pharmacist-run anticoagulation service that included mobile phlebotomy for INR monitoring. Iterative modeling from the HMO's perspective utilized registry data to calculate the costs of thromboprophylaxis with anticoagulants at 2010 AWP minus 35%, monitoring at $50 per phlebotomy, $15 per INR, and 0.1 hour pharmacist time (at $75/hr) per INR. Patient training for any anticoagulant use was included at 0.25 hr pharmacist time. Duration of therapy was modeled to a mean of 35 days for injectible (enoxaparin and fondaparinux) thromboprophylaxis for which monitoring services would not be required. Sensitivity analyses included reducing AWPs by 25% prior to discounting and increasing phlebotomy and INRs to $75 and $25, respectively. **RESULTS:** 835 THAs for 800 patients were included. The mean age and duration warfarin therapy were 66 years and 40 days, respectively, and 62% were females. The base-case thromboprophylaxis cost was $556 (95% CI=$545-$567), $701 (95% CI=$693-$709), and $2677 (95% CI=$2646-$2708) for warfarin, enoxaparin, and fondaparinux, respectively. 25% AWP reduction resulted in thromboprophylaxis costs of $553 (95% CI=$542-$564), $564 (95% CI=$558-$571), and $2145 (95% CI=$2120-$2171) for warfarin, enoxaparin, and fondaparinux, respectively. Increasing monitoring costs resulted in thromboprophylaxis cost of $756 (95% CI=$740-$771) for warfarin. **CONCLUSIONS:** Warfarin thromboprophylaxis had the lowest cost but is sensitive to monitoring costs whereas injectible thromboprophylaxis is sensitive to drug acquisition costs.

PCV56

COST-MINIMIZATION ANALYSIS OF LANDIOLOL FOR CT SCANNING FOR CVD SUSPICIOUS PATIENTS IN JAPAN

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OBJECTIVES: To conduct a cost-minimization analysis of landiolol for CT diagnosis of cardiovascular diseases (CVD) suspicious patient with tachycardia in Japan. **METHODS:** A decision-tree model was constructed to analyze costs from health-care payer's perspective. Drug costs and diagnosis costs, computer tomography (CT) and coronary angiography (CAG),are adopted to the model. Landiolol is administered only to slow the heart rate to take CT image appropriately. Since some trials proved that there was no difference between landiolol and placebo in terms of efficacy and safety, we conducted cost-minimization analysis. 22.4% of those who suspicious for CVD are thought to be take beta-blockers. Success rate for CT scanning for landiolol and placebo, derived from domestic trial data, were 81.4% (96/118, 77.8% - 84.9%) and 54.2% (64/118, 49.7% - 58.8%). Patients who failed to take CT image were thought to take CAG. The healthcare cost were derived from Japanese data costs of landiolol, CT imaging, CAG are JPY6,500 (USD79, USD1=JPY82.7), JPY39,100 (USD472) and JPY 105,900 (USD1,279), respectively. Positive rate for CAG, derived from domestic trial data, were 37.1% (33/89, 32.0% - 42.2%). Various sensitivity analyses, both univariate and probabilistic ones, were conducted. **RESULTS:** In the basecase analysis, expected costs per patient for landiolol and placebo were JPY82,600 (USD998) and JPY85,218 (USD1,029), respectively. In budget impact analysis, 49,000 patients are eligible for landiolol and it can save JPY 120mil. (USD1.45mil.) for whole patients. Sensitivity analyses suggested the robustness of the results. **CONCLUSIONS:** Landiolol for CT diagnosis of cardiovascular diseases (CVD) suspicious patient with tachycardia is thought to be cost-saving.

PCV57

HEALTH CARE RESOURCE UTILIZATION AMONG T2DM PATIENTS WITH PRE-EXISTING MACROVASCULAR CONDITIONS: A MATCHED COHORT STUDY

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OBJECTIVES: T2DM is a chronic metabolic disorder characterized by hyperglycemia and associated with significant morbidity. This may be particularly so among patients with pre-existing macrovascular conditions (MVC). This study was undertaken to differentiate healthcare resource utilization between T2DM patients with and without pre-existing MVC in Europe. **METHODS:** This is a matched cohort study based on the Real-Life Effectiveness and Care Patterns of Diabetes Management (RECAP-DM) study, a multi-center, observational study with retrospective medical chart reviews of T2DM patients in eight European countries. Included patients were aged ≥30 year at time of diagnosis of T2DM and added a SU or a TZD to failing metformin monotherapy (index date), and had pre-existing (i.e., with onset date prior to index date) MVC. A control cohort with T2DM but without pre-existing MVC was identified using 1:1 propensity score matching. Logit models were used to identify the relationship between pre-existing MVC and the likelihood of ER admission, receiving medical/surgical procedures, and hospitalization during the study period. Negative binomial models were used to predict the number of office visits and length of hospital stay per year attributable to the pre-existing MVC. **RESULTS:** Of the 453 eligible patients with pre-existing MVC (cases), 64% were male, mean age and time from T2DM diagnosis was 64.5 (9.1) and 6.2 (5.3) years, respectively. HbA1c prior to the index date was 8.0 (1.2). Relative to controls, patients with pre-existing MVC were significantly more likely to report ER admissions (Odds Ratio 3.1; 95%CI 1.8-5.2), receiving medical/surgical procedures (OR 2.72; 95%CI 1.7-4.3), and hospitalizations (OR 2.6; 95%CI 1.7-4.0) after controlling for other predictors. Similarly, pre-existing MVC incurred 2.9 additional office visits per year ($p<0.001$) and 0.41 days of hospital stay per year ($p=0.004$). **CONCLUSIONS:** This study found that T2DM patients with pre-existing MVC were more likely to use various types of healthcare resources.

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ASSOCIATION BETWEEN HEART FAILURE AND RESOURCE UTILIZATION IN ST-ELEVATION MYOCARDIAL INFARCTION PATIENTS TREATED WITH PERCUTANEOUS CORONARY INTERVENTION

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OBJECTIVES: To determine association between heart failure (HF) and resource utilization in ST-elevation myocardial infarction (STEMI) patients treated with Percutaneous Coronary Intervention (PCI). **METHODS:** Retrospective analysis of I3 InVision Data Mart (2003-08). Adult enrollees (≥18 years) with primary diagnosis of STEMI were selected if they were a) treated using PCI procedure and b) had continuous enrollment for at least 6 months prior (baseline) to the STEMI-related index hospitalization. Enrollees were excluded if they underwent coronary artery bypass graft during index hospitalization. Pre-existing HF was defined as presence of a claim comprising relevant HF diagnosis at baseline. New onset HF was defined as listing of HF as comorbidity in the reimbursement claims for index hospitalization without supporting evidence for pre-existing HF at baseline. General and generalized linear models were used to assess impact of HF (versus no HF) on resource utilization parameters including length of stay (LOS) and on costs (log-transformed) associated with STEMI-related index hospitalization, respectively. Priori