A COST-EFFECTIVENESS ANALYSIS FOR PROPHYLACTIC THERAPIES AGAINST AIR TRAVELER THROMBOSIS

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OBJECTIVES: To determine the cost-effectiveness of providing aspirin, low molecular weight heparin (LMWH), or compression stockings to air travelers for the prevention of air traveler thrombosis (ATT). METHODS: A pharmacoeconomic model was constructed from the perspective of a 1.5 million member US managed care organization (MCO). The model had a one-year time horizon to coincide with typical budgetary cycles. Air travel estimates were calculated using 2005 Federal Aviation Administration and US Census Bureau statistics. Published ATT incidence estimates varied across patient risk factors and distance flown, ranging from zero to 455 events per 100,000 flights. Treatment efficacy estimates for the relative risk reduction of ATT during and immediately following air travel were obtained from published literature. The model assumed prophylactic therapy use prior to each flight; for compression stockings, one set was issued per patient for all flights. Cost inputs included medical charges for incident ATT treatment (extrapolated from wholesale acquisition costs). Five reiterations of the model were performed to test all ATT incidence estimates. Incremental cost-effectiveness ratios (ICERs) were calculated for prophylaxis versus no treatment. RESULTS: In 4 of 5 risk scenarios, ICERs for aspirin prophylaxis was dominant, with potential MCO cost savings ranging from $436,700 to $1,251,500. For compression stockings, ICERs were dominant for patients taking long-haul flights only (>5000 miles), with potential cost savings of $957,700 to $1,141,600. LMWH prophylaxis did not result in cost savings under any scenario. Reducing the treatment efficacy estimates by up to 20% did not alter these results. CONCLUSION: Payment for prophylactic aspirin therapy for ATT prevention in air travelers resulted in cost savings for a MCO, as did payment for compression stockings for use during long-haul flights. MCOs that develop programs to provide prophylactic therapies to air travelers could realize significant cost savings.

PHARMACOECONOMIC ANALYSIS OF EXTENDED PROPHYLAXIS BY ENOXAPARIN AFTER HIP JOINT REPLACEMENT

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OBJECTIVES: Pharmacoeconomic analysis of extended preventive injection of enoxaparin after hip joint replacement and costing of one prevented case of deep venous thrombosis (DVT) in the enoxaparin group compared to placebo in Russia. METHODS: The pharmacoeconomic analysis was based on the results of prospective, randomized, double controlled study of the use of enoxaparin as extended DVT prophylaxis conducted in a clinical center in Sweden (Bergqvist D. et al., 1996). The efficiency of extended prophylaxis by enoxaparin versus placebo in hospital environment was studied during the trial. All patients (n = 262) received a daily hypodermic injection of 40 mg of enoxaparin after preventative hip joint replacement, on average during 9 days of their hospitalization (open study period). After that the patients were randomized in groups. 131 patients in the placebo group and 131 patients in the enoxaparin group received the treatment. It was suggested that the patients of both groups be injected with 40 mg of enoxaparin daily, on average during 18.6 days. In the clinical trial the number of detected DVT in each group was assumed as the most adequate index of efficiency. 21 and 45 DVT cases were detected in the enoxaparin and the placebo group respectively. RESULTS: In Russia total costs of extended prophylaxis after hip joint replacement in comparison groups amounted to $186,272 in the enoxaparin group and to $159,584 in the placebo group. Costs per patient amounted to $1422 in the enoxaparin group and to $1218 in the placebo group. With the help of efficiency increment analysis, the cost of one DVT case prevented by way of extended prophylaxis by enoxaparin versus placebo amounted to $1112. CONCLUSION: According to the results of the pharmacoeconomic analysis based on the findings of the clinical trial, the cost of one DVT case prevented with the help of extended prophylaxis by enoxaparin versus placebo is $1112.
required a discount greater than 61% and 71%, respectively, from the branded WAC to achieve cost per unit of LDL-C reduction lower than generic lovastatin. CONCLUSION: To facilitate effective and efficient management of patients with dyslipidemia, a tiered formulary could include generic simvastatin or pravastatin as the cost-effective generic statin in the first tier (depending upon level of discount to current WAC) and rosuvastatin as the cost-effective branded statin in the second tier.

**PCV31**

**COST-EFFECTIVENESS OF ACHIEVING ADDITIONAL LIPID TARGETS WHEN SUBSTITUTING FENOFIBRATE 145 MG FOR STANDARD FENOFIBRATE THERAPY**

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**OBJECTIVES:** The proportion of patients achieving lipid targets with fenofibrate 145 mg is substituted for a standard fenofibrate formulation that does not require administration with food has been developed. A cost-effectiveness model was developed to determine the incremental cost of meeting additional recommended lipid levels when fenofibrate 145 is substituted for a standard fenofibrate formulation that requires food administration in a diabetic population.

**METHODS:** A simulation study using a managed care perspective was designed to predict changes in lipid levels [HDL-C, LDL-C, TG, and total cholesterol (TC)] and associated drug costs based on Wholesale Acquisition Costs over the course of 1 year. Lipid targets were based on NCEP-ATP III. A hypothetical cohort of 1000 was modeled for a diabetic population with abnormal lipid levels based on NHANES data. Lipid changes were based on the study of fenofibrate by Athyros, et al. 2002. A reduction in efficacy for each lipid parameter, based on previous work, was applied against patients on standard fenofibrate therapy. Seventy-two more patients (18% increase) achieved at least 3 targets. The betic patients reaching TG targets. Seventy-two more patients 145 for standard fenofibrate therapy resulted in 9.4% more dia-

**RESULTS:** In a cohort of 1000 patients, substituting fenofibrate 145 for standard fenofibrate therapy resulted in 9.4% more diabetic patients reaching TG targets. Seventy-two more patients (11% increase) on fenofibrate 145 achieved the target level or with Medicare or Medicaid coverage had a higher proportion of depression. In regression models, hypertensive patients with depression had worse health status: SF-12 PCS score (−5.6, p < 0.0001), SF-12 MCS score (−13.5, p < 0.0001), and EQ-5D utility score (−0.20, p < 0.0001). Hypertensive patients with depression had higher utilization of outpatient ($415, p < 0.0001) and pharmacy ($10, p < 0.0001) services, but both groups had comparable expenditures in inpatient care ($0.09, p < 0.0001) and dental service ($23, p = 0.05). CONCLUSION: In the U.S. population, hypertensive patients with depression had poorer health status and higher health care expenditure in outpatient services and prescription drug compared with those without depression. The difference in inpatient cost between these groups was very small.

**PCV32**

**IMPACT OF DEPRESSION ON HEALTH STATUS AND HEALTH CARE UTILIZATION IN PATIENTS WITH HYPERTENSION: RESULTS FROM THE MEDICAL EXPENDITURE PANEL SURVEY (MEPS 2002–2003)**

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**OBJECTIVES:** Most of the patients taking clopidogrel. The mean age was 56.9 years, with 69% of individuals aged 50 to 65 years. The most common outpatient diagnoses were essential hypertension (61%), unspecified hyperlipidemia (57%), hypercholesterolemia (44%), and unspecified chest pain (43%). On average, users of clopidogrel had 3.41 prescriptions per month in 2006 at a health plan cost of $376.50/month. Average length of therapy for clopi-

**RESULTS:** Rising cost of medication, including statins, beta-blockers, and ACE-inhibitors, has raised concern for health care expenditures. Aspirin therapy was not available in the prescription claims data. RESULTS: Clopidogrel was the most widely prescribed antiplatelet, representing 93% of all prescriptions. Men represented 65% of the patients taking clopidogrel. The mean age was 56.9 years, with 69% of individuals aged 50 to 65 years. The most common outpatient diagnoses were essential hypertension (61%), unspecified hyperlipidemia (57%), hypercholesterolemia (44%), and unspecified chest pain (43%). On average, users of clopidogrel had 3.41 prescriptions per month in 2006 at a health plan cost of $376.50/month. Average length of therapy for clopi-

**RESULTS:** In a cohort of 1000 patients, substituting fenofibrate 145 for standard fenofibrate therapy resulted in 9.4% more diabetic patients reaching TG targets. Seventy-two more patients (11% increase) on fenofibrate 145 achieved the target level or with Medicare or Medicaid coverage had a higher proportion of depression. In regression models, hypertensive patients with depression had worse health status: SF-12 PCS score (−5.6, p < 0.0001), SF-12 MCS score (−13.5, p < 0.0001), and EQ-5D utility score (−0.20, p < 0.0001). Hypertensive patients with depression had higher utilization of outpatient ($415, p < 0.0001) and pharmacy ($10, p < 0.0001) services, but both groups had comparable expenditures in inpatient care ($0.09, p < 0.0001) and dental service ($23, p = 0.05). CONCLUSION: In the U.S. population, hypertensive patients with depression had poorer health status and higher health care expenditure in outpatient services and prescription drug compared with those without depression. The difference in inpatient cost between these groups was very small.

**PCV33**

**ANALYSIS OF CLOPIDOGREL USE IN OUTPATIENT SETTINGS**

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**OBJECTIVES:** Using recent US national claims data, this study examined characteristics of managed care patients taking clopi-

dogrel in outpatient settings and analyzed patterns of use. METHODS: This retrospective study identified patients with oral antiplatelet claims in a large, national, managed care claims database (PharMetrics) between 1/2003–6/2006 (n = 47,364). All medical and pharmacy claims were analyzed during this period. Analysis focused on outpatient use patterns of clopidogrel and patient characteristics, e.g., demographics, comorbidities, inpa-

tient history, and other cardiovascular medication use. Aspirin therapy was not available in the prescription claims data. RESULTS: Clopidogrel was the most widely prescribed antiplatelet, representing 93% of all prescriptions. Men represented 65% of the patients taking clopidogrel. The mean age was 56.9 years, with 69% of individuals aged 50 to 65 years. The most common outpatient diagnoses were essential hypertension (61%), unspecified hyperlipidemia (57%), hypercholesterolemia (44%), and unspecified chest pain (43%). On average, users of clopidogrel had 3.41 prescriptions per month in 2006 at a health plan cost of $376.50/month. Average length of therapy for clopi-

dogrel was 292 days. By patient type, it varied from 283 days for coronary artery bypass surgery, 336 days for percutaneous coronary intervention (PCI), and 344 days for stroke. However, 10.4% of PCI patients took clopidogrel for ≤30 days. Patients refilled their clopidogrel prescriptions for 93% of the daily regimen needed during therapy. Frequent concomitant cardiac medications included statins (63.9%), beta-blockers (55.0%), ACE-inhibitors (48.7%), and diuretics (14.2%). Data show that 40–50% of patients discontinued another concomitant cardiac