OBJECTIVE: The objective of this study was to estimate rates of venous thromboembolism (VTE) and inpatient healthcare utilization following total hip replacement (THR) or total knee replacement (TKR) surgery.

METHODS: Using a retrospective cohort approach and inpatient data from a large Midwestern integrated healthcare organization, we evaluated all patients who underwent a THR or TKR procedure between January 1, 1998 and September 30, 2000 and who received warfarin or low-molecular-weight heparin (LMWH) prophylaxis against deep vein thrombosis (DVT) during the initial hospitalization. VTE rates (based on ICD-9-CM diagnoses for pulmonary embolism or DVT) during the index stay were estimated along with the associated incremental length of stay (LOS) and total charges. Time to VTE occurrence within 90 days following index hospitalization also was evaluated along with the associated LOS.

RESULTS: We identified 1411 patients who underwent THR (N = 605) or TKR surgery (N = 806). For both procedures, warfarin was used 57% of the time versus 36% for LMWH, while 7% of patients received both. The mean LOS (±SD) for the initial hospitalization was 4.4 ± 2.0 days and mean charges were $22,150 ± $12,250. The rate of VTE during the initial hospitalization was 1.1% (15/1411) leading to an extra 3.7 ± 0.5 days (p < 0.01) in hospital and $11,269 ± $3,168 in additional charges. Following discharge, another 14 patients (1%) were readmitted for treatment of VTE with a mean LOS of 6.1 ± 7.8 days. Most of the readmissions for VTE (10 of 14) occurred within 30 days.

CONCLUSIONS: We found that approximately 2% of patients receiving DVT prophylaxis in this high-risk population were diagnosed with thromboembolic events, which resulted in a significant health care burden and cost extending at least 90 days beyond surgery. Whether this failure rate represents inadequate anti-coagulation or other risk factors requires further study.

OBJECTIVES: To estimate the resource use and costs associated with atherothrombotic events following the diagnosis of peripheral arterial disease (PAD).

METHODS: We evaluated resource use and costs following a recorded diagnosis (identified using ICD-9 codes) of PAD using the healthcare records of residents of Saskatchewan, Canada who were diagnosed between 1985–1995. Data on patient characteristics and medical history were available from January 1980 and follow-up was complete to December 2000. Rates of resource use (hospitalizations, visits, procedures) were determined by dividing the cumulative amount of use by the patient time in a given period. Unit costs (2002 Canadian dollars) were applied to the corresponding resource use to obtain the mean costs. In this paper, the impact of atherothrombotic (myocardial infarction, angina, stroke, TIA) hospitalizations is considered and compared to that in patients with myocardial infarction and stroke.

RESULTS: Among 16,440 patients with PAD, 54.9% were male, mean age was 67.3 years, 58% died during follow-up, 85.8% were hospitalized at least once and one third (37.1%) had at least one atherothrombotic-related hospitalization, a hazard of 6.5/100 person-years. Among those hospitalized, there were 2.1 atherothrombotic hospitalizations on average. The hazard was highest immediately following diagnosis (30.5/100PY) but dropped rapidly to 25.3 in the second month, 16.8 by month 6 and 13.7 by the end of the first year. This translated to a monthly cost of $80.40 per patient in the first month (66.3% of total hospitalization cost), dropping to $45.70 at year end (77.1% of total). These atherothrombotic event costs amounted to $28.3 million in years 2–5; whereas, patients suffering a myocardial infarction or stroke incurred $28.2 million and $31.0 million, respectively.

CONCLUSIONS: Hospitalizations for atherothrombotic events account for a substantial portion of the costs of managing patients with PAD.

OBJECTIVES: To describe costs and utilization associated with common inpatient treatments for deep venous thrombosis (DVT) and pulmonary embolism (PE).

METHODS: Data from medical records were collected for DVT and PE admissions (identified using Diagnostic Related Group [DRG] or All Patient Refined DRG codes) from 132 hospitals between January 1999 and December 2000. Admissions were classified by treatment, including unfractionated heparin (UFH) and low-molecular-weight heparin (LMWH) monotherapies, UFH with LMWH,
PHYSICAL ACTIVITY AND THE RISK OF CARDIOVASCULAR DISEASE: A META-ANALYSIS OF PROSPECTIVE STUDIES

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OBJECTIVE: The LIFE Study demonstrated a significant reduction in cardiovascular morbidity and mortality in hypertensive patients with ECG left ventricular hypertrophy treated with losartan (versus treatment with atenolol) over a mean period of 4.8 years. This reduction was essentially related to a significant 25% decrease (p = 0.001) in the risk of fatal and non-fatal stroke. The objective of this study was to compare the treatment costs of each therapeutic strategy throughout the duration of this study. RESULTS: A total of 4,443 pairs of propensity-score matched patients were included in the DHP and non-DHP study group. Prevalence of new diagnosis for ischemic cerebrovascular disease was lower in the non-DHP group than in the DHP group (1.8% vs 2.5%; p < 0.05). Statistically significant difference in prevalence of new diagnosis for renal insufficiency, kidney dialysis, or proteinuria was not observed. Average hypertension-related pharmacy and medical costs were significantly lower in the non-DHP group ($168 and $260) than in the DHP group ($184 and $370; p < 0.05). The inter-group difference in costs was larger among patients who used angiotensin converting enzyme inhibitors (ACEI) concurrently with CCB. CONCLUSION: Treatment of hypertension with non-DHP CCB is associated with lower prevalence of ischemic cerebrovascular disease and lower pharmacy and medical costs as compared to DHP CCBs, especially when used concurrently with ACEI.

ECONOMIC EVALUATION OF LOSARTAN COMPARED WITH ATENOLOL IN THE TREATMENT OF HYPERTENSION WITH LEFT VENTRICULAR HYPERTROPHY: A COST-MINIMIZATION ANALYSIS BASED ON LIFE STUDY

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OBJECTIVE: To compare health service utilization, costs and outcomes of patients who used dihydropyridine (DHP) and non-DHP calcium channel blockers (CCB) for hypertension. METHODS: Utilizing pharmacy, membership and medical data from a large managed care health plan of over 2 million commercial members, this study included continuously enrolled patients who had at least 2 or more CCB claims (DHP or non-DHP) between June 2000 and June 2001 and did not have a CCB claim 6 months prior to the index claim. Patients were followed for 12 months after the index prescription and those who had drug coverage for at least 60% of the days during the follow-up period were included in the study. Geocoding using national census data was performed to extract socioeconomic data. Propensity-score matching of DHP and non-DHP group was performed to adjust for selection bias. Overall and hypertension-related pharmacy and medical service utilization and costs, and prevalence of new renal and vascular-related diagnoses during follow-up were determined for each study group. RESULTS: A total of 4,443 pairs of propensity-score matched patients were included in the DHP and non-DHP study group. Prevalence of new diagnosis for ischemic cerebrovascular disease was lower in the non-DHP group than in the DHP group (1.8% vs 2.5%; p < 0.05). Statistically significant difference in prevalence of new diagnosis for renal insufficiency, kidney dialysis, or proteinuria was not observed. Average hypertension-related pharmacy and medical costs were significantly lower in the non-DHP group ($168 and $260) than in the DHP group ($184 and $370; p < 0.05). The inter-group difference in costs was larger among patients who used angiotensin converting enzyme inhibitors (ACEI) concurrently with CCB. CONCLUSION: Treatment of hypertension with non-DHP CCB is associated with lower prevalence of ischemic cerebrovascular disease and lower pharmacy and medical costs as compared to DHP CCBs, especially when used concurrently with ACEI.