INPATIENT BURDEN OF ILLNESS AND PREDICTORS OF CHARGES OR LENGTHS OF STAY AMONG ADULT HEART TRANSPLANTATION PATIENTS

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OBJECTIVES: To assess the role of hospital, patient, payer and clinical factors on inpatient hospital lengths of stay (LOS) and total charges in adults undergoing heart transplantation. METHODS: This analysis characterized inpatient hospital discharge records from the Agency for Healthcare Research and Quality (AHRQ) Healthcare Cost and Utilization Project (H-CUP) Nationwide Inpatient Sample (NIS) from 2002 to 2005. All patients above 18 years of age recorded in the hospitalization procedure were included for inclusion. Results: Of 5911 patients, 64% were male. Mean charges were $332,617 ± $122,403. Average LOS was 41.7 ± 50.16 days. Inpatient mortality was 5.4%. Regression analyses indicated significant associations between charges and number of procedures (Incidence Rate Ratio (IRR) = 1.074, 95% CI = 1.059–1.089), inpatient mortality (IRR = 1.274, 95% CI = 1.081–1.495), African American race (IRR = 0.871, 95% CI = 0.783–0.969), and hospital location (IRR small metropolitan = 0.799, 95% CI = 0.731–0.874, IRR micropolitan/rural = 0.741, 95% CI = 0.661–0.831). These analyses also indicated significant associations between LOS and number of procedures (IRR = 0.979, 95% CI = 0.960–0.997), number of procedures (IRR = 1.136–1.467), and hospital location (IRR micropolitan/rural = 0.779, 95% CI = 0.653–0.958). RESULTS: This investigation of 5911 adult heart transplant patients suggests that several factors are significantly associated with LOS and charges. Continued research, particularly subgroup analyses and long term follow-up, are warranted.

ECONOMIC BURDEN OF ATHEROSCLEROSIS AMONG PATIENTS WITH TYPE-2 DIABETES MELLITUS

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OBJECTIVES: The present study estimated cardiovascular event rates and direct medical costs attributable to the medical management of type-2 diabetes mellitus (T2DM) patients with diagnosed atherosclerosis. METHODS: Using national administrative claims data, the number of cardiovascular (CV) events (i.e., myocardial infarction, stroke, revascularization) and direct costs of care were quantified among patients >17 years of age with T2DM and, with or without an ICD-9 diagnostic code for coronary artery or cerebrovascular disease between January 1, 2002 and December 31, 2004. Patients with a CV event in the 12 months prior to index date were excluded. A comparison cohort (n = 14,188) with T2DM and no atherosclerosis was matched on age, gender, geography, and Charlson comorbidity score to patients with diagnosed atherosclerosis and T2DM (n = 10,842). Differences between patient groups were tested for CV event rates per 1000 patients and monthly costs for 12 months pre- and post-diagnosis. RESULTS: The cohorts included 53% men with a mean age of 66.5 years (30% were > 65 years of age). Patients with atherosclerosis and T2DM had 239 CV events/1000 patients and the comparison cohort with T2DM had 39.8/1000 patients at 12 months post-index date, p < 0.01. Mean total cost of care for patients with atherosclerosis and T2DM was $10,039 for the 12 months before and $18,371 for 12 months post-diagnosis, an 83% increase. One-year post-index total costs were significantly higher among atherosclerosis and T2DM patients than the comparison cohort ($18,371 vs. $5,756, p < 0.01). The attributable cost (difference between atherosclerosis pre- and post costs and comparison pre- and post costs) for patients was $627 per month ($7524 for 1 year), CONCLUSIONS: Patients with diagnosed atherosclerosis and T2DM have substantial medical and economic burden attributable to their atherosclerosis. Utilizing administrative data, health plans may identify these patients for more effective management and treatment of their underlying atherosclerosis to reduce this burden.

MANAGEMENT OF PRIMARY ATRIAL FIBRILLATION (AF): PATIENT CHARACTERISTICS AND HOSPITAL CARE SETTING

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OBJECTIVES: To describe and differentiate characteristics and costs of patients admitted for treatment of primary AF in hospital emergency department (ED) and inpatient settings. METHODS: Analysis of 2004–2005 discharges from the Premier Perspective database, including patients with primary AF diagnoses and evidence of initial therapy with electric conversion (EC) or an IV antithrombin (amiodarone, or procainamide). RESULTS: Of 11108 discharges evaluated, 34% were admitted directly as inpatients and 66% presented to the ED. Of these, 14% were treated and released from the ED; the remaining 86% were transferred to the inpatient setting. ED patients were significantly (p = 0.0001) younger with fewer comorbidities (p < 0.0001) than either transfer or direct admit patients. Initial conversion therapy for the vast majority (79%) of ED treated patients was either EC or oral AF, both of which are fast acting. Only 10% of ED patients received initial amiodarone. In contrast, 32% (42%) of transfer (direct) patients were treated with initial amiodarone and oral AF, respectively. About 4% of ED patients required a second conversion attempt compared to 13% of inpatient discharges. Median LOS was 4 days for both direct admit and transfer patients. Average costs were highest among direct admit ($9229) vs. transfer ($8111) and ED ($1209) patients (p < 0.0001). CONCLUSIONS: Health care resource utilization is high for patients presenting with acute AF and varies significantly by hospital care setting. Adjusted average costs of treating primary AF in the inpatient setting are significantly higher than the costs of treatment in the ED. Patient characteristics and selected method of cardioversion may impact both choice of care setting and costs. In clinically appropriate patients, the availability of fast-acting conversion therapies suitable for use in the ED may obviate the need for inpatient admission and, thus, reduce the health care burden of treating AF in the US.
Lombardy. The monthly cost in the first year was €1249 per person (77% attributable to HAs, 15% to pharmacueticals and 8% to outpatient claims), decreasing to €309 in the following years (54% HAs, 31% pharmacueticals, 16% outpatient). CONCLUSIONS: This large study on the burden of AMI shows the epidemiologic, economic and clinical impact of the disease. DENALI, with its large population followed over time is a powerful and dynamic tool for epidemiologic and health economic research.

OBJECTIVES: Acute coronary syndromes (ACS) are life-threatening disorders requiring intensive medical management or invasive cardiovascular procedures. CABG is an important therapeutic procedure among these patients. In Brazil almost 21,000 CABG are performed in public hospitals costing the government R$3779.49 each in average. The aim of this study is to determine the direct medical costs of CABG among different regions. METHODS: A prospective cohort study analyzed administrative claims data for patients with ACS submitted to CABG in 2007–2008. From a nationwide database with 1,801,344 people all the patients with ACS submitted to CABG were selected. The patients were split according to the Brazilian geographical region where the procedure was performed. Student T-test was used to compare the costs among three different regions. RESULTS: We identified 263 patients with ACS submitted to CABG. 67% of the procedures were performed in Southeast (SE) region, 25% in Middle West (MW) and 8% in the south region. The average p SD, quartile 25%, median and 75% of the CABG cost of whole sample were R$15,849.72 ± R$7,355.69, R$12,153.84, R$7,405.74 and R$18,735.46, respectively. The same parameters for the SE, MW and S regions were, respectively R$15,721.23 ± R$3,099.74, R$15,485.23, R$14,398.47 and R$18,657.87; R$16,744.15 ± R$4,212.57, R$13,340.56, R$15,688.26 and R$19,341.96; and R$14,033.63 ± R$6,272.96, R$14,555.33, R$14,163.88 and R$17,103.31. There was no statistical difference among the different regions of Brazil total CABG cost. There was no statistical difference among the different regions and the total sample average. CONCLUSIONS: The CABG average cost we found represent the average Brazilian private setting health cost independent of the region studied. The average total CABG cost in the private setting is at least the double in relation to the average total CABG cost in the public setting.

OBJECTIVES: To evaluate the cost-effectiveness of ezetimibe/simvastatin versus simvastatin alone for the treatment of patients with type 2 diabetes, hypertension and nephropathy in the Czech patients from Mayor perspective.

METHODS: Economic evaluation. The study was performed using a Markov model. The clinical outcomes of the study included a) reduction in microalbuminuria, b) reduction in progression of nephropathy in patients with type 2 diabetes, c) a 50% reduction of cardiovascular events. The effectiveness measure was quality-adjusted life-years (QALYs). One-way sensitivity analyses indicate that higher incidence of cancer, lower cancer costs, and higher risk of myocardial infarction (MI) reduce the cost-effectiveness of ezetimibe/simvastatin substantially. According to probabilistic analyses, ezetimibe/simvastatin is cost-effective at $50,000/QALY only 36.7% of the time; even at a willingness-to-pay of $100,000/QALY, ezetimibe/simvastatin is cost effective less than 50% of the time. CONCLUSIONS: Although our study suggests that simvastatin/ezetimibe treatment is cost effective, policy makers should interpret these results in light of possible uncertainty surrounding the incidence of cancer, incidence of myocardial infarction, and the true cost of simvastatin treatment following generic approval.

OBJECTIVES: To investigate whether ezetimibe/simvastatin costs are highest among people with diabetes, hypertension and nephropathy. A hospital cohort study was performed. Student T-test was used to compare the costs among different regions. RESULTS: We identified 263 patients with ACS submitted to CABG. 67% of the procedures were performed in Southeast (SE) region, 25% in Middle West (MW) and 8% in the south region. The average p SD, quartile 25%, median and 75% of the CABG cost of whole sample were R$15,849.72 ± R$7,355.69, R$12,153.84, R$7,405.74 and R$18,735.46, respectively. The same parameters for the SE, MW and S regions were, respectively R$15,721.23 ± R$3,099.74, R$15,485.23, R$14,398.47 and R$18,657.87; R$16,744.15 ± R$4,212.57, R$13,340.56, R$15,688.26 and R$19,341.96; and R$14,033.63 ± R$6,272.96, R$14,555.33, R$14,163.88 and R$17,103.31. There was no statistical difference among the different regions of Brazil total CABG cost. There was no statistical difference among the different regions and the total sample average. CONCLUSIONS: The CABG average cost we found represent the average Brazilian private setting health cost independent of the region studied. The average total CABG cost in the private setting is at least the double in relation to the average total CABG cost in the public setting.

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