OBJECTIVES: To determine association between heart failure (HF) and in-hospital mortality in ST-elevated myocardial infarction (STEMI) patients treated with Percutaneous Coronary Intervention (PCI). METHODS: Retrospective analysis of 13 In-Vision Data Mart (2003-08). Adult enrollees (>18 years) with primary diagnosis of STEMI and PCI within 24 hours were selected. Our intent was to analyze 90 days mortality for at least 6 months prior to the STEMI-related index hospitalization (baseline). Enrollees were excluded if they underwent coronary artery bypass graft during index hospitalization. In-hospital mortality was assessed based on an all-cause in-hospital death data (or lack thereof) for STEMI patients after index hospitalization. Pre-existing HF was defined as presence of a claim with relevant HF diagnosis at baseline. New onset HF was defined as listing of HF as a comorbidity in the reimbursement claims for index hospitalization without supporting evidence in the inpatient chart. Multivariable logistic regression was used to assess association between HF status and in-hospital mortality. Prior significance level of 0.05 was used for these analyses. RESULTS: Overall 7261 enrollees were included in the analysis. Out of these, 187 (2.6%) had HF at baseline and 1,075 (14.8%) experienced HF for the first time. Out of 7261 enrollees, 351 (4.8%) died during index hospitalization. Changes of in-hospital mortality increased significantly with either pre-existing HF (absolute rate: AR): 9.6%, Odds Ratio (OR): 2.3, 95% Wald confidence limits (CI): 1.0 - 5.4), new onset HF (AR: 10.7%, OR = 3.0, 95 CI: 2.3 - 3.8) or inclusion of pre-existing HF as a major comorbidity (AR: 16.7%, OR = 3.9, 95 CI: 2.2 - 6.9) in index hospitalization claims. CONCLUSIONS: Presence of HF, recorded as either a pre-existing condition or as a major comorbidity condition, in STEMI patients undergoing PCI was associated with significant increase in the in-hospital mortality.

Cardiovascular Disorders – Cost Studies

PCV32 BUDGET IMPACT ANALYSIS OF INCREASING LMWH/FXI UTILIZATION Schilling B1, Powers A2, Faria C2, Choe Y1, Broder M1, Bentley T4
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OBJECTIVES: Low molecular weight heparins (LMWH) and factor Xa inhibitors (FXI) are used to treat and prevent venous thromboembolic events (VTE) and myocardial infarctions (MI). Although hospitalized patients have increased VTE/MI risk, almost 60% do not receive their LMWH/FXI medication. Increasing LMWH/FXI utilization while containing costs has become an important quality improvement goal. Our objective was to estimate from the hospital perspective the annual inpatient costs of increasing LMWH/FXI utilization. METHODS: We developed a budget impact model to estimate inpatient event costs for deep vein thrombosis (DVT), pulmonary embolism (PE), and MI, and pharmacy costs for two LMWH products (dalteparin and enoxaparin sodium injection and enoxaparin sodium injection) and one FXI (fondaparinux). Inpatient event costs were estimated from AHQR data at $10,000, $20,000, and $9,000 for preventable DVT, PE, and MI events, respectively, and inpatient product costs were estimated using 2010 wholesale acquisition costs with market-based estimates of current product discounts. Changes in event frequency, and total hospital costs were estimated for a hypothetical 500-bed hospital in which LMWH/FXI use increased from 60% to 80%, and market share followed two scenarios: maintaining current LMWH/FXI share (90% enoxaparin, 0% dalteparin) or complete formulary interchange from enoxaparin to dalteparin. RESULTS: Increasing LMWH/FXI utilization from 60% to 80% with unchanged market share would decrease costs of DVT by $153,000 (5.5% reduction); PE by $25,000 (6.3%); and MI by $120,000 (10.0%). Pharmacy costs would correspondingly increase by 33.1% for a net cost increase in total hospital costs (event plus pharmacy costs) of $187,000 (2.5%). Alternatively, increasing utilization while also shifting product market share to greater dalteparin and less enoxaparin use would reduce the pharmacy cost increase to $308,000 (22.5%), for a net cost increase of 17.0% (0.4%). CONCLUSIONS: Hospitals could potentially improve treatment quality by increasing appropriate LMWH/FXI utilization, and by shifting utilization from enoxaparin to dalteparin.