Subsequent probabilistic analyses will be used to further explore uncertainties around the estimates.

PCV91

HEALTH CARE RESOURCE UTILIZATION AMONG ADULTS WITH TYPE 2 DIABETES MELLITUS, HYPERTENSION, AND OBESITY

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OBJECTIVES: Individuals with type 2 diabetes mellitus (T2DM) utilize more health care resources than those without diabetes, yet a portion of the increased use may be due to comorbid conditions. This study compared health care resource utilization among adults with T2DM plus hypertension (HTN) and obesity with those with T2DM only. **METHODS:** Respondents to the Study to Help Improve Early evaluation and management of risk factors Leading to Diabetes (SHIELD), a large US survey, self-reported their height, weight, comorbid conditions, number of hospitalizations, emergency department (ED) visits, and physician visits in the past 12 months. Respondents reporting T2DM and HTN and obesity (body mass index [BMI] ≥30 kg/m^2) were identified and compared with a T2DM-only group. **RESULTS:** T2DM respondents with, comorbid HTN, and obesity (n = 1186), were younger, more likely to be men, and had lower income but were similar to T2DM-only respondents (n = 293) in race, education, smoking, and cardiovascular disease history. Respondents with T2DM, HTN, and obesity had significantly more physician visits (mean of 8 vs. 6, p = 0.001), especially 10 or more visits (21% vs. 15%), than respondents with T2DM only (p = 0.03). No significant differences (p > 0.05) were reported for percentage hospitalized (21% vs. 20%) and number of days hospitalized (mean of 7 vs. 11 days) over the past 12 months. Respondents with comorbid HTN and obesity reported significantly more ED visits (9% with 2–13 visits) compared with T2DM-only group (5% with 2–5 visits, p = 0.02). **CONCLUSIONS:** Respondents with comorbid conditions of T2DM, HTN, and obesity have greater health care resource utilization in physician office visits and ED visits than those with T2DM only.

PCV92

ARE DOUBLE-BLIND, DOUBLE-DUMMY STUDIES SUITABLE FOR RESOURCE UTILISATION ANALYSES? AN EXAMPLE FROM A NEW ORAL ANTICOAGULANT FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM (VTE) FOLLOWING ORTHOPAEDIC SURGERY

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OBJECTIVES: Resource utilisation data were collected in all three Dabigatran etexilate (DBG) Phase III primary VTE prevention following orthopaedic surgery studies. This study aimed to, within trial, summarise resource use by treatment group and compare resource use separately for each dose of orally-administered DBG (150 mg od, 220 mg od) versus subcutaneous enoxaparin. **METHODS:** The RE-MOBILIZE study included 2596 knee-surgery patients and compared DBG to enoxaparin 30 mg bid. The RE-MODEL and RE-NOVATE studies included 2076 and 3463 patients undergoing knee and hip surgery respectively, and compared DBG with enoxaparin 40 mg od. All studies used a randomised, double-blind, double-dummy non-inferiority design. Duration of treatment differed by study. Data collected for all patients included hospitalisation (main and re-admission), non-protocoled diagnostics, blood transfusions, reoperations, concomitant medications and health care contacts for enoxaparin injections. Each resource use category was summarised, separately for each study, by and between treatment using means and standard errors. Two sample t-tests were used to examine differences between treatments. **RESULTS:** There were no consistently significant differences between treatments (within each study). The percentages of patients requiring domiciliary nurse visits to administer thromboprophylaxis following discharge from hospital (i.e. administer subcutaneous enoxaparin or placebo because the patient was unable to self-inject) were 5.6% (DBG 150 mg od), 5.0% (DBG 220 mg od) and 5.4% (enoxaparin) in RE-MOBILIZE, 1.0%, 1.5% and 1.9% in RE-MODEL, and 4.4%, 5.1% and 5.0% in RE-NOVATE. All domiciliary nurse visit comparisons for each DBG arm versus enoxaparin were statistically non-significant (P > 0.15). **CONCLUSIONS:** Double-blind, double-dummy study designs appear to be unhelpful in the identification of differences that might arise from changes in treatment formulation and route of administration. In this study, a hypothesised difference in domiciliary nurse treatment administrations remained undetected due to the double-dummy nature of the trials.

PCV93

DISCRETE EVENT SIMULATION OF CARDIAC HOSPITALS PERFORMING PERCUTANEOUS CORONARY INTERVENTIONS

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OBJECTIVES: Efficient facility operation is an important factor in quality of care for hospitals. How treatment protocols influences efficiency and productivity of a cardiac hospital is little known. **METHODS:** A discrete event simulation model of a cardiac hospital with percutaneous coronary intervention (PCI) capability was built on analysis of time-stamped electronic medical record database (Cerner Health Facts®). Additional data were obtained from PCI literature, TRITON TIMI-38 trial, hospital statistics, and expert opinions. ACS treatment options include PCI, coronary arterial bypass graft (CABG), or drug therapy. Three oral antiplatelet dosing strategies for unstable angina (UA) and non-ST segment myocardial infarction (NSTEMI) were considered with loading dose given at PCI, minimum 2 hours prior, and minimum 6 hours prior to PCI. Facility occupancy, wait, PCI volume, and length of stay, were tracked. **RESULTS:** Pre-treatment strategy increased patients' total time in the hospital for all ACS-PCI, with an average time of 114.96 hours with loading dose at PCI, 118.32 hours (+2.92%) with minimum 2 hours prior, and 121.68 hours (+5.85%) with minimum 6 hours prior. For UA/NSTEMI subgroup, total time in hospital was 129.04 hours with loading at PCI, 134.51 hours (+4.24%) with minimum 2 hours prior, and 140.38 hours (+8.79%) with minimum 6 hours prior to PCI. Increase was mainly in pre-procedure time. Pre-treatment has no significant effect on procedure times. Among the CABG-bound patients, pre-operation times increased by 33.49 hours (+85.77%) and 35.47 hours (+90.83%) under 2 and 6 hour pre-treatment strategy, respectively. **CONCLUSIONS:** Pretreatment strategy with oral antiplatelet is likely to cause some inefficiency in hospital due to waits and longer total stay. This may increase facility congestion, occupancy, and staff hours. In CABG-bound patients, pretreatment leads to additional days due to recommended wait. The pretreatment strategy as a way to optimize antiplatelet therapy in ACS-PCI entails efficiency costs.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes Studies

PCV94

CONCORDANCE AMONG THREE SELF-REPORTED MEASURES OF MEDICATION ADHERENCE AND COUNT OF TABLETS RECORDS IN COLOMBIAN HYPERTENSIVE PATIENTS

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OBJECTIVES: To evaluate the level of agreement among three previously validated self-reported medication adherence measures and count of tablets records **METHODS:** This was a cross-sectional study which included adult patients (40 and older) with hypertension disease enrolled continuously for 6 months in a private medical center. Random sequences of tests (communication of self-compliance (SC), Morinsky-Green Test (MG) and knowledge of the illness (KI)) were used to estimate the adherence of antihypertensive medication. Threshold of 80% was used to determine adherence with count of tablets. Concordances were assessed using Cohen's kappa coefficient (k) and prevalence-adjusted bias-adjusted kappa (*PABAK*). **RESULTS:** A total of 151 hypertensive patients were included in the study. A total of 65.5% of these patients have other comorbilities and 45.6% took more than 5 drugs per day. The prevalence of non adherence, using a tablet count as reference test, was 8%. Due substantial imbalance in the fourfold table's marginal totals we found high agreement of negative results (SC (0, 94), MG (0.60), KI (0.72)) but low Kappa (SC (k:- 0,03), MG (k: 0,06), KI (k:–0,01)).The Kappa values adjusted (PABAK) were SC (k:0.79), MG (k: –0,06), KI (k:0,15). **CONCLUSIONS:** Because of the weak to moderate concordance found among validated measures of adherence, the selection of a useful adherence measure in clinical practice is difficult. These findings underscore the difficulty in both assessing patients' medication-taking behavior and assessing and comparing the results of adherence research. The development of valid and reliable measures for easily assessing medication adherence behavior in clinical setting is needed.

PCV95

PREDICTIVE MODELS TO IDENTIFY NON-ADHERENCE TO DYSLIPIDEMIC MEDICATIONS USING PHARMACY AND MEDICAL CLAIMS DATA FROM A COMMERCIAL HEALTH PLAN

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OBJECTIVES: To develop predictive models for medication compliance in dyslipidemia that will aid health care decision makers in targeting compliance intervention programs. **METHODS:** Pharmacy and medical claims data from a commercial health plan were analyzed for all currently enrolled members who received their first dyslipidemic medication between May 1, 2007 and April 30, 2008. Percentage of days covered (PDC) defined as days supply of dyslipidemic medication per 365 days. PDC < 80% was used to categorize non-compliant patients. Potential independent variables included patient demographics, pharmacy utilization and medical conditions. Stepwise logistic regression was used to predict the odds of non-compliance. **RESULTS:** A total of 88,635 patients were included. Sixty-five percent of patients were non-compliant (PDC = 0.33; SD = 0.22). The most significant predictor of non-compliance was treatment with bile acid sequestrants (OR: 6.75; p < 0.0001, compared to statins). Significant predictors of non-compliance also included age category, increasing from an OR = 1.11 for age 45–55 to OR = 3.23 for age <18 [p < 0.0001 for all estimates compared to age 75+]; prior diabetes diagnosis (OR: 1.15, p < 0.0001) and the number of unique pharmacies used (OR = 1.10 per additional pharmacy; p < 0.0001). Factors reducing non-compliance include male gender (OR: 0.77, p < 0.0001); previous heart attack (OR: 0.82; p = 0.0221); prior compliant behavior (OR: 0.888; p < 0.0001); number of unique physicians seen for medications (OR: 0.969 per additional physician; p < 0.0001) and copayment categories (relative to no copayment). Compliance significantly improved by 12%, 12% and 6% for copay categories $5–$10, $10–$20, and $20–$30, respectively to no copayment. (p < 0.01). **CONCLUSIONS:** The results may