OBJECTIVES: To evaluate outcomes of clopidogrel use following hospitalization for ACS in patients who had stent placement during the index hospitalization.

METHODS: Retrospective administrative claims data from a geographically diverse US managed care organization (MCO) were used to identify patients ≥ 18 years of age, hospitalized with ACS diagnoses, treated with stent placement, and filling clopidogrel prescriptions within 7 days of discharge between 2000 and 2004 using ICD-9, CPT-4, and NDC codes. Exclusion criteria included ACS, anticoagulant or antiplatelet agents except aspirin and antiplatelet therapy 12 months prior to the index event, and use of anticoagulant or antiplatelet agents except aspirin and clopidogrel in the follow-up period. Clopidogrel exposure and use of anticoagulant or antiplatelet therapy 12 months prior to the index event, and use of anticoagulant or antiplatelet agents except aspirin and clopidogrel in the follow-up period. Clopidogrel exposure and non-exposure time following the index hospitalization were determined based on prescription data. Outcomes: Hospitalization for ischemic events (IE) and hospitalization or ER visits for bleeding episodes (BE) were determined using ICD-9 codes. Cox proportional-hazard regression controlled for clopidogrel exposure, age, gender, diabetes, hypertension, percutaneous transluminal coronary angioplasty (PTCA), and coronary artery bypass graft (CABG).

RESULTS: A total of 9129 subjects, 79.3% male, mean age 54.6 ± 9 years, were identified. Mean follow-up time was 514 days, mean clopidogrel exposure time was 210 days, and mean non-exposure time was 303 days. IE rate was 8.7% during exposure and 9.1% during non-exposure; BE rates were 0.8% and 0.7%, respectively. Hazard ratio (HR) for IE during clopidogrel exposure was 0.87 [95% CI, 0.78-0.96; P = 0.007]. Other significant HRs were male gender (0.79; P < 0.001); diabetes (1.32; P < 0.001); and hypertension (1.13; P = 0.017). HR for BE during clopidogrel exposure was 1.46 [95% CI, 1.09-1.97; P = 0.012]; other significant HRs were hypertension (1.35; P = 0.041) and age (1.04; P < 0.001). CONCLUSION: This confirms clinical study findings that clopidogrel use reduces subsequent IE in ACS patients treated with stent placement, with a bleeding risk comparable to that observed in the CURE study. Longer treatment with clopidogrel could potentially reduce additional IE.

**CARDIOVASCULAR STUDIES—Methods & Concepts**

**PCVS9**

**EFFECTIVENESS OF OUTPATIENT CLOPIDOGREL TREATMENT IN PREVENTING CARDIOVASCULAR EVENTS IN PATIENTS UNDERGOING STENTING FOR ACS: A RETROSPECTIVE CLAIMS DATABASE ANALYSIS**

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OBJECTIVES: To evaluate outcomes of clopidogrel use following hospitalization for ACS in patients who had stent placement during the index hospitalization. METHODS: Retrospective administrative claims data from a geographically diverse US managed care organization (MCO) were used to identify patients ≥ 18 years of age, hospitalized with ACS diagnoses, treated with stent placement, and filling clopidogrel prescriptions within 7 days of discharge between 2000 and 2004 using ICD-9, CPT-4, and NDC codes. Exclusion criteria included ACS, anticoagulant or antiplatelet therapy 12 months prior to the index event, and use of anticoagulant or antiplatelet agents except aspirin and clopidogrel in the follow-up period. Clopidogrel exposure and non-exposure time following the index hospitalization were determined based on prescription data. Outcomes: Hospitalization for ischemic events (IE) and hospitalization or ER visits for bleeding episodes (BE) were determined using ICD-9 codes. Cox proportional-hazard regression controlled for clopidogrel exposure, age, gender, diabetes, hypertension, percutaneous transluminal coronary angioplasty (PTCA), and coronary artery bypass graft (CABG).

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**PCV59**

**DIFFERENCES IN ANTIBIOTICS PRESCRIBED BY PHYSICIANS WITH HIGH AND LOW INFECTION RATES APPLIED TO PATIENTS UNDERGOING CARDIOVASCULAR SURGERY**

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OBJECTIVES: To investigate patterns in antibiotic prescribing for patients undergoing cardiovascular surgery to determine whether there are differences between physicians with high rates of infection compared to physicians with low rates of infection. METHODS: All cardiovascular surgeries from a mid-sized southern hospital over a 2-year period were examined (approximately 2100 surgeries). A cross-tabulation between physician and patient infections was performed to identify those physicians with a low (under 6%) and a high (over 6%) infection rates. Information from the pharmacy database relating to all patients in the cardiovascular database was extracted, and all antibiotic prescriptions were identified. The data mining techniques of association rules and kernel density estimation were used to investigate prescribing patterns between the two groups of physicians. RESULTS: While the surgeons did not seem to differ in their use of cephalosporins, they differed considerably in their use of fluoroquinolones. Low infection physicians made more frequent use of Cipro while high infection physicians tended to make more use Levaquin. In addition, some patients received up to eight different antibiotics as inpatients before, during, and after cardiovascular surgery. CONCLUSION: Data mining techniques that have been developed for business applications can be used to investigate physician decisions and their impact on patient outcomes. Variability in physician decisions in the absence of treatment guidelines can be investigated observationally, and meaningful results obtained. In this application, there are differences in antibiotic use related to infection rates. These differences should be examined and a consensus reached for prescribing habits.