OBJECTIVE: To characterize MAAE related to CVC replacement or placement among hospitalized Medicare surgical patients. METHODS: The Centers for Medicare and Medicaid Services sponsored identification and abstraction of the records for 40,620 hospitalizations of Medicare beneficiaries. Different simple random sampling fractions were used for each of the 50 states. For patients undergoing surgery in the operating room, details about each CVC (re-)placed during the hospitalization, and related non-infectious adverse events, were noted.

RESULTS: Among 40,620 sample hospitalizations, 7044 CVCs were (re-)placed during 4889 surgical hospitalizations (mean length of stay 10.4 d [95% CI: 9.7–11.2]); among these, there were 159 MAAEs among 130 hospitalizations (mean length of stay 20.1 d [95% CI: 15.8–24.5]). The proportion of MAAEs per catheter (re-)placement was 2.3% (95% CI: 1.9%–2.6%) and the proportion of stays where a CVC was (re-)placed that had a CVC-related MAAE was 2.7% (95% CI: 2.2%–3.2%). Among patients who had length of stay up to 12 days and a CVC (re-)placement, MAAE was associated with increased in-hospital mortality (OR = 2.88, 95% CI: 1.53–5.43). Among those with CVCs (re-)placed, MAAE occurrence was unrelated to age. The most common CVC (re-)placement sites were internal jugular (40%) and subclavian veins (25%). The most common specified CVC types were PICCs (19%) and pulmonary artery catheters (16%). The most common hospital locations for (re-)placement were operating rooms (35%) and critical care units (17%). Most (72%) of the stays with CVC (re-)placement had just 1; 20% had 2 CVC (re-)placements. The most common MAAEs were misplacement (22%), thrombosis or embolism (18%), coiling or kinking (10%), and pneumothorax (8%).

CONCLUSIONS: Among Medicare surgical inpatients, the rate of mechanical or allergic adverse events per catheter was approximately 2%. Incomplete documentation was a barrier to studying specific types of CVCs in relation to MAAEs and their risk factors.

EXPLORATION OF HIGHLY ELEVATED CREATININE KINASE RESULTS AND ASSOCIATED CHOLESTEROL THERAPY IN A LARGE COMMERCIAL HEALTH PLAN

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OBJECTIVE: The use of statins has been associated with risk for myotoxicity. Myopathy, defined as creatine kinase (CK) elevation greater than 10 times the upper limit of normal (ULN), occurs in 0.1–0.5% of statin users. This study describes elevated CK levels in an HMO population on cholesterol lowering therapy.

METHODS: All subjects with a valid CK result during January 1 to December 31, 2001 were studied. Pharmacy claims data were linked to the laboratory results. A highly elevated result was defined as CK at least 10 ULN. METHODS: A search of laboratory data identified 13,624 subjects with valid CK results. Most subjects had only one result (n = 10,301, 76%). Seventy-six subjects (0.6%) had a highly elevated CK result. Forty-one percent of all subjects (n = 5530) filled prescriptions for statins only, 400 (3%) filled prescriptions for non-statin cholesterol lowering therapy only, and 1473 (11%) filled prescriptions for both types of cholesterol lowering medications. Highly elevated CK results were found among 0.3% (n = 14) of statin only subjects, 0.5% (n = 2) of non-statin therapy only subjects and 0.6% (n = 9) of subjects with both medications. Of subjects with no cholesterol therapy, 0.8% (n = 53 of 6621) had a highly elevated CK result. CONCLUSIONS: We found a low rate of highly elevated CK results among those for whom results were available. The rate of highly elevated CK was higher among those with non-statin cholesterol therapy or combination therapy compared to those with statin therapy alone. Despite the low occurrence of highly elevated results, we found that a large percentage of those tested were statin users. The low incidence of highly elevated CK among monitored statin users raises questions regarding the most effective strategy for identifying patients at risk for myotoxicity.

THE NATIONAL ANTICOAGULATION BENCHMARK AND OUTCOMES REPORT (NABOR)1: EVIDENCE OF A SIGNIFICANT DIFFERENCE BETWEEN GUIDELINES AND ACTUAL PRACTICE

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OBJECTIVE: To assess patient characteristics, risk factors and antithrombotic treatment of atrial fibrillation (AF), venous thromboembolism (VTE), acute myocardial infarction (AMI), and prophylaxis in orthopedic surgery (OS) in patients enrolled in a national multicenter anticoagulation database. METHODS: Data was retrospectively collected from hospital inpatient records at 38 US hospitals. Patients treated from July 2000—June 2003 with an ICD-9-CM or procedure code for AF, pulmonary embolus (PE), DVT, pregnancy related PE or DVT, AMI, total knee or hip replacement, and hip fracture surgery were randomly selected. Patients under 18 years of age, and those admitted from or discharged to another hospital were excluded. Clinical characteristics and anticoagulation management according to guidelines were analyzed. RESULTS: A total of 3778 patients were included (945 AF, 939 VTE, 966 AMI, and OS). Mean age was 66.1 years with 53.3% male and 46.7% female. Comorbidities included hypertension (59.9%), coronary artery disease (35.5%), diabetes (21.5%), and malignancy (17.3%). Surprisingly only 54.7% of AF patients with high stroke-risk received warfarin and 20.6% received no treatment. Only 50.6% of VTE patients had INR ≥ 2.0 two consecutive days prior to discontinuing heparin. Only 60.5% of those without a therapeutic INR were discharged on bridge therapy. Length of hospitalization for bridged patients was significantly less than those discharged on chronic warfarin alone (4.0 vs. 8.1 days) (P < 0.001). Only 75.5% of AMI patients received aspirin on arrival to the hospital, although 88% were discharged on aspirin and/or warfarin. Only 85.6% of the OS population received prophylaxis with heparin or LMWH, the remaining received no anticoagulation. CONCLUSIONS: These results suggest that evidence-based antithrombotic guidelines are not being consistently followed. Further evaluation of antithrombotic practices in those sites with the highest and lowest performance is warranted. It is hoped that this database will help demonstrate gaps between guidelines and actual practice.

OBESITY AMONG HIGH SCHOOL STUDENT AND CONTRIBUTING FACTORS

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OBJECTIVE: The basis of this study is to explore the different contributing factors that affect excess weight gain among adolescents. The different attributes that will be reviewed include: the various genetic disorders, nutrition, food industry, physical activity, sedentary activities, and the assortment of methods used to measure to weight and body composition. METHODS: The