

152 Emergency Severity Index (Version 3) Triage Category Is Associated with One-year Survival in Geriatric Emergency Patients

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Objective: The Emergency Severity Index (v. 3) (ESI) triage algorithm was designed to evaluate patient acuity and anticipated resource utilization in an emergency department (ED) population. We postulated that ESI triage categorization would correlate with survival in a geriatric ED population.

Methods: This institutional review board (IRB)-approved survival analysis was conducted for a consecutive series of patients >65 years of age presenting to a tertiary care referral center ED during one calendar month. ESI triage category, length of survival, and vital status at one year following the index ED visit were collected. Vital status was determined by query of the U.S. Social Security Death Index (SSDI) and by review of medical records. Data were analyzed utilizing Kaplan-Meier survival analysis.

Results: During the study, 1,088 patients >65 years of age were registered in the ED. Six direct admissions to the hospital not seen in the ED were excluded, leaving 1,081 subjects for analysis. Vital status was obtained on all subjects. Survival increased across triage categories ranging from 49.1% (13/31) in ESI category 1 to 92.9% (39/42) in category 5. 20.5% (222) subjects died within the one-year follow-up period; 46.4% (103) of those died within 60 days of the ED visit. Mean survival days in those who died within 60 days increased across the triage categories ($\chi^2 = 19.2$, $df = 4$, $p = 0.001$); the mean number of days survived in ESI category 1 was 6.38 days (standard deviation [SD] 14.89, 95% confidence interval [95% CI]: -2.62-15.39) and in ESI category 5 was 15.5 days (SD 2.12, 95% CI: -3.56-34.56). Kaplan-Meier survival analysis revealed that ESI triage categorization was strongly associated with both length of survival and vital status (log-rank chi-square 34.93, $df = 1$, $p = 0.0000$).

Conclusions: ESI triage categorization is strongly associated with survival at one year in ED patients >65 years of age. Those patients in the lowest-acuity triage categories survived longer than those triaged to the highest categories.

153 Treatment of Elder Patients Presenting to the Emergency Department with Acute Coronary Syndrome: Do Guideline-based Critical Pathways Improve Outcomes?

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Objectives: Acute coronary syndrome (ACS) is a frequent cause of morbidity and mortality in the geriatric population. The purpose of this study was to evaluate the impact of a four-hospital ACS guideline-based order initiative (ACSETS—ACS Emergency Treatment Strategies) on acute (within 24 hours) treatment, inpatient mortality (IM), and length of stay (LOS) in ACS patients >75 years old.

Methods: All patients admitted through the emergency department (ED) with a discharge diagnosis of unstable

angina (UA)/non-ST-elevation acute myocardial infarction (NSTEMI) or ST-elevation acute myocardial infarction (STEMI) (identified by International Classification of Diseases, 9th Revision [ICD-9] codes) were enrolled into the study. ED, inpatient, and discharge order forms were utilized, along with educational programs and feedback in the ACSETS postimplementation group. Each chart was reviewed by a study nurse and data were entered into a web-based database. The historical control group included patients discharged between 1/1/02 and 12/31/02 and the ACSETS group between 5/1/03 and 8/31/04. The major outcome measures were inpatient mortality (IM), length of stay (LOS), and acute therapeutic interventions. A multivariate statistical model controlling for age, gender, comorbidities, and smoking was used to analyze IM and LOS.

Results: Patients >75 years old numbered 627 in the ACSETS group and 569 in the historical control group. ACSETS implementation significantly improved adherence to recommended acute inpatient ACS treatment in the geriatrics patient: acetylsalicylic acid (ASA) (67% vs 74%), beta-blocker (59% vs 71%), statin (36% vs 56%), clopidogrel (25% vs 50%), and heparin (50% vs 63%). Hospital LOS was significantly decreased [odds ratio (OR) 0.63 odds of longer stay (0.51-0.79)]. IM trended downward from 10.4% to 7.7% without statistical significance [OR 0.707 (0.47-1.06)].

Conclusions: ACSETS, a critical pathway approach, improved adherence to guideline-based acute pharmacologic treatment and reduced LOS in the hospitalized geriatric ACS patients. IM was not significantly reduced. One-year mortality rates are yet to be determined.

154 Determinants of Decreased Cardiac Catheterization Rates in Elder Patients With Acute Coronary Syndromes

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Objectives: Previous studies have shown that elder patients with acute coronary syndromes (ACS) are less likely to receive cardiac catheterization. The reasons for this are not well characterized. As a result, we performed an exploratory analysis to explain why elder patients with ACS are less likely to receive cardiac catheterization.

Methods: This was a medical record review conducted at an urban teaching hospital. Patients greater than 65 years old who presented to the emergency department (ED) with acute myocardial infarction or unstable angina with ST-segment deviation were included. Univariable and multivariable logistic regression was performed, and odd ratios (ORs) with their 95% confidence intervals were reported.

Results: Of the 192 eligible patients, 81 (42%) did not undergo cardiac catheterization. In our univariable analysis (table), patients who were demented, residing in nursing homes/assisted living, or do not resuscitate (DNR)/do not intubate (DNI), or did not have chest pain were less likely to receive cardiac catheterization. Only nursing home/assisted living residence and absence of chest pain remained significantly associated with noncardiac catheterization in our multivariable analysis.