

female subjects between out-of-hospital and in-hospital conditions may be ascribed to the extent of a burden during ACLS. Therefore, we recommend that chest compression should be changed every 1 min for female rescuers under in-hospital ACLS conditions.

127 Predictors of Mortality in Patients Presenting to Accident and Emergency With Acute ST-Elevation Myocardial Infarction in Rural Malaysia

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Study Objective: In developing countries such as Malaysia, the primary mode for revascularization is via thrombolytic therapy. This is only effective when instituted within a small time window and out-of-hospital delay is a major concern. In a region where the mean house-to-door times can be as long as 8.5 hours, there is an urgent need to reduce the door-to-needle times.

Methods: One hundred and thirty three patients with acute ST elevation myocardial infarction patients were recruited. The mean house-to-door, door-to-needle times were recorded. Logistic regression was employed in order to predict variables associated with mortality.

Results: The majority of patients were male 88.7%, with a mean age of 56.4 ± 10.3 years. The mean and median presentation time (house-to-door) was 222.6 ± 25.3 and 142.5 minutes respectively. Logistic regression revealed that the time to thrombolysis {OR 1.007 (95%CI 1.001, 1.012)} and the random blood sugar level on presentation to A+E {OR 1.255 (95%CI 1.061, 1.485)} were significant independent predictors of mortality in patients.

Conclusion: In a region where there is limited resources and significant house-to-door time delay, patient stratification is essential in order to achieve greatest benefit for patients with the resources at hand. We found that the time to thrombolysis (door-to-needle) and the degree of blood sugar derangement at presentation are the most important predictors of death in patients with acute myocardial infarction.

128 Evaluation of Chest Pain in an Emergency Department Chest Pain Unit: Effect of Age on Outcomes

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Study Objectives: Emergency department (ED) chest pain units (CPUs) have become frequent sites for evaluation of patients with suspected acute coronary syndromes. However, the most recent ACC/AHA guidelines for the management of unstable angina classify all patients greater than 75 years old as "high risk" of death, regardless of other risk factors. This high-risk classification excludes elderly patients from being evaluated in a CPU in many hospitals simply due to age. We hypothesize that there is no difference in short-term adverse events after undergoing evaluation and discharge from an ED CPU among those younger than 75 years old versus those 75 years or older.

Methods: This retrospective chart review examined the incidence of death, MI, or recurrent unstable angina within 28 days of being evaluated in an ED CPU. In addition, this study looked to see if there was a difference in short-term adverse event rates among those 75 years and older, versus those less than 75 years of age.

Participants: We gathered data on all patients who presented to our ED and were subsequently monitored in our ED CPU over a 12-month span. Inclusion criteria included all patients whose symptom complex was concerning for possible acute coronary syndrome, and who were admitted to the ED CPU and subsequently discharged after observation and testing. Any patients who were subsequently admitted to the hospital for any reason were excluded from this study.

Statistical Analysis: The variables collected included presentation date, age, ED CPU disposition, follow-up visit date, and any significant events that occurred within 30 days of initial presentation. A contingency analysis was performed using JMP 6.0 software (SAS institute), and a Fisher's exact test was performed due to the small number of adverse events for both age groups.

Results: There were 555 patients who met initial inclusion criteria. Follow-up of at least 30 days was documented in 535 patients, or 96.4% of the inclusion patients. The incidence of adverse events, defined as death, MI, or recurrent unstable angina, within 30 days of discharge from the ED CPU was 6/535, or 1.1%, for patients of all ages. For patients less than 75 years old, the rate was 4/475 (0.8%), and for patients

75 years or older, the rate was 2/60 (0.4%). There was no statistically significant difference between the two age groups ($p=0.138$).

Conclusion: Our study shows no age-related difference in adverse event rates within 30 days of discharge from our ED CPU. This suggests that there is no increased risk with placing elderly patients in an ED CPU. While this study supports the ability of ED CPUs to safely rule out acute coronary syndromes in the elderly and discharge them home, further prospective studies with larger patient volumes are needed.

129 A Method to Improving Arrival to Electrocardiogram Time in Emergency Department Chest Pain Patients

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Study Objective: The ACC/AHA guidelines recommend 10 minutes from patient arrival to electrocardiogram (ECG) interpretation on all patients presenting with chest pain. Many hospitals are coming up with ways to achieve this goal. The purpose of our study was to determine if we could decrease our door to ECG time to 10 minutes or less using a new process change.

Methods: Setting: A single urban academic emergency department (ED) with an annual census of approximately 64,000. Patient Population: All ED patients registered from September 9, 2007 until October 21, 2007 with a complaint of chest pain. This was a before and after interventional design study. Intervention: Our ED nursing and technician staff developed a process to expedite ECGs. Prior to our start date, as patients registered the triage nurse would triage patients and determine the need for an ECG after the triage interview. We attempted several different processes to decrease our time, yet still we maintained an 18 minute average ECG time from time of arrival. Starting on October 1, 2007, a designated ECG technician (ECGT) was assigned to be responsible for ECGs at all times. The ECGT carries a telephone and is responsible for staffing our ECG area. Once a patient is identified in triage, a quick registration is taken and the registration staff calls to alert the ECGT by telephone that a chest pain patient has arrived. The ECGT's primary responsibility is to perform an ECG on every patient presenting with a chief complaint of chest pain. Whenever the ECG technician takes a break the charge nurse reassigns another technician.

Data was extracted from our electronic ECG log and patient tracking system. Our ECG machines are synchronized to our electronic patient tracking system. The daily ECG electronic log is synchronized to our tracking system. We included, age, sex, race and mode of arrival.

Outcome Measures: Outcomes measured included door to ECG times from September 9th thru 30th, 2007 compared to after implementation from October 1st thru 21st, 2007.

Primary Data Analysis: We used analysis of co-variance comparing pre and post ECG times, and co varying by age, race and sex.

Results: Five hundred forty patients enrolled: 240 before and 300 after intervention. The mean age was 49 ± 16 , 44% were women. Blacks were 58%, whites were 36% and others were 6%. Patients walked in 88% compared to 12% who came by ambulance, 38% were triaged as emergent compared to 62% triaged as urgent/non urgent, and 67% came in between 7am to 7pm. Before the intervention, 18% of ECGs were <10 minutes compared to 62% after, for a difference of 44% (CI 37 - 51%, $p<.0001$). This difference was not statistically affected by triage classification or mode of transportation, although it appears that intervention was less effective for those who were triaged as urgent/non urgent or who arrived by ambulance. There were no differences by age, race, and sex or shift patient presented on. The daily mean of door to ECG times was 18 minutes during the pre-pilot phase. With the implementation of a designated ECG technician 24/7 there is a significant decrease in door to ECG times. The median of door to ECG times is 9 minutes with a mean of approximately 10 minutes.

Conclusion: Our intervention significantly improved door to ECG time.

130 Delayed Diagnosis of NSTEMI Based on Enzymes: Impact on PCI, CABG and Outcome

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Study Objective: Current diagnosis of NSTEMI disease in the ED rests heavily on the use of rapid cardiac marker determinations. In the absence of EKG changes