

# Evidence-Based Practice (EBP) - E144

## Poster

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### Abstract Title:

**Early Aggressive Management of Geriatric Patients with Rib Fractures Improve Clinical Outcomes**

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### Background & Purpose:

Literature shows that elderly patients with rib fractures have more mortality and morbidity as compared to their younger counterparts. These adverse outcomes include higher mortality, increased incidence of transfers to higher level of care, longer LOS, and pneumonia. The trauma educational committee reviewed all trauma admissions with > 1 rib fracture and age > 64 years. The data showed that patients requiring > 4L O2 to keep sat > 92% in the ED were more likely to develop pneumonia and/or require upgrade in care. The goal of this study is to determine if using a Geriatric Rib Fracture Care Management Guideline results in a decreased incidence of pneumonia, upgrades in care, mortality and length of stay.

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### Study/Project Design:

Study will include measurement before and after implementation of a Geriatric Rib Fracture guideline on July 1, 2012.

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### Setting:

A large suburban Level-one Trauma Center.

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### Sample:

All admitted trauma patients age > 64 years and > 1 rib fracture. Baseline group consisted of 74 patients and post group data collection is ongoing.

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### Procedures:

The trauma educational committee reviewed the literature and developed an inpatient care management guideline that outlined initial ED assessment and resuscitation, bed assignment from the ED and ongoing hospital care. Data was obtained from the trauma registry for all admitted patients over 64 years of age with greater than one rib fracture. Retrospective review from July 2011 to June 2012 served as the pre-implementation group (N=74). Data points included LOS, pneumonia rates, % of patients who met criteria for higher level of care in the ED, actual upgrades in care, and mortality. All staff including the trauma attendings, residents, APNs, and staff nurses were educated on the new guideline that was implemented on July 1, 2012. Post guideline data collection is ongoing and will be compared to baseline group.

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### Findings/Results:

The pre-implementation group consisted of 74 patients. Data revealed a LOS of 8.5 days, pneumonia rate of 9.25%, 14.9% of patients met criteria for a higher level of care on admission, 10.5% of patients were upgraded in level of care, and mortality rate was 18.5%. Post-implementation data collection is ongoing. Preliminary data (N=10) reveals a LOS of 3.6 days, pneumonia rate of 10%, 10% of patients met criteria for a higher level of care on admission, 0% of patients were upgraded in level of care, and mortality rate is 0%. Lessons learned from the study include 1) difficult to keep residents educated on the guideline with monthly turnover, 2) some patients are admitted to medicine and are mistriaged, and 3) all patients were included in the study regardless of ISS and injury pattern. Statistical analysis will be performed once data collection is completed.

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### Discussion/Conclusions/Implications:

Most trauma centers have already felt the impact of the aging trauma patient. The elderly are more likely to be undertriaged. They report lower pain scores and take less medication thus leading to respiratory decompensation. Keen nursing assessment needs to include assessing pain, pain medication, incentive volume. Other key variables that can help the healthcare provider make the best triage decision include age, number of fractured ribs, O2 requirement on arrival and co-morbidities. If the results of our study show improved clinical outcomes, we hope to utilize the data

to support the embedding of a medical hospitalist on the service to allow better coordination of care for the elderly patient.