The Geriatric Trauma Institute (GTI) – The Efficacy of a Dedicated Geriatric Trauma Service: A Pilot Study

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An aging population

- As the world population continues to age, geriatric trauma becomes an ever increasing burden on the trauma and health care systems.

- Increased 65+ trauma patients 3-5% annually

- By 2030, 20% of the US population will be 65+
Geriatric Trauma

- No. 5 cause of death for age $\geq 65$

- Mortality in most series averages 15 to 30%.
  - 4 to 5 X mortality of younger patients.

- Mortality start to increase at age 45 for males.
The impact on Trauma

- In 2010, 2.3 million nonfatal fall injuries alone among geriatrics were treated in emergency departments resulting in more than 662,000 hospitalizations.

- In 2010, the direct medical costs of falls, adjusted for inflation, were $30.0 billion.
The Bottom Line

- >65 use 33% of all health care dollars and 25% of all trauma care money.
- Medicare - DRG based- grossly underpays hospital costs for trauma, esp. in the elderly
  - Avg. reimbursement 40 to 65% of total hospital costs.
    - Increased age and ISS - worse reimbursement.
In an already strained health care system, increasing costs of health care in all trauma patients, but especially in the geriatric population, requires a careful evaluation of resource allocation.

With increased hospital length of stay associated in this cohort, protocols and clinical pathways must be created to reduce the overall cost and effectively treat these patients.
Purpose

- This study was designed to assess the impact of a dedicated geriatric trauma institute when compared to traditional primary care management.

- We hypothesized that a dedicated geriatric trauma service results in reduce length of stays, mortality and overall cost of the care in these patients.
Methods

- A retrospective analysis was performed on all trauma patients age 65 or older who presented to our Level I trauma center over the last year, excluding isolated hip fractures.

- Demographic variables, ISS, and admitting service were recorded. A dedicated geriatric trauma service was initiated in May 2013 to standardize patient care and expedite surgical procedures and compared to the prior 6 months data.

- Length of stay and associated hospital floor or ICU room charges were used as a proxy measure to assess the impact and efficacy of a dedicated geriatric trauma service.
Coordinated Care

GTI Central PA
Results

- Results 490 geriatric patients were treated during the study period. 228 patients were treated since the initiation of a dedicated geriatric trauma service.

- GTI saw a higher average Injury Severity Score (5.6 vs 8.69) when compared to a non-trauma admitting service.

- Despite this discrepancy, patient length of stay was lower when a dedicated geriatric trauma service facilitated patient care (5.99 vs 4.6). When excluding isolated hip fractures, the LOS was 4.2.

- No statistical difference in morbidity or mortality was seen.
ISS and LOS

ISS: 8.69
LOS: 5.99, 4.36, 4.2
Additional GTI benefits

- Total of 299 patients admitted through GTI from May – August 2013 (157 patients >= 65 previous year)
- Only 9 patients admitted to PCP – none had surgery
- Decreased ED to OR time from average of 3 days to 1.3 days
- Increased discharge to home by 3%
- Decreased discharge to SNF by 2%
- Increased discharge to rehab by 5%
The Financial Impact

- In just over 5 months since the service implementation, a reduction in geriatric trauma care charges of greater than $775,200 has been seen based on length of stay alone.

- Additionally, females saw an even greater reduction in overall length of stay resulting in an estimated reduction of $595,000 in charges.

- With the current data trends, an estimated hospital charge reduction of over 1 million dollars is expected in just 6 months.
Conclusion

- These findings suggest that the initiation of a dedicated geriatric trauma service as part of the geriatric trauma institute provides a cost effective means to geriatric trauma care.

- With the growing geriatric population, hospitals should consider a dedicated geriatric trauma service model to reduce overall costs of care, improve care, and provide age targeted total trauma care.
Questions?
REFERENCES