Improving Trauma Care Through a Co-Management with Hospitalists

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Medical Institution: Christiana Care Health System

What is the problem or challenge you identified?
In the US, our geriatric population (≥ 65) is increasing faster than any other segment of the population. Accordingly, US trauma centers have also experienced a significant increase in geriatric trauma patients which has added a significant burden due to their unique needs.

At Christiana Care Health System’s (CCHS) Christiana Hospital, a state designated ACS-verified Level I trauma center in Newark, Delaware, we have had a significant increase in geriatric trauma patients managed by our trauma service. From 2004 to 2013, this population is increased from 21 to 33% of our annual trauma service census. As this population has a higher incidence of pre-existing medical conditions, we have been challenged not only care for the injuries sustained by these patients but also manage their significant co-morbidities during their hospitalization. As identified through our trauma program’s PI process, this responsibility for our trauma service of managing major medical comorbidities increased consultation of medical hospitalists and subspecialists and admissions of trauma patients to non-surgical services. Furthermore, these consultations were often obtained late in hospitalization, lacked collaboration with the trauma service providers, and were often complicated communication with the patient, family, and staff.

Describe the intervention you developed/change you implemented to address the problem:
With collaboration with the leadership of the CCHS trauma program and internal medicine department, a corrective action strategy was conceived, developed, and implemented. This strategy consisted of a co-management model in which a medical hospitalist was embedded on our trauma service (“trauma hospitalist” program). This program was trialed by two pilots conducted in March and September 2012. From these pilots, criteria for Trauma Hospitalist consultation were codified, responsibilities for trauma practitioners and trauma hospitalists defined, and rules of engagement for all team members developed. All Trauma Hospitalists participated in Advanced Trauma Life Support (ATLS) and were certified as ATLS providers.

In January 2013, this co-management model was initiated. The trauma hospitalist participates in daily morning, afternoon sign-out, and weekly multidisciplinary rounds. They confer and collaborate throughout the day with the trauma attending physicians, trauma advanced practice nurses, and trauma service residents regarding medical management as well as instructing trauma service personnel in pre-existing medical condition management through established forums and during rounds.

How did you measure the effects of the change?
Since implementation of our trauma hospitalist program, there has been a 5.7% reduction in trauma patients being admitted to non-surgical services. From its inception in January 2013 to March 2014, our trauma hospitalists have provided 1,623 consultations. Of these consultations, 55% of these consultations were for management of diabetes mellitus and/or essential hypertension. The majority of the trauma hospitalist efforts were directed at disease management (47%) and communication/discharge functions (47%). As to the latter responsibility, developing and communicating a discharge plan (60%) and reconciling the patient’s medications (20%) comprised the bulk of this activity. A recent survey of trauma service staff indicated that since implementation of this program the embedding
of a trauma hospitalist on our trauma service has improved interdisciplinary communication and expedited care of our geriatric trauma patients especially related to the management of their chronic co-morbidities.

**How did you sustain the change?**

This transformational model has been a shared learning experience for both our trauma service personnel and medical hospitalists. Embedding a trauma hospitalist has created a collaborative, cohesive, and seamless approach in addressing pre-existing medical conditions for geriatric trauma patients on our trauma service. Efficiency, effectiveness, and patient safety related to the unique needs of these patients appear to have been enhanced due to the improved communication in a clearly defined co-management model which is the focus of this program. The positive feedback from our patients, their families, and our staff in regards to our trauma hospitalist program has convinced us to continue to monitor its impact and outcomes of our geriatric trauma care in order to address and facilitate the needs of this challenging trauma population.
Impact of the Trauma Hospitalists  
January 2013-March 2014  
N = Encounters

Communication/Discharge Functions  
N = 436

Medical Management  
N = 1623

Overall Summary of Functions  
Excluding DMHTN Management  
N = 739

Medical Management by System  
N = 1623

Results

Number of Trauma Patients Admitted to Medicine Post Implementation

- 2009: 11.3%
- 2010: 10.4%
- 2011: 13.3%
- 2012: 10.3%
- 2013: 13.6%

There was a 5.7% reduction in trauma patients being admitted to a medicine.
Survey Results

Trauma Nurses, APNs, Residents and Attending Survey Results

Patient care has been expedited as a result of medical issues being addressed sooner by the Trauma Hospitalists.

Answered: 38  Skipped: 0

There is improved communication regarding medical concerns since the integration of the Trauma Hospitalists onto the trauma service.

Answered: 38  Skipped: 0

Feedback from staff noted improved communication with the medical team which led to a more collaborative approach in treating medical concerns.

Pre-Implementation of Trauma Hospitalists Baseline Data

Number of Trauma Patients Admitted to Medicine

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>11.3%</td>
<td>10.4%</td>
<td>13.3%</td>
<td>18.3%</td>
</tr>
</tbody>
</table>

0  100  200  300  400  500  600  700  800  900

2009  2010  2011  2012