Implementing a Rib Fracture Management Pathway and PIC Scoring Tool to Reduce ICU Readmissions

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BACKGROUND
The institution is a 413 bed Level I trauma/burn adult and pediatric center in a 4 state region. The microsystem encompasses general surgery patients with rib and or sternal fractures admitted to the Trauma ICU, Burn-Pediatric ICU, and acute care units.

SPECIFIC AIM: We aim to improve the care of patients with rib fractures and or sternal fractures and reduce ICU readmission rates by 20% within one year after implementing the Rib Fracture Management Pathway.

METHOD

SWOT ANALYSIS

<table>
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<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Improved pain management</td>
<td>Limited evidence to support guideline-based management</td>
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<tr>
<td>Efficient use of resources</td>
<td>Difficult to measure outcomes</td>
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<tr>
<td>Increased communication</td>
<td>Inconsistent among resident staff</td>
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<tr>
<td>Enhanced patient outcomes</td>
<td>Consistently high inpatient satisfaction</td>
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Opportunities
- Improved pain management
- Increased communication

Threats
- Limited evidence to support guideline-based management
- Inconsistent among resident staff

FINANCIAL IMPLICATIONS
- 31% of patients requiring an ICU stay account for 70% of the total hospital costs (Fakhry et al., 2013)
- Patients with an ICU readmission had 4 times the median ICU length of stay (Institutional data, 2013)
- Average ICU costs for rib fractures without complications or comorbidities = $30,371.57/day or $31,114.71/3days (WSHA, 2013)
- Reducing ICU re-admissions by 20% will save the institution $124,458.84 over 2 years

RESULTS
- Staff education has been delayed 2 weeks due to last minute changes in the protocol (see timeline)
- Actions in the timeline are up to date and are on track
- The pathway, neural guidelines, and PIC scoring tool will be electronically placed on an internal decision support site to allow quick access and reference to protocol

CNL RECOMMENDATIONS
- Round frequently on all new patients admitted with rib and or sternal fractures to sustain the project and maintain adherence to the pathway
- Incorporate reporting of PIC score and team goals into daily bedside rounds
- Provide additional “time out” educational moments to support staff as well as solicit feedback on implementation process and protocol
- Second analysis of data one year after implementation to determine efficacy of pathway

REFERENCES
- Available upon request