Use of NFTI to Evaluate Under triage in Pediatric Trauma Patients

Niti Shahi, Ryan Phillips, Christen Rodenberg, Maxene Meier, Gabrielle Shirek, John Recicar, Denis Bensard*, Steven Moulton*

Children’s Hospital Colorado
Disclosures

• None
Methods to Evaluate Under triage

NFTI

- 6 clinical criteria
- Retrospective

- pRBCs w/n 4 hrs of arrival
- DC from ED-> OR w/n 90 minutes
- DC from ED->IR
- DC from ED-> ICU with ICU LOS >3 days
- Mech ventilation w/n 3 days (outside of procedural anesthesia)
- Death w/n 60 hrs
Study Aims

1) Compare undertriage rates using CM and NFTI

2) Compare resource utilization between NFTI under triaged (UT) and NFTI appropriately triaged (AT) patients
Methods

- Pediatric trauma pts at CHCO 2017-2018

- Pts who did NOT meet the highest activation criteria
<table>
<thead>
<tr>
<th></th>
<th>NFTI UT (n=37)</th>
<th>NFTI AT (n=196)</th>
<th>Overall (n=233)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality (#, %)</td>
<td>3 (8.1%)</td>
<td>0 (0%)</td>
<td>3 (1.3%)</td>
<td>0.0013</td>
</tr>
<tr>
<td>Hospital Length of Stay</td>
<td>11.0</td>
<td>3.00</td>
<td>4.00</td>
<td>0.0005</td>
</tr>
<tr>
<td>Ventilation Days</td>
<td>3.00</td>
<td>0.00</td>
<td>0.00</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>ICU Length of Stay</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Surgical Intervention</td>
<td>16 (43.2%)</td>
<td>58 (29.6%)</td>
<td>74 (31.8%)</td>
<td>0.1489</td>
</tr>
<tr>
<td>Total Cost of Hospitalization</td>
<td>$68,500</td>
<td>$17,600</td>
<td>$20,400</td>
<td>0.0012</td>
</tr>
</tbody>
</table>
Conclusions

- NFTI may be more accurate than CM at identifying Under Triage in pediatric trauma pts

- NFTI UT pts have:
  - Ventilator days
  - ICU Length of stay
  - Cost of Hospitalization
  - Mortality
Questions?