Evaluation of a patient safety initiative of rapid removal of backboards in the emergency department


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Introduction

• Prolonged time on the transfer backboard used by EMS leads to:
  • Higher levels of patient discomfort
  • Respiratory distress
  • Agitation
  • Removal from a backboard is time intensive
  • Goal is to implement a medical directive which allows paramedics to assist in removal of patients from backboards in the emergency department

Objectives

• Primary Objective
  To determine if the length of time ED patients were immobilized on a rigid backboard decreased following implementation of the medical directive

• Secondary Objectives
  To determine if this directive decreases spinal imaging (X-ray, CT) and ED length of stay

Methods

• Pre- and post-implementation study
• Inclusion Criteria:
  ▪ 18 years or older
  ▪ Brought to WRH Ouellette Campus on a rigid transfer board
• Charts reviewed 3 months pre and 3 months post-implementation of the policy

Results

• Preliminary data of 88 patients: Time on backboards reduced from an average of 72 minutes to 51 minutes (p<0.001).

• Chart Review: 183 pre-implementation, 186 post-implementation

• No significant difference in secondary outcomes

<table>
<thead>
<tr>
<th>Patient Data</th>
<th>ED Data</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td>Time of EMS Arrival</td>
</tr>
<tr>
<td>Gender</td>
<td>Time of transfer to ED bed</td>
</tr>
<tr>
<td>CTAS</td>
<td>Time of patient removal from EMS board</td>
</tr>
<tr>
<td>GCS</td>
<td>Spinal imaging obtained in ED</td>
</tr>
<tr>
<td>Disposition</td>
<td>Time of discharge from ED</td>
</tr>
</tbody>
</table>

Limitations

• Decrease in backboard time relied on preliminary data
• Backboard time was not documented for the majority of cases
• Larger sample size?

Conclusions

• Duration on backboards was significantly decreased with a medical directive allowing paramedics to assist in removal of boards
• There was no significant change in secondary outcomes, including imaging and ED length of stay
• It is important to remove patients from backboards as soon as possible, as it will improve patient comfort and decrease potential complications of prolonged time on backboards.