Catching Them Early; The Emergency Departments Role in Pressure Injury Prevention

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Disclosures

- This presenter has no disclosures to make for this presentation
Objectives

- Explore the risk for pressure injury in the Emergency department
- Define existing barriers in the emergency department to pressure injury prevention
- Describe preventative measures that can be taken in the emergency department
- Understand the importance of the emergency departments role in catching/preventing the pressure injury early
Did you know

- 60,000 patients die annually from complications of Hospital acquired pressure ulcers*

- Length of Emergency Department stay is greater than 2 hours prior to hospital admission *

- The annual cost of pressure ulcers is 11 billion **

*Denby & Rowlands, 2010**  **Honaker, Brockopp, & Moe, 2014**
OR WE COULD MAKE AN ONLINE RESERVATION 2 DAYS BEFORE AN ACCIDENT!
Visits to ED by Age

Table 2. Emergency department visits by patient age, sex, and residence: United States, 2011

<table>
<thead>
<tr>
<th>Selected patient characteristics</th>
<th>Number of visits in thousands (standard error in thousands)</th>
<th>Percent distribution (standard error of percent)</th>
<th>Number of visits per 100 persons per year(^1) (standard error of rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All visits</td>
<td>136,296 (6,413)</td>
<td>100.0 (--)</td>
<td>44.5 (2.1)</td>
</tr>
<tr>
<td>Age(^1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 15 years</td>
<td>24,823 (1,724)</td>
<td>18.2 (0.9)</td>
<td>40.6 (2.8)</td>
</tr>
<tr>
<td>Under 1 year</td>
<td>3,485 (303)</td>
<td>2.6 (0.2)</td>
<td>87.3 (7.6)</td>
</tr>
<tr>
<td>1–4 years</td>
<td>9,773 (737)</td>
<td>7.2 (0.4)</td>
<td>60.5 (4.6)</td>
</tr>
<tr>
<td>5–14 years</td>
<td>11,565 (823)</td>
<td>8.5 (0.4)</td>
<td>28.2 (2.0)</td>
</tr>
<tr>
<td>15–24 years</td>
<td>22,150 (1,140)</td>
<td>16.3 (0.3)</td>
<td>51.7 (2.7)</td>
</tr>
<tr>
<td>25–44 years</td>
<td>39,124 (1,997)</td>
<td>28.7 (0.6)</td>
<td>48.7 (2.5)</td>
</tr>
<tr>
<td>45–64 years</td>
<td>29,828 (1,537)</td>
<td>21.9 (0.5)</td>
<td>36.4 (1.9)</td>
</tr>
<tr>
<td>65 years and over</td>
<td>20,372 (1,172)</td>
<td>14.9 (0.5)</td>
<td>50.8 (2.9)</td>
</tr>
<tr>
<td>65–74 years</td>
<td>8,208 (518)</td>
<td>6.0 (0.2)</td>
<td>36.9 (2.3)</td>
</tr>
<tr>
<td>75 years and over</td>
<td>12,163 (729)</td>
<td>8.9 (0.3)</td>
<td>68.2 (4.1)</td>
</tr>
</tbody>
</table>

Sex and age\(^1\)

National Hospital Ambulatory Medical Care Survey:
### Time spent in the emergency department

<table>
<thead>
<tr>
<th>Time spent in the emergency department</th>
<th>Count</th>
<th>(SE)</th>
<th>Percent</th>
<th>(SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 hour</td>
<td>16,198</td>
<td>(1,020)</td>
<td>11.9</td>
<td>(0.6)</td>
</tr>
<tr>
<td>1 hour, but less than 2 hours</td>
<td>33,184</td>
<td>(1,776)</td>
<td>24.3</td>
<td>(0.7)</td>
</tr>
<tr>
<td>2 hours, but less than 4 hours</td>
<td>47,537</td>
<td>(2,476)</td>
<td>34.9</td>
<td>(0.5)</td>
</tr>
<tr>
<td>4 hours, but less than 6 hours</td>
<td>20,420</td>
<td>(1,256)</td>
<td>15.0</td>
<td>(0.5)</td>
</tr>
<tr>
<td>6 hours, but less than 10 hours</td>
<td>10,487</td>
<td>(762)</td>
<td>7.7</td>
<td>(0.5)</td>
</tr>
<tr>
<td>10 hours, but less than 14 hours</td>
<td>2,134</td>
<td>(229)</td>
<td>1.6</td>
<td>(0.2)</td>
</tr>
<tr>
<td>14 hours, but less than 24 hours</td>
<td>1,340</td>
<td>(128)</td>
<td>1.0</td>
<td>(0.1)</td>
</tr>
<tr>
<td>24 hours or more</td>
<td>794</td>
<td>(96)</td>
<td>0.6</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Blank</td>
<td>4,202</td>
<td>(1,006)</td>
<td>3.1</td>
<td>(0.7)</td>
</tr>
</tbody>
</table>

Patient arrived in emergency department after business hours²

<table>
<thead>
<tr>
<th>Time spent in the emergency department</th>
<th>Count</th>
<th>(SE)</th>
<th>Percent</th>
<th>(SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>81,428</td>
<td>(3,799)</td>
<td>59.7</td>
<td>(0.5)</td>
</tr>
<tr>
<td>No</td>
<td>53,700</td>
<td>(2,581)</td>
<td>39.4</td>
<td>(0.5)</td>
</tr>
<tr>
<td>Blank</td>
<td>1,169</td>
<td>(904)</td>
<td>* 0.9</td>
<td>(0.7)</td>
</tr>
</tbody>
</table>
The emergency department is the single greatest point of entry into the hospital (Denby & Rowlands, 2010)

11.5% of patient admitted from the ED go to critical care and 19.8% go to step down telemetry (Naccarato & Kelechi, 2011)
How high is the risk for skin injury development in the ED?
Various Patient Conditions Presenting to the ED

- Respiratory failure
- Sepsis
- Acute Renal failure
- Rhabdomyolysis
- Diabetes
Common Risk Factors

- Immobility
- Advanced age
- Incontinence
- Malnourishment
- Equipment
Immobility

- Trauma
- Fractures
- Obesity
- Paraplegia/quadriplegia/hemi
- Stroke/paralysis
Advanced Age

- 62% of persons 75 years or older visit the emergency department at least once a year *
  - Less nutrient exchange
  - Less resistant to shear force
  - Loss of dermal thickness
  - Decreased sensory perception
  - Increased vascular fragility

- 14% of patients with hip fractures develop Hospital acquired pressure injury

Naccarato & Kelechi, 2011
Incontinence urinary/fecal

- Predisposing factor to pressure injury
  - It alters the resiliency of the epidermis to external factors
  - Shear and friction are increased with mild to moderate moisture
  - Increase risk of perineal candidiasis/fungal infections
Malnourishment

- Weakness
- Weight loss
- Muscle wasting
- Inability to feed self
Emergency Department equipment that may increase risk of pressure injury development

- Spinal immobilization
- Poorly padded ED stretchers
- Narrow stretcher restricting body movement
Patient Positioning/transferring

- Head of bed elevation greater than 30 or higher
- Body type and position increased risk of shear force
- Transferring the patient multiple times for diagnostic purposes increases risk for shear injury
Some injuries that might not be seen initially in the Emergency Department

- Deep tissue injury
  - Hemodynamically unstable
  - Poor tissue perfusion
  - Diabetes
  - Shearing damage combined with patient on anticoagulant
Barriers to pressure injury prevention in the ED

- Equipment & Supplies
- ED Stretchers
- Use of multiple mechanical devices
- The inability to reposition the patient due medical instability
- The inability to perform a complete body assessment in triage
Why is this so important?

- Our focus has been primarily on inpatient pressure ulcer reduction programs with good results, but more effort is needed on early detection & prevention.

- Our current tools for risk assessment may not be appropriate for the emergency department setting.

- Our patients are at the highest risk of pressure injury development when they are in the emergency department for longer periods.

- Regulatory requirements necessitate assessment, documentation and interventions.

- Increasing financial burden.
Innovative Ideas for Practice

- Risk Assessment specifically for the ED

Simple Triage Tool:
Non-ambulatory, restricted/limited mobility, ALOC
☐ NO  ☐ YES - Initiate Skin / Risk Assessment Tool

Bjorklund, et al., 2012
Assessment Tool

Bjorklund, et al., 2012
Brief intervention plan for the Emergency Department

- Identifying patients at risk
- Identifying community-acquired pressure injury on admission
- Implementing preventative measures, such as positioning with pillows to off load, stretcher support surfaces that help decrease risk of injury
- Providing nutrition if able
- Maintaining dry intact skin
Increased Communication within the organization

- Between nurses, physicians and families
- Identifying patients at high risk for Deep Tissue Injury and providing that information on hand-off report/SBAR
- Describing the wound/wounds
- Positioning/off loading
What is the single, least expensive preventative measure we can take to prevent pressure injury?
Do you think the emergency department has a role in pressure injury prevention?

- We are continually finding ways to improve our practice in healthcare

- More research is needed
  - What tools will work best in the emergency department environment?
  - Do specific patient conditions lead to increased development of pressure ulcers?
  - If patient flow from the emergency department improved would that decrease hospital acquired pressure injury?
References


Happy Halloween