Management of Incontinence Associated Dermatitis in the Surgical Intensive Care Unit
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BACKGROUND
- Incontinence-associated dermatitis (IAD) - distinct form of skin injury often misidentified as pressure injury; can predispose patient to pressure injuries and skin infection
- IAD prevalence rate 5.7% to 22.8%; incidence rate 3.4% to 36%. In acute care and long-term acute care settings
- Incontinence - number one risk factor for IAD. Associated skin conditions cost United States $16.5 - 19.5 billion/year
- At project site, in 2016, 13% IAD on hospital admission; 26% hospital-acquired IAD. Surgical ICU (SICU) 9% IAD on admission; SICU hospital-acquired IAD 18%, with goal of <10%. No standardized process in place for management of IAD or incontinence
- The purpose of this project was decrease the rate of hospital-acquired IAD in the SICU.

CLINICAL QUESTION
Will staff education and implementation of an evidence-based incontinence algorithm improve identification of IAD and decrease the incidence of hospital-acquired IAD in the SICU?

METHODS
- Framework: PDSA
- Setting: 18-bed SICU in southeastern urban hospital
- Staff: 35 SICU RNs
- Population: Adult SICU patients >18 from general, colorectal, medical, and urological surgeries (N=211 incontinent patients)
- Data Collection: Number of incontinent patients, number of cases of IAD on admission, number of cases of hospital-acquired IAD obtained from EMR. EMR audit for nurse compliance with algorithm. Pre-test, post-test scores for staff education
  - Pre-QI: April 2016-July 2016 (n=79)
  - Post-QI: February 5, 2016-June 5, 2018 (n=132)
- Intervention: Staff in-service, education. Algorithm for management of fecal and urinary incontinence and Ghent Global IAD Categorization Tool (GLOBIAD). Algorithm standardized selection of skin care products and devices for the management of fecal and urinary Incontinence
  - Data Analysis: Descriptive Statistics with Graphic Display: Microsoft Excel
  - Staff in-service, education. Algorithm for management of fecal and urinary incontinence and Ghent Global IAD Categorization Tool (GLOBIAD). Algorithm standardized selection of skin care products and devices for the management of fecal and urinary Incontinence
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RESULTS

Figure 1. Intervention Compliance and Hospital Acquired IAD

<table>
<thead>
<tr>
<th>Month</th>
<th>Compliance %</th>
<th>Hospital Acquired IAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-18</td>
<td>29</td>
<td>74</td>
</tr>
<tr>
<td>Mar-18</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>Apr-18</td>
<td>97</td>
<td>7</td>
</tr>
<tr>
<td>May-18</td>
<td>97</td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 2. Average IAD Rate Identified On Admission

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Compliance Rate</th>
<th>Hospital Acquired IAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
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<tr>
<td>20-25</td>
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<tr>
<td>30-35</td>
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</tbody>
</table>

IMPLICATIONS FOR PRACTICE

Management of fecal and urinary incontinence is imperative to prevent IAD, improve patient outcomes and decrease healthcare costs. Standardized interventions that can be implemented by the non-WOC RN to prevent or delay the onset of hospital-acquired IAD should be utilized in all ICU settings. The GLOBIAD is a useful tool to aid in the identification of IAD and to further assist the non-WOC RN to consult the WOC RN.

CONCLUSIONS
- In SICU patients, staff education and use of algorithm was successful in reducing hospital-acquired IAD.
- Strengths: IAD more readily identified both on admission, during hospital stay with GLOBIAD; Increased length of time from admission to onset of hospital acquired IAD by 10 days; Project mentor; Leadership and clinical nursing staff buy-in
- Limitations: Pre-intervention IAD data collected only by Wound, Ostomy, and Continence (WOC) RN consult; Short project time frame
- Next Steps: Modify algorithm to include guidance for placement of external/internal fecal device; Give additional options for IAD treatment; Standardize EMR charting for IAD and IAD intervention; Pilot algorithm in other units

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