Breaking Down the Braden

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<table>
<thead>
<tr>
<th>SKIN</th>
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<tbody>
<tr>
<td>SkinUnChE+</td>
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<tr>
<td>Braden Act</td>
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<tr>
<td>BradenFricShear</td>
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<td>Braden Mobile</td>
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<td>Braden Moist</td>
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<td>Braden Nutr</td>
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<td>Braden SensPer</td>
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<td>Braden Score</td>
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<table>
<thead>
<tr>
<th>SKIN ASSESSMENT</th>
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<tr>
<td>Skin Color</td>
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</table>

- Completely limited
- Very limited
- Slightly limited
- No impairment

NURSE RESIDENCY

JULY 2014 COHORT
<table>
<thead>
<tr>
<th>Sensory Perception</th>
<th>MOISTURE</th>
<th>Activity</th>
<th>MOBILITY</th>
<th>NUTRITION</th>
<th>Friction &amp; Shear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to respond meaningfully to pressure-related discomfort</td>
<td>Degree to which skin is exposed to moisture</td>
<td>Degree of physical activity</td>
<td>Ability to change and control body position</td>
<td>Usual food intake pattern</td>
<td>Requires moderate to maximum assistance in moving</td>
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<tr>
<td>Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body.</td>
<td>Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.</td>
<td>Confined to bed.</td>
<td>Does not make even slight changes in body or extremity position without assistance.</td>
<td>Never eats a complete meal. Rarely eats more than ¼ of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR is NPO and/or maintained on clear liquids or 1's for more than 5 days.</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
</tr>
<tr>
<td>2. Very Limited</td>
<td>2. Very Moist</td>
<td>2. Chairfast</td>
<td>2. Very Limited</td>
<td>2. Probably Inadequate</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
</tr>
<tr>
<td>Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over ½ of body.</td>
<td>Skin is often, but not always moist. Linen must be changed at least once a shift.</td>
<td>Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.</td>
<td>Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.</td>
<td>Rarely eats a complete meal and generally eats only about ¼ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement OR receives less than optimum amount of liquid diet or tube feeding.</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
</tr>
<tr>
<td>Responds to verbal commands, but cannot always communicate discomfort or the need to be turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.</td>
<td>Skin is occasionally moist, requiring an extra linen change approximately once a day.</td>
<td>Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.</td>
<td>Makes frequent though slight changes in body or extremity position independently.</td>
<td>Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) per day. Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
</tr>
<tr>
<td>Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.</td>
<td>Skin is usually dry. Linen only requires changing at routine intervals.</td>
<td>Walks outside room at least twice a day and inside room at least once every two hours during waking hours.</td>
<td>Makes major and frequent changes in position without assistance.</td>
<td>Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
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**Braden Scale**

**BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK**

<table>
<thead>
<tr>
<th>Date of Assessment</th>
<th>Total Score</th>
</tr>
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**Very High Risk:** 9 or less

**High Risk:** 10-12

**Moderate Risk:** 13-14

**Mild Risk:** 15-18

**No Risk:** 19-23
Background/Significance

Project Purpose:
The purpose of the project is to re-educate Registered Nurses on the Braden scale in order to facilitate the effective use of the Braden score and to properly identify pressure ulcer risk thus reducing inconsistencies among nurses’ assessment of Braden scores.
PICO QUESTION

• In hospitalized adults, how does re-educating Registered Nurses on the Braden scale compared to current practice facilitate the effective use of the Braden scale to obtain accurate Braden assessment scores?

P: Hospitalized Adults
I: Re-education of Braden scale to Registered Nurses
C: Current practice (no re-education)
O: To obtain accurate Braden assessment scores
TRIGGER

PROBLEM-FOCUSED

- Root cause analysis on 2KS
- Braden Scale scores correlated with pressure ulcers

Significance – improve accuracy of Braden score, properly identify individuals at risk for skin breakdown
EVIDENCE

- **Search engines:** CINAHL; EBSCO
- **Key words:** Braden; scale; skin; pressure ulcer; moisture; nutrition; ICU; adult; education; nurses

The Braden Scale has the best sensitivity/specificity balance and is a good pressure ulcer risk predictor when compared with The Norton Scale, The Waterlow Scale, and nurses’ clinical judgment (Pancorbo-Hidalgo, Garcia-Fernandez, Lopez-Medina, & Alvarez-Nieto; 2006).

Nurses utilize the Braden scale score as well as subscale scores to determine which nursing interventions to use, proving the importance of accurate scores (Tchato, Putnam, & Ruap; 2013).

In one study, large variations were found amongst nurses’ interpretations of the Braden score, threatening the consistency and accuracy of Braden Scale assessments, calling for a training program to define vague patient descriptions (Choi, Choi, & Kim; 2014).
EVIDENCE

- Nurses show strong agreement in Braden subscores of sensory perception, activity, mobility, and friction/shear, but low agreement in moisture and nutrition (Rogenski & Kurcgant; 2012).

- Wound, ostomy, and continence nurses are the gold-standard for accurate Braden Scale scores (Choi, Choi, & Kim; 2014).

- In one study, Braden Scale Scores did not improve after just pressure ulcer re-education, but re-education did improve documentation of a nursing care plan for skin integrity (Provo, Placentine, & Dean-Baar; 1997).

- In one research study, nurses had higher, statistically significant test scores on pressure ulcers, including assessment, after re-education. Computer based testing was a good alternative to lecture. Knowledge loss occurred at three months, proving that nurses should continue to be re-educated, such as on a quarterly basis (Cox, Roche, & Van Wynen; 2011).

- Research by Tweed & Tweed (2008) indicates pressure ulcer assessment test scores improved with re-education but fell back to baseline after 20 weeks.
EVIDENCE

- Nurses were found to be better at identifying “not at risk” and “very high risk” than “mild risk” and “high risk.” Least correctly identified were moisture and sensory perception subscores. Disagreed with number of linen changes per shift. RN’s rated sensory perception higher than actual score, unless description provided. Tend to give patients inaccurately higher scores (Maklebust, Siegreen, Sidor, Gerlach, Bauer, & Anderson; 2005).

- In one study, nutrition had the poorest correct subscale scores. New nurses also had less accurate Braden Scale scores with moderate risk. Nurses are good at utilizing preventative interventions were, but they correlate poorly with Braden subscale scores (Megnan & Maklebust, 2008a).

- Effect of web-based training on Braden Scale varies according to familiarity. New users made more reliable and precise assessments after training, but regular users were unaffected by training. Further research needed to determine how to improve regular users scores (Magnan & Maklebust, 2008b).
Current Practice at LVHN

- No education on Braden Scale
- RNs are required to complete a Braden assessment on each patient, each shift
IMPLEMENTATION

Process Measures

- Indicator Name - Completion by 90% RNs
- Scale – Pre-test and Post-test
- Frequency of measures – Once
- Data Source – Select Survey; RN employee list
- Data Collected – By group; Select Survey responses
IMPLEMENTATION

Outcome Indicators

- Indicator Name – Braden Scale test accuracy
- Scale – Created case scenarios
- Frequency – Twice; pre and post- education
- Data Source – Select Survey
- Data Collected – By group and scored
Implementation Plan

- **Communication:** By Director at staff meeting; email
- **Education:**
  - **Who:** RNs on 2KS
  - **Methods:** PowerPoint created with help of WOCN
  - **When:** Tentatively scheduled end of April-beginning of May
Implementation Process

▪ Three phases:
  • Phase I – pre-test via email with due date
  • Phase II – education via email with due date
  • Phase III – post-test via email with due date

▪ Evaluation Indicators: Improvement in test scores, over 90% completion by RNs
Practice Change

- Braden Scale education for RNs on 2KS
- PowerPoint presentation
- Evaluated using the same pre- and post-survey
RESULTS

- ALL SUB-SCALE SCORES IMPROVED
- Key Findings:
  - Nurses were best at recognizing extremes (Severe Risk and No Risk)
  - Best overall score post-test – activity sub-score
  - Worst overall score post-test – mobility sub-score
  - Most improvement – moisture sub-score
  - Least improvement – sensory perception sub-score
RESULTS
Pre- and post-education scores
(Score = % correct)

- Severe risk = 50% → 81.8%
- High risk = 56.3% → 54.5%
- Moderate risk = 87.5% → 54.5%
- Mild risk = 62.5% → 63.6%
- No risk = 56.3% → 81.8%
Activity Sub-score

73.8% → 87.3% (+13.5%)

- **PRE:** 73.8% (Best= Bedfast @ 100%; Worst= Walks occasionally @ 62.6%)
- **POST:** 87.3% (Best= Bedfast @ 100%; Worst= Walks occasionally @ 81.8%)

- Best overall scores
- Second most improvement
**Friction/Shear Sub-score**

67.5% → 74.5% (+7%)

- **PRE:** 67.5%
  - RNs less likely to recognize turning a patient q2 hours, as a friction and shear issue as opposed to a restless patient.
    - 81.3% - [agitated patient] vs 43.8% - [chemically paralyzed patient]

- **POST:** 74.5%
Mobility sub-score

62.4% ⇒ 69.1% (+6.7%)

- Slight improvements
- Worst category in the post-test
  - Completely immobile - chemically paralyzed patient
  - Slightly limited - not recognized by all for patient making slight movements frequently
  - Paraplegic patient who was able to readjust self (most believed to be very limited)
Nutrition sub-score
77.5% → 81.8% (+4.3%)

- BEST pre-test scores:
  - Difficulty in identifying that patient being maintained on IVF (D5W ½ NS with 20 KCL) for 1 week correlates with poor nutrition
  - Biased as all questions R/T patients on IVs/TF for ICU arena
Moisture sub-score
57.5% → 80% (+22.5%)

- Worst pre-test scores

- Most improvement!
  - Difficulty in identifying that patient stooling with every turn = constantly moist
Sensory Perception sub-score
67.5% → 70.9% (+3.4%)

- Least improvement

- **Best** = Completely & no impairment @ 90.9%

- **Worst** = Very limited @ 54.5%
Correlation to Research Studies

- Will scores fall back to baseline in 20wks as in Tweed & Tweed (2008)?

- Nurses found to be better at identifying severe risk and no risk than identifying mild risk and high risk, similar to Maklebust, Siegreen, Sidor, Gerlach, Bauer, & Anderson (2005)
  
  - Unlike this study, nurses tended to give inaccurately lower scores than higher scores
  - Moisture and sensory perception worst categories in this study, as moisture was our worst category in pre-test

- Nutrition worst score in Megnan & Maklebust (2008a), which was not the case here BUT our scenarios were IVF/TF based and not based on patients actually eating meals

- Did not analyze data by years of experience as the studies did.. unsure how years of experience affected our data
RESULTS

NEXT STEPS

• Post-test survey again in “x” weeks to see if nurses retained knowledge

• Determine frequency of re-education needed to retain knowledge
Implications for LVHN

- Nurses on 2KS had more accurate scores after Braden Scale education
  - How would other units perform?
  - Is this an isolated occurrence?

- Need for quarterly bundle education?
Strategic Dissemination of Results

- Nurse Residency Graduation
- Present to 2KS staff at unit meeting
- Possibility of hospital-wide pressure ulcer committee
Lessons Learned

- **Errors to results**
  - 16 RNs took pre-test; 11 RNs took post-test (32.3% completion by 2K South RNs)
  - Epic training concurrently
  - Poor communication to staff (lack of brochures/flyers)
  - Time constraints (given 2 weeks to complete each part)
  - Incentive not announced until after pre-test
References

Make It Happen

- Questions/Comments:

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