Back to the Basics: Creating Evidence Based Nursing Protocols to Improve Patient Outcomes

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Disclosures

- Sage Products
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- Hill-Rom
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Session Objectives

• Describe the Interventional Patient Hygiene Model and how it aligns to basic infection prevention nursing care practices

• Compare and contrast narrow and expanded views of nurse's patient advocacy role and identify key basic nursing care that prevents skin injury

Notes on Hospitals: 1859

“It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm.”

Florence Nightingale

Advocacy = Safety
PROTECT THE PATIENT FROM BAD THINGS HAPPENING ON YOUR WATCH

Implement Interventional Patient Hygiene

Interventional Patient Hygiene

- Hygiene...the science and practice of the establishment and maintenance of health
- Interventional Patient Hygiene...nursing action plan directly focused on fortifying the patients host defense through proactive use of evidence based hygiene care strategies

Comprehensive Oral Care Plan

Hand Hygiene

Catheter Care

Bathing & Assessment

Incontinence Associated Dermatitis Prevention Program

Pressure Ulcer Prevention
### INTERVENTIONAL PATIENT HYGIENE (IPH)


- **VAP/HAP**
- **Oral Care/Mobility**
- **HAND**
- **Patient**
- **HYGIENE**
- **Catheter Care**
- **Skin Care/Bathing/Mobility**
- **CA-UTI**
- **CLA-BSI**
- **SSI**
- **HASI**

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### Pressure Ulcer (PU) Facts

- 2.5 million patients are treated annually in Acute Care in US
- NDNQI data base: critical care 7%  Med-Surg: 1-3.3%
- Acute care: 0-12%, Critical care: 3.3% to 53.4% (International Guidelines)
- Most severe pressure ulcer: sacrum (44.8%) or the heels (24.2%)
- 60,000 persons die from pressure ulcer complications each yr
- National health care cost $10.5-17.8 billon dollars for 2010

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Reddy, M et al. JAMA, 2006; 296(8): 974-984
Identify Patients at High Risk
Risk Assessment on Admission, Daily, Change in Patient Condition (B)

- Use standard EBP risk assessment tool
- Research has shown Risk Assessment Tools are more accurate than RN assessment alone
- Braden Scale for Predicting Pressure Sores Risk:
  - Pressure Ulcers
    - Mobility, sensation, perception, activity
    - Tissue tolerance to pressure
    - Nutrition, moisture, shear/friction
  - Score 6-23

Clinical judgment of nurses alone achieve inadequate capacity to assess PU risk

Its About the Sub-Scale’s

- Retrospective cohort analysis of 12,566 adults patients in progressive & ICU settings for yr. 2007
- Identifying patients with HAPU Stage 2-4
- Data extracted: Demographic, Braden score, Braden subscales on admission, LOS, ICU LOS, presence of Acute respiratory and renal failure
- Calculated time to event, # of HAPU’s

Results:
- 3.3% developed a HAPU
- Total Braden score predictive (C=.71)
- Subscales predictive (C=.83)
A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear.

Moisture increases the impact of shear and friction coefficient.

Adapted from Barb Bates-Jensen & NPUAP
EBP Recommendations to Achieve Offloading & Reduce Pressure (A)

• Turn & reposition every (2) hours (avoid positioning patients on a pressure ulcer)
  – Repositioning should be undertaken to reduce the duration & magnitude of pressure over vulnerable areas
  – Consider surface when determining freq
  – Cushioning devices to maintain alignment / 30° side-lying & prevent pressure on boney prominences
  – Use lifting device or other aids to reposition & make it easy to achieve the turn
  – Assess whether actual offloading has occurred

Prophylactic Dressings: Emerging Therapies

• Consider applying a polyurethane foam dressing to bony prominences in the areas frequently subjected to friction and share (B)
• Consider placement prior to prolonged procedures or continuous head elevation (B)
• Consider ease of application and removal and the ability to reassess the skin.
• Continue to use all of other preventative measures necessary when using prophylactic dressings (C)

EBP Recommendations to Reduce Shear & Friction

- Loose covers & increased immersion in the support medium increase contact area
- Use lifting/transfer devices & other aids to reduce shear & friction.
  - Mechanical lifts
  - Transfer sheets
  - 2-4 person lifts
  - Turn & assist features on beds
    - Do not leave moving and handling equip underneath the patient

Current Practice:
Turn & Reposition

- Transfer Device
- Specialty Bed
- Disposable Slide Sheets
- Draw Sheet/Pillows/Layers of Linen
- Lift Device

Attitude & Accountability

Factors Impacting the ability to Achieve Quality Nursing Outcomes at the Point of Care

Achieving the Use of the Evidence For Mobility & Moisture

Resource & System
- Breathable glide sheet/stays
- Foam Wedges
- Microclimate control
- Reduce layers of linen
- Wick away moisture body pad
- Protects the caregiver


In-Bed Technology

Value

Skills & Knowledge
EBP Recommendations to Achieve Offloading & Reduce Pressure

- Turn & reposition every 2 hours (avoid positioning patients on a pressure ulcer)
  - Use active support surfaces for patients at higher risk of development where frequent manual turning may be difficult
  - Microclimate management
  - Early Mobility programs
  - Seated support surfaces for patients with limited mobility when sitting in a chair


EBP Recommendations to Achieve Offloading & Reduce Pressure

Ensure the heels are free of the bed surface

- Heel-protection devices should elevate the heel completely (off-load) in such a way as to distribute weight along the calf
- The knee would be in slight flexion
- Remove device periodically to assess the skin
Moisture Injury: Incontinence Associated Dermatitis

- Inflammatory response to the injury of the water-protein-lipid matrix of the skin
  - Caused from prolonged exposure to urinary and fecal incontinence
- Top-down injury
- Physical signs on the perineum & buttocks
  - Erythema, swelling, oozing, vesiculation, crusting and scaling
- Strain at which the skin breaks is 4x greater with excess moisture than dry skin

Brown DS & Sears M, OWM 1993;39:2-26
IAD Assessment Tool

Hospital Survey on Incontinence & Related Skin Injury

Patient Information

Date of Survey: ___________ Unit: ___________

Patient: Name: ___________ Sex: ___________ Age: ___________

Birthdate: ___________ Race/ethnicity: ___________ Language: ___________

Address: ___________ Telephone: ___________ E-mail: ___________

Instructions:

• This survey is limited to inpatient care areas and excludes the following: Home Health, Long Term Care, Inpatient Rehabilitation, Women's, Emergency Department & Operating Room. 

• Complete ONLY ONE form for each unit

Unit / Work Area:

• General Medicine
• Critical Care
• Behavioral Health
• Orthopedic
• Surgical
• Trauma
• Neurological

Date of Survey: ___________ Unit: ___________

Patient Information

Note: Complete ONLY ONE form for each unit


IAD: Multisite Epidemiological Study

• 791 patients in 20 facilities in US
• One day prevalence
  – To measure the prevalence of IAD in the acute care setting,
  – To describe clinical characteristics of IAD, and
  – To analyze the relationship between IAD and prevalence of sacral/coccygeal pressure ulcers
• Results: Incontinence 54%
  – 16.3% perineal skin damage, (23.3%) IAD
  – All patients had urinary or fecal incontinence or both
  – 26% was present on admission, 74% was hospital acquired
  – IAD was associated with an increased prevalence of sacral/coccygeal pressure ulcers (p<0.000).

Gray M, Presented at the 23rd Annual Meeting of the Wound Healing Society; SAWC Spring/WHS Joint Meeting: Denver, Colorado May 1 - 5, 2013
EBP Recommendations to Reduce Injury From Incontinence & Other Forms of Moisture

• Clean the skin as soon as it becomes soiled.
• Use an incontinence pad and/or briefs that wick away
• Use a protective cream or ointment
  – Disposable barrier cloth recommend by IHI & IAD consensus group
• Ensure an appropriate microclimate & breathability
• < 4 layers of linen
• Barrier & wick away material under adipose and breast tissue
• Pouching device or a bowel management system

Evidence-based Components of an IAD Prevention Program

• Skin care products used for prevention or treatment of IAD should be selected based on consideration of individual ingredients in addition to consideration of broad product categories such as cleanser, moisturizer, or skin protectant. (Grade C)
  – A skin protectant or disposable cloth that combines a pH balance no rinse cleanser, emollient-based moisturizer, and skin protectant is recommended for prevention of IAD in persons with urinary or fecal incontinence and for treatment of IAD, especially when the skin is denuded. (Grade B)
  – Commercially available skin protectants vary in their ability to protect the skin from irritants, prevent maceration, and maintain skin health. More research is needed (Grade B)


www.ihi.org
IAD/HAPU Reduction Study

- Prospective, descriptive study
- 2 Neuro units
- Phase 1: prevalence of incontinence & incidence of IAD & HAPU
- Phase 2: Intervention
  - Use of a 1 step cleanser/barrier product
  - Education on IAD/HAPU
- Results:
  - Phase 1: incontinent 42.5%, IAD 29.4%, HAPU 29.4%, LOS 7.3 (2-14 days), Braden 14.4
  - Phase 2: incontinent 54.3%, IAD & HAPU 0, LOS 7.4 (2-14), Braden 12.74

How Do We Make It Happen?

Universal PUP Bundle with WOC Support = HAPU

- Quasi experimental pre-post design
- Intact skin on admission
- 180 pre-intervention received SOC and 146 post-intervention received UPUP & 2x weekly WOC rounding

Results:
- HAPU ↓ from 15.5% to 2.1%
- 204 rounds over 6 months
- ↑ adherence to heel elevation (p<.001) & repositioning (p<.015)


Universal PUP Bundle
- Skin Emollients
- Assessment
- Floating Heels
- Early Identification
- Repositioning

SAFER
Patient Skin Integrity Bundle (InSPIRE)

Methodology
• Before & after design
• 105 ICU pts in experimental group
• 102 ICU pts in control group
• Control-SOC
• Intervention: InSPIRE
  – Skin assessment on admission (4hrs) & surface placement
  – Ongoing Q 12
  – Skin hygiene (1x bath pre-package)
  – Turning q 3hrs/turn clock
  – ET & NG evaluated q 12 & repositioned
  – Heel device
  – Microclimate

Results:
– Groups similar on major demographics (age, SOFA, ICU LOS)
– Cumulative HAPU ↓ in intervention group 18.1% vs. 30.4% (p=.04)
– Mucosal injuries ↓ 15% vs. 39% p <.001
– Overall processes of care did not differ
– Device observation/repositioned 76% vs 28% of days (p <.001)
– Bathed only 1x per day in intervention group
– Repositioning q3hrs 83% vs. 51% days observed (p<.001)

Sustaining Your Initiative
• Advocacy
• Braden subscales
• Skin rounds/time frequency
• Hand-off communication
• The right products and processes
• Quarterly prevalence/incidence of PU & IAD
• Skin liaison/champion nurses
• Creative strategies to reinforce protocol use
  • Visual cues in the room or medical record
  • Rewards for increase compliance
• Yearly competencies on beds or positioning aids to ensure correct and maximum utilization
Activity without purpose is the drain of your resources

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