New Strategies to Improve Assessment, Documentation and Prevention of Pressure Injuries

Janet Cuddigan, PhD, RN, CWCN, FAAN
Professor, UNMC College of Nursing
 Omaha, NE
Focus of this Presentation

- New developments in pressure injury staging
- Review of staging algorithm
- Skin assessment in dark-pigmented skin
- Latest updates on prevention injury best practices
- Impact of ICD 10 coding changes and considerations for documentations.
Trends in NDNQI Data: A Reason for Hope?

Shifting NDNQI Benchmarks?

2011-2016 NDNQI HAPI Rates

Unpublished NDNQI Data. Used with permission.
Shifting Stage Distributions?

Distribution of HAPI by Stage

Conclusions:
- Relative proportion of Stage 1 and 2 HAPI decreasing over time.
- Stage 3, 4, Unstageable and DTPI increasing over time.
Insights on Process Improvement

2015 Compliance with Process Measures

Unpublished NDNQI Data. Used with permission.
Moving the Needle

How do we close the gap?


...Zero Avoidable?
Top 5 Immediate Opportunities

1. Improve staging accuracy.
2. Improve coding accuracy.
3. Prevent MDR PI.
4. Re-examine prevention in critical care.
5. Focus on OR-acquired PI.
1. Improve staging accuracy.

**Problem**
Are you sure this is a pressure injury?
If yes, is it staged, documented and treated correctly?

**Action**
Re-education of interdisciplinary team.
Inter-rater reliability and competency testing.

**Resources**
2016 NPUAP Pressure Injury Staging Definitions
NPUAP Staging Slide Set
NDNQI free CE modules
Pressure Injury Definition

A pressure injury is localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device.

The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense pressure, prolonged pressure or pressure in combination with shear.

The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue.
Stage 1 Pressure Injury: Non-blanchable erythema of intact skin

Intact skin with a localized area of non-blanchable erythema, which may appear differently in darkly pigmented skin. Presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes. Color changes do not include purple or maroon discoloration; these may indicate deep tissue pressure injury.
Blanchable vs. Non-Blanchable

Photo courtesy of Dr. Tom Defloor

Photo courtesy of EPUAP

NOT APPLICABLE
Stage 2 Pressure Injury: Partial-thickness skin loss with exposed dermis

Partial-thickness skin loss with exposed dermis. The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister. Adipose (fat) is not visible and deeper tissues are not visible. Granulation tissue, slough and eschar are not present. These injuries commonly result from adverse microclimate and shear in the skin over the pelvis and shear in the heel.
Stage 3 Pressure Injury: Full-thickness skin loss

Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible. The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage or bone is not exposed. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.
Stage 3 Pressure Injury with Epibole

- Epibole (ee-PIB-oh-lee)
- Rolled edge
  - Due to lack of tissue in the wound bed to support the epidermal cells to cross the wound bed
  - Needs to be removed

Area of Focus
Stage 4 Pressure Injury: Full-thickness loss of skin and tissue

Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.
How would you stage this pressure injury?
Unstageable Pressure Injury: Obscured full-thickness skin and tissue loss

Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed. Stable eschar (i.e. dry, adherent, intact without erythema or fluctuance) on an ischemic limb or the heel(s) should not be softened or removed.
Deep Tissue Pressure Injury: Persistent non-blanchable deep red, maroon or purple discoloration

Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister. Pain and temperature change often precede skin color changes. Discoloration may appear differently in darkly pigmented skin. This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface.
Deep Tissue Pressure Injury - continued

The wound may evolve rapidly to reveal the actual extent of tissue injury, or may resolve without tissue loss. If necrotic tissue, subcutaneous tissue, granulation tissue, fascia, muscle or other underlying structures are visible, this indicates a full thickness pressure injury (Unstageable, Stage 3 or Stage 4). Do not use DTPI to describe vascular, traumatic, neuropathic, or dermatologic conditions.
Evolution of Deep Tissue Pressure Injury

- **Day 1** - Classify intact, discolored skin this pressure as a Deep Tissue Pressure Injury
- **Day 3** - Classify discolored skin with epidermal blistering as a Deep Tissue Pressure Injury
- **Day 10** - If the Deep Tissue Pressure Injury becomes necrotic, classify it as an Unstageable Pressure Injury
NPUAP Pressure Injury Stages

• Numerically stage if depth visible/palpable:
  • Stage 1
  • Stage 2
  • Stage 3
  • Stage 4

• Depth not visible:
  • Unstageable
  • Deep Tissue Pressure Injury (DTPI)

• Additional Considerations:
  • Describes anatomic depth that is visible or palpable.
  • Deeper damage possible
  • Does not progress 1-4
  • Does not heal 4-1. Do NOT Downstage
  • Note if caused by a medical device
  • Pressure injuries on mucous membranes should not be staged.
  • Injury does not imply fault
Pressure/Shear at Injury Site?

**Deepest tissue type visible?**

- **YES**
  - *Stage 1*
  - or
  - *Stage 2*
  - or
  - *Stage 3*
  - or
  - *Stage 4*
  - *Mucosal Membrane Pressure Injury* (Name, count; but do not stage)

- **NO**
  - *Unstageable* (obsured by slough or eschar)
  - or
  - *Deep Tissue Pressure Injury*
  - or
  - *Non-Visible* (Under non-removable dressing or device—NDNQI / CMS only)

**Wounds & skin injuries due to:**

- **Disease:**
  - Arterial ulcers
  - Venous ulcers
  - Diabetic Foot ulcers

- **Moisture:**
  - MASD
  - IAD
  - Intertriginous dermatitis

- **Trauma:**
  - Skin tears
  - MARSI
  - Burns
  - Abrasions
  - Bruises

*See NPUAP staging definitions.*

Classify/stage first. THEN determine if etiology is related to a medical device.
Medical Device Related.....

• ....is an etiology.
• It is not a stage.

• **FIRST** Classify/Stage
• **THEN** determine if etiology is related to a medical device.
2. Improve coding accuracy.

**Problem**

- Some PI rates based on coding.
- Reimbursement based on quality indicators.
- Inadequate, inaccurate or inconsistent terminologies and codes.

**Action**

- Improve inter-professional communication
- Improve accuracy of documentation.
- Work with coders! Do they see what you see?
- Rounding. Case Discussions. Weekly audits of discharges with PI

**Resources**

- Requires an organized national response to coordinate and harmonized terminology based on current science.
- NPUAP Task Force on Coding and Terminology.
3. Prevent Medical Device Related Pressure Injuries (MDR PI)

Medical device related pressure injuries result from the use of devices designed and applied for diagnostic or therapeutic purposes. The resultant pressure injury generally conforms to the pattern or shape of the device. The injury should be staged using the staging system.

This describes an etiology. It is not a stage.

- Use the staging system to stage.
- Then note whether the injury is known to be related to a medical device.
- When assessing medical device related pressure injuries, remove only those devices that can be safely removed.
- Prevention requires unique strategies.
Best Practices for Prevention of Medical Device-Related Pressure Injuries in Critical Care

- Choose the correct size of medical device(s) to fit the individual
- Cushion and protect the skin with dressings in high-risk areas (e.g., nasal bridge)
- Inspect the skin in contact with device at least daily (if not medically contraindicated)
- Avoid placement of device(s) over sites of prior or existing pressure injury
- Educate staff on correct use of devices and prevention of skin breakdown
- Be aware of edema under device(s) and potential for skin breakdown
- Confirm that devices are not placed directly under an individual who is bedridden or immobile
3. Prevent MDR PI.

**Problem**

30 to 50% of all pressure injuries in adults.
Most common cause of pressure injury in children.
Requires unique prevention strategies.

**Action**

Careful selection of devices.
Prevention protocols specific to MDR PI.
Re-education of staff.

**Resources**

NPUAP Free Poster
International Guideline E-chapter & Task Force
NDNQI free CE modules

**Problem**

Higher HAPI rates than other units.
Too unstable to turn?

**Action**

Go beyond Braden in risk assessments.
High risk – aggressive prevention. Medical devices.
Turning strategies for the “too unstable to turn”.
Careful differentiation of Avoidable vs Unavoidable.

**Resources**

International Guideline E-chapter
Prevention Injury Prevention Inventory (Pittman, 2015)
4. OR acquired pressure injuries

**Problem**
High risk area. Long periods of immobility. Perfusion.
Use of medical devices
Unique positioning

**Action**
Go beyond Braden in risk assessments.
OR specific risk assessment tools.
Track HAPI to OR with root cause analysis.
Protocols for risk assessment, positioning, medical devices
Improve hand-offs to PACU and floor.

**Resources**
International Guideline E-chapter
AORN Toolkit
NPUAP Task Force. NPUAP Free Webinar – September 2017
Future Challenges and Opportunities

• Refining definition of unavoidable PI.
• Clarifying POA, especially in relation to DTPI.
• Differentiating reopened, recurrent and new PI.
• Harmonizing terminology (LOINC & SNOMED) and coding (ICD 10 and 11) with new evidence based definitions.
• NQF 0678: New or worsened pressure injuries.
Questions

Contact information:

www.npuap.org

Janet Cuddigan, PhD, RN, CWCN, FAAN
Professor, University of Nebraska Medical Center, Omaha, NE
jcuddiga@unmc.edu