# Pressure Injury Prevention & Care


DEPARTMENT OF NURSING EDUCATION

INSTITUTE OF CONTINUOUS LEARNING

# 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.

## PRESENTATION

Intact Skin or

Open ulcer

Note: It is painful!

## CAUSES

- Intense Pressure
- Prolonged Pressure
- Pressure + Sheer

(NPIAP – National Pressure Injury Advisory Panel, 2016)

# Pressure Injury – Risk Assessment

**THE BRADEN SCALE**

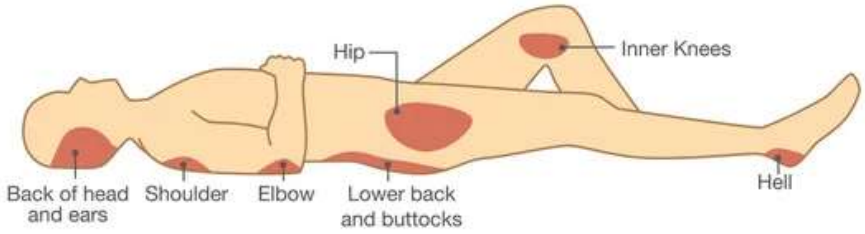
evidenced-based tool

predicts the risk for developing a hospital-acquired pressure injury.

Scores 6 risk factors:

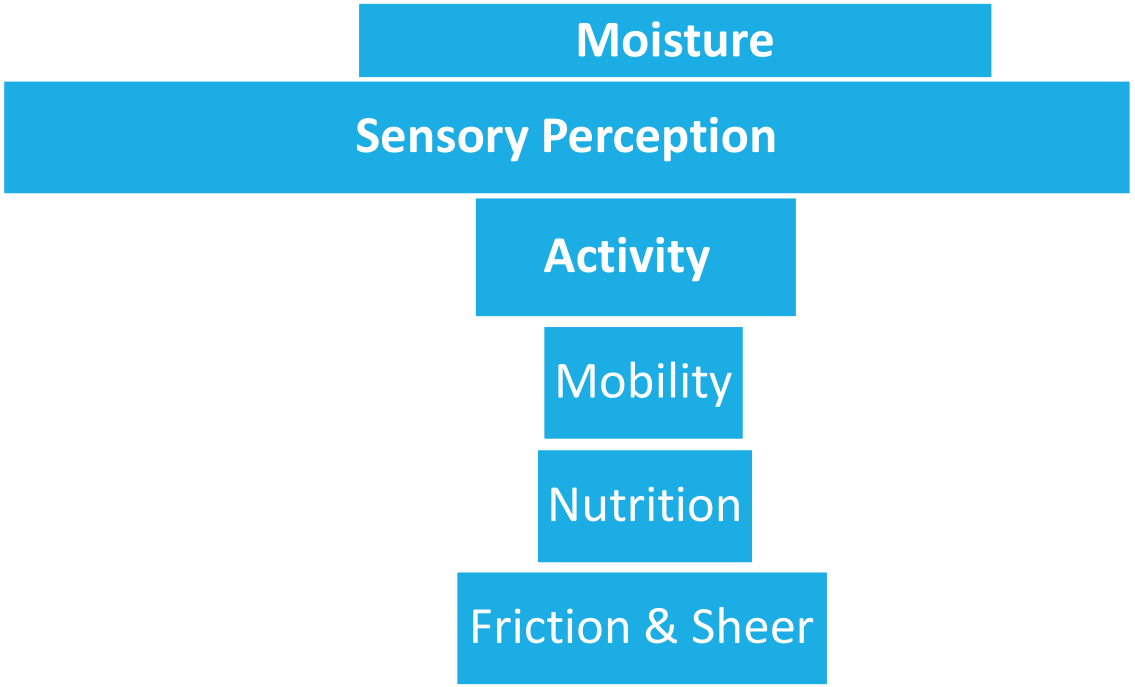
**THE BRADEN SCALE – SCORING:**

19-23 = no risk
15-18 = mild risk
13-14 = moderate risk
Less than 12 = High Risk
less than 9 = severe risk




SOURCE: Barbara Braden and Nancy Bergstrom. Copyright, 1988

# Pressure Injury –Braden Scale Risk Factors




SOURCE: Barbara Braden and Nancy Bergstrom. Copyright, 1988

# Pressure Injury –Braden Scale Risk Factors

| **Sensory Perception** | **Moisture** | **Activity** | Mobility | Nutrition | Friction & Sheer |
|---|---|---|---|---|---|
| Ability to respond meaningfully to pressure-related discomfort | Degree to which skin is exposed to moisture | Degree of physical activity | Ability to change and control body position | Usual food intake pattern | Movement up and down in bed & potential injury |

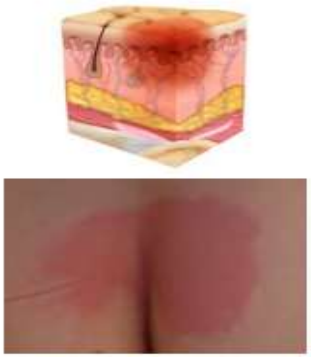
SOURCE: Barbara Braden and Nancy Bergstrom. Copyright, 1988

# Braden Scale – Interventions

| Sensory Perception | Moisture | Activity | Mobility | Nutrition | Friction & Sheer |
|---|---|---|---|---|---|
| • Turn & Position Q2 hours & PRN<br>• Keep bed tidy and free of objects<br>• One sheet, one pad!<br>• Off-load heels<br>• Protect bony prominences | • Create Toileting Schedule<br>• Change/clean patient when wet<br>• Utilize 'Purewick' or Texas Catheter<br>• Apply moisture barrier to skin | • Activity as ordered (fall prevention measures)<br>• Change position Q2 hours in chair<br>• If bedrest, turn/change patient | • Turn and position Q2 hours and PRN<br>• PROM (as ordered)<br>• Pressure-relieving mattress<br>• Manage other risk factors (nutrition, moisture etc.) | • Obtain nutrition consult<br>• Provide supplementation<br>• Assess % of meal complete<br>• Assess protein intake & supplement as ordered<br>• Supplement vitamins A, C, E | • HOB not elevated >30% (unless contraindicated)<br>• Use lift sheet to move patient up in bed<br>• Ask patient to help/use trapeze to move up |

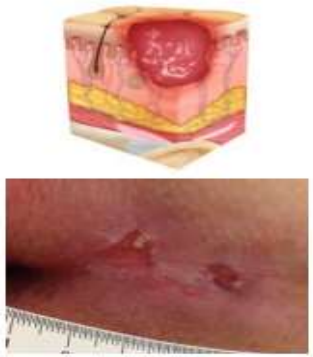
SOURCE: Barbara Braden and Nancy Bergstrom. Copyright, 1988

# NPIAP STAGING FOR LIGHTLY PIGMENTED SKIN



### 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.

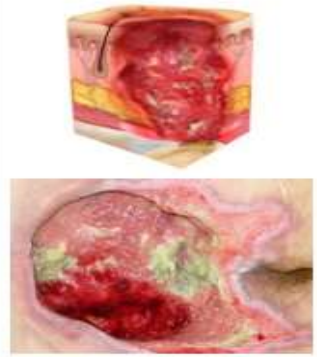


### STAGE 2 PRESSURE INJURY: PARTIAL-THICKNESS SKIN LOSS WITH EXPOSED DERMIS

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.

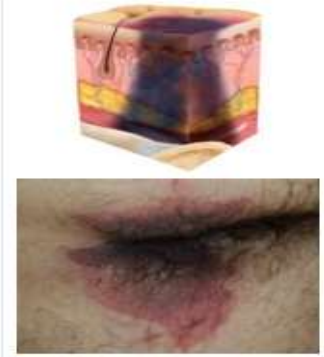


### STAGE 4 PRESSURE INJURY: FULL-THICKNESS LOSS OF SKIN AND TISSUE

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.

### UNSTAGEABLE PRESSURE INJURY: OBSCURED FULL-THICKNESS SKIN AND TISSUE LOSS

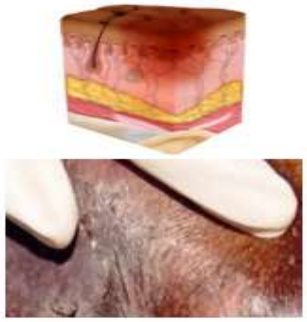
Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed. Stable eschar (i.e. dry, adherent, intact without erythema or 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.

# NPIAP STAGING FOR DARKLY PIGMENTED SKIN



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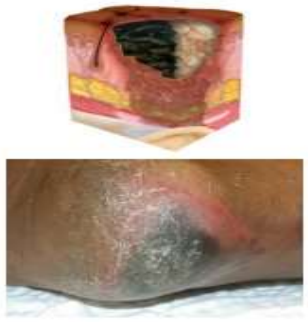

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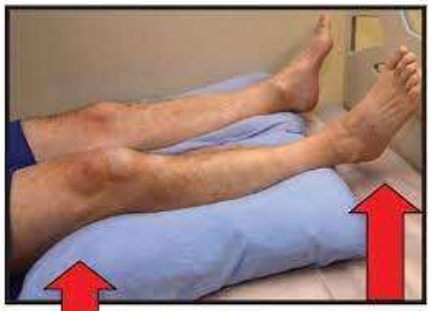
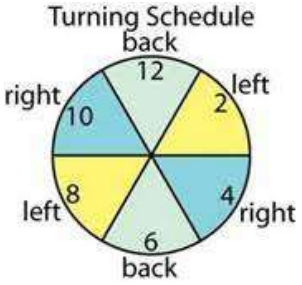
**TIPS FOR STAGING DARKLY PIGMENTED SKIN:**

- Moisten the skin
- Inspect for changes in pigmentation
- Palpate for edema
- Ask about pain in the area
- Use indirect light to examine skin

# Pressure Injury Prevention Products Used at UHB







# Pressure Injury Treatment Products UHB

# Wound Care Referral & Consult

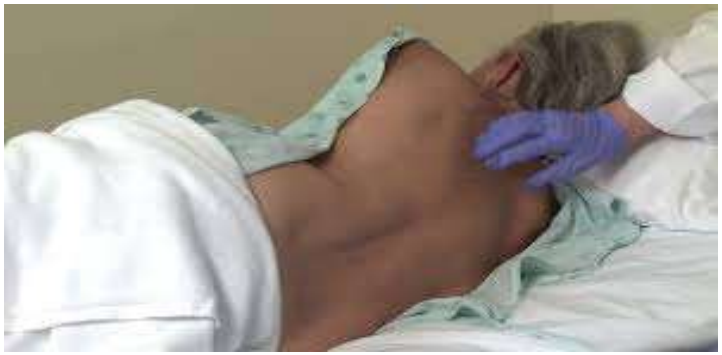
**On Admission:**

RN Performs **Full** Head to Toe Assessment

If no pressure injury – Braden scale to determine risk factors

If suspected pressure injury, RN:

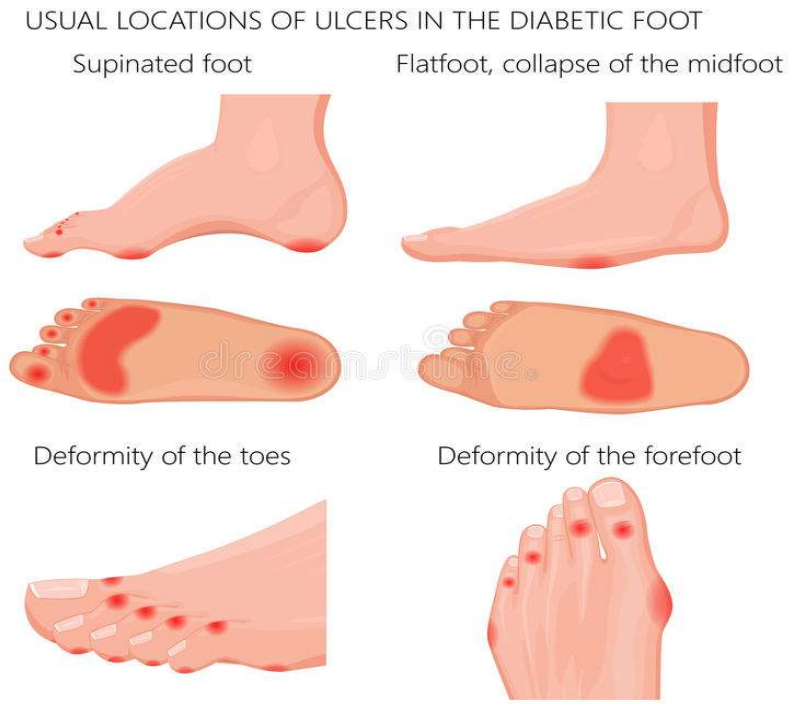
1. Involves WTA (wound treatment associate)
2. Submits wound care referral (in Healthbridge)
3. Notifies LIP……LIP enters treatment order

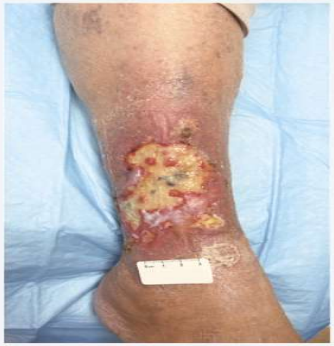
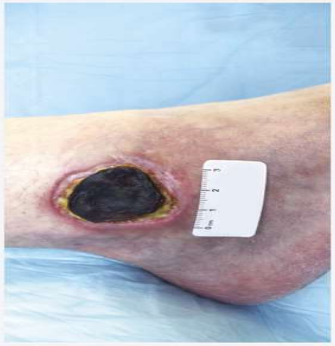
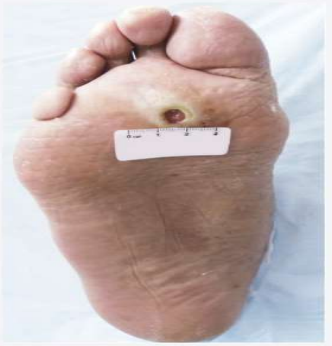
# Non-Pressure Injury

Most common types:

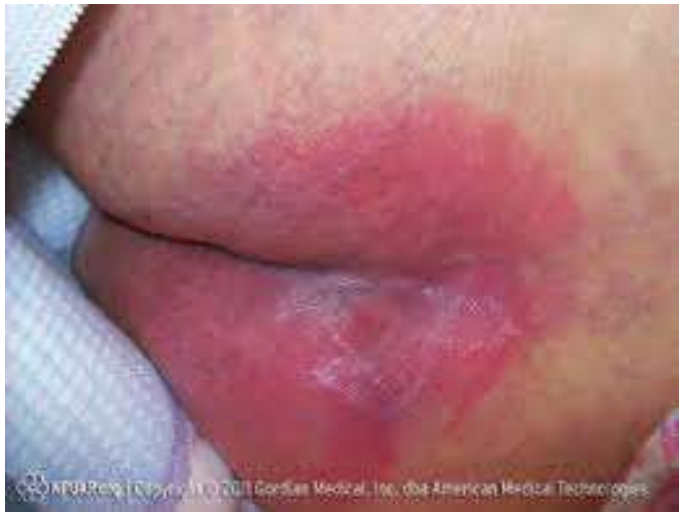
- Diabetic
- Venous
- Arterial
- Moisture-related
- Traumatic



# NON-PRESSURE INJURY

| Feature | Ulcer Type | | |
|---|---|---|---|
| | Venous | Arterial | Neuropathic Diabetic |
| Underlying condition | Varicose veins, previous deep-vein thrombosis, obesity, pregnancy, recurrent phlebitis | Diabetes, hypertension, smoking, previous vascular disease | Diabetes, trauma, prolonged pressure |
| Ulcer location | Area between the lower calf and the medial malleolus | Pressure points, toes and feet, lateral malleolus and tibial areas | Plantar aspect of foot, tip of the toe, lateral to fifth metatarsal |
| Ulcer characteristic | Shallow and flat margins, moderate-to-heavy exudate, slough at base with granulation tissue | Punched out and deep, irregular shape, unhealthy wound bed, presence of necrotic tissue, minimal exudate unless infected | Deep, surrounded by callus, insensate |
| |  |  |  |
| Condition of leg or foot | Hemosiderin staining, thickening and fibrosis, eczematous and itchy skin, limb edema, normal capillary refill | Thin shiny skin, reduced hair growth, cool skin, pallor on leg elevation, absent or weak pulses, delayed capillary refill, gangrene | Dry, cracked, insensate, calluses |
| Treatment | Compression therapy, leg elevation, surgical management | Revascularization, antiplatelet medications, management of risk factors | Off-loading of pressure, topical growth factors |

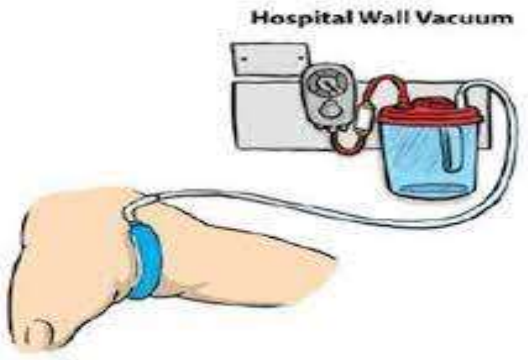
# Moisture-Related Skin Injury



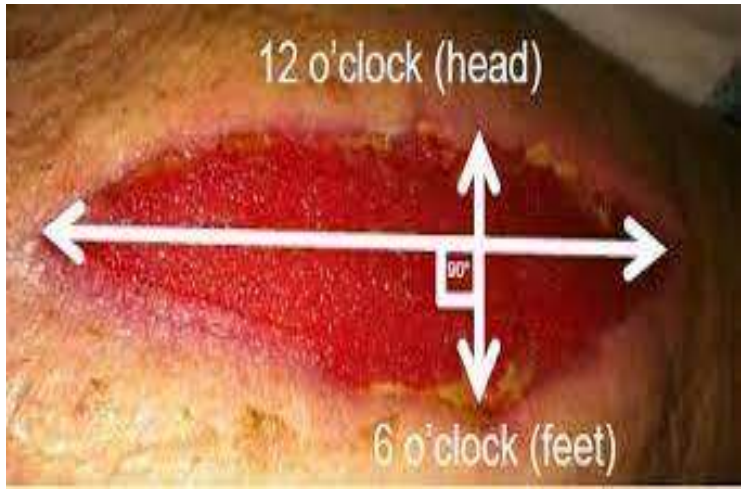
# Moisture-Related Skin Injury Prevention Products Used at UHB

MALE

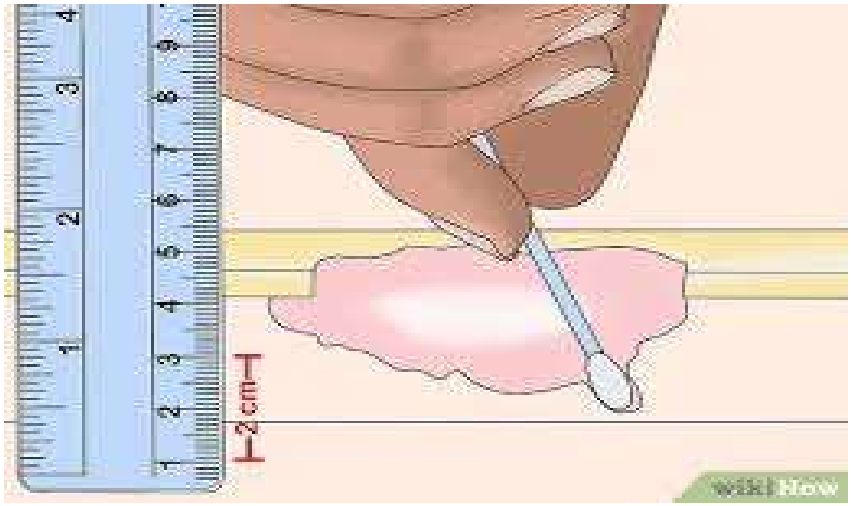
FEMALE

# Pressure Injury Measurement

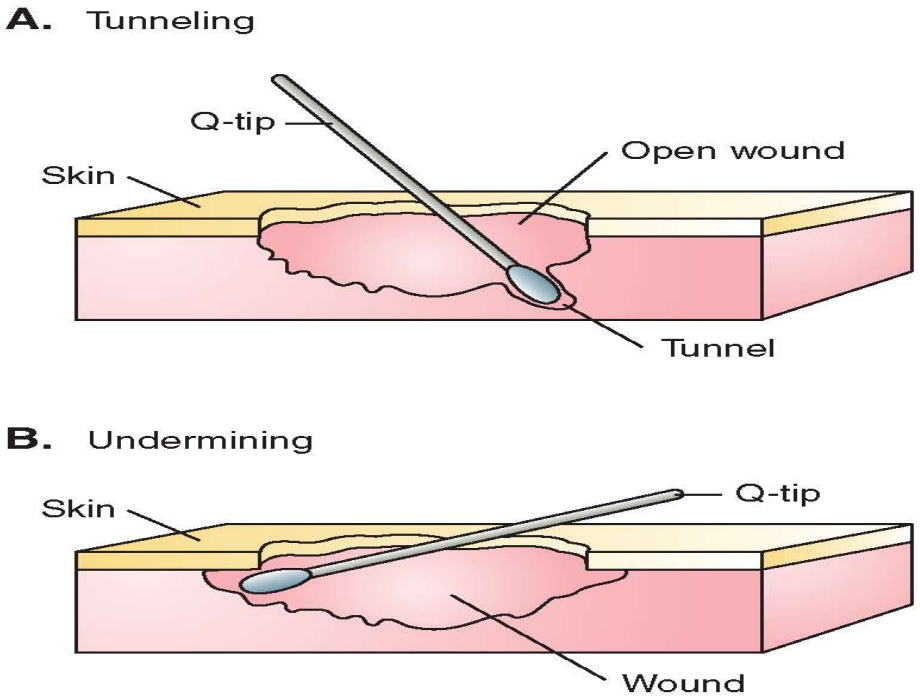



**Length & Width**




Depth

# Pressure Injury Measurement



# Document

- Early recognition is key (hospital vs community acquired)
- Initial measurement, appearance, odor
- Treatment and preventative interventions per shift
- Progression and updates in measurement weekly and PRN
- Referrals (e.g. nutrition)
- Healed pressure injury always referred to as ‘healed stage ____’

# References

Baris, Nuray MSN; Karabacak, Bilgi Gulseven PhD; Alpar, Şule Ecevit Prof The Use of the Braden Scale in Assessing Pressure Ulcers in Turkey, Advances in Skin & Wound Care: August 2015 - Volume 28 - Issue 8 - p 349-357 doi: 10.1097/01.ASW.0000465299.99194.e6

By the Numbers: Braden Score Interventions, Advances in Skin & Wound Care: April 2004 - Volume 17 - Issue 3 - p 150