WHAT ‘S IN A NAME?

- 1777: decubitus is the oldest term used
- 1942 Studies and papers were starting to be published using decubitus
- 1959 Ischemic ulcers were noted
- 1975 Bedsores
- 1980’s Pressure sore
- 1990’s Pressure Ulcer
- June 2016 Pressure Injury
AGE RELATED CHANGES THAT CONTRIBUTE TO PRESSURE ULCER RISK.

- *Thinning of the dermal epidermal junction.* Leads to wrinkling, tearing, loss of elasticity, increased skin permeability, & alterations in barrier function of the skin.
- *An altered immune response & decreased dermal vascularity.* Causes a greater potential for infection.

GOALS OF EDUCATION FOR PRESSURE ULCER RISK PREDICTION AND PREVENTION FOR NURSING HOMES

- Identify overall goals for the facility & for each resident
- Outline clearly the role of each team member/position
- Encourage input from all staff at both the resident level & the facility level
- Use current standards & sound facility policies to deliver resident specific care
- Make the care plan the primary resource document for delivering resident specific care
DEATH AND LAW SUITS

- Powell found a 129% higher death rate for pts admitted to LTC who developed a pressure ulcer than those who did not.
- Burd et. al reported a risk of death among geriatric patients who developed a pressure ulcer to be 4 times greater than the norm, & 6 times greater in those whose pressure ulcers did not heal.
- Estate of Cote: Arizona jury awarded $16.7 million in punitive damages and $2.5 million in Compensatory damage against a SNF
  - Pressure Ulcers are Easy Pickings for Lawsuits: Provider April 2016 pg 35-37

STATISTICS IN AGED CARE

- Prevalence Rates: 4.1% to 32.2%: Number of individuals with a PU at a specific point in time
- Incidence & Facility Acquired Rates: 1.9% to 59% Incidence is the number of new pressure ulcers that develop during a specific time period, such as a year.
- Significant variations in study methods and methodological rigor limit the value of these data points
**COSTS**

- Latest figures shows the average cost for treating a pressure ulcer is over 1 billion annually and additional $2.2 million in Medicare Hospital Days
- Cost for treatment $6,000 to $60,000 depending on size and stage
- Some sources indicate cost per ulcer can be up to $90,000


**NEW DEFINITION BY THE NPUAP**

- Pressure Injury: A pressure injury is localized damage to the skin and/or 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 and/or 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

- *NPUAP National Pressure Ulcer Advisory Panel 2016*
**CURRENT CMS DEFINITION**

- **F686:** *NOTE:* Regardless of the staging system or wound definitions used by the facility, the facility is responsible for completing the MDS utilizing the staging guidelines found in the RAI Manual.

- **PRESSURE ULCER/INJURY** A pressure ulcer/injury is localized injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of intense and/or prolonged pressure or pressure in combination with shear. The pressure ulcer/injury can present as intact skin or an open ulcer and may be painful.

- **RAI Manual** page M-4

**EXTERNAL FACTORS**

*Pressure*

*Friction*
**SHEAR**

Tissue layers slide against each other, disrupts or angulates blood vessels

---

**PLANNING FOR CARE**

- The pressure ulcer/injury definitions used in the RAI Manual have been adapted from those recommended by the National Pressure Ulcer Advisory Panel (NPUAP) 2016 Pressure Injury Staging System.
- An existing pressure ulcer/injury identifies residents at risk for further complications or skin injury. Risk factors described in M0100 should be addressed
PLANNING FOR CARE

• For MDS assessment, initial numerical staging of pressure ulcers and the initial numerical staging of ulcers after debridement, or DTI that declares itself, should be coded in terms of what is assessed (seen or palpated, i.e. visible tissue, palpable bone) during the look-back period. Nursing homes may adopt the NPUAP guidelines in their clinical practice and nursing documentation. However, since CMS has adapted the NPUAP guidelines for MDS purposes, the definitions do not perfectly correlate with each stage as described by NPUAP. Therefore, you must code the MDS according to the instructions in this manual.

CODING TIPS

• If an ulcer/injury arises from a combination of factors that are primarily caused by pressure, then the area should be included in this section as a pressure ulcer/injury.
• If a pressure ulcer is surgically closed with a flap or graft, it should be coded as a surgical wound and not as a pressure ulcer. If the flap or graft fails, continue to code it as a surgical wound until healed.
Residents with diabetes mellitus (DM) can have a pressure, venous, arterial, or diabetic neuropathic ulcer. The primary etiology should be considered when coding whether a resident with DM has an ulcer/injury that is caused by pressure or other factors.

If a resident with DM has a heel ulcer/injury from pressure and the ulcer/injury is present in the 7-day look-back period, code 1 and proceed to code items in M0300 as appropriate for the pressure ulcer/injury.

If a resident with DM has an ulcer on the plantar (bottom) surface of the foot closer to the metatarsals and the ulcer is present in the 7-day look-back period, code 0 and proceed to M1040 to code the ulcer as a diabetic foot ulcer. It is not likely that pressure is the primary cause of the resident’s ulcer when the ulcer is in this location.
REVERSE STAGING

• Pressure ulcers do not heal in a reverse sequence, that is, the body does not replace the types and layers of tissue (e.g., muscle, fat, and dermis) that were lost during pressure ulcer development before they re-epithelialize. Stage 3 and 4 pressure ulcers fill with granulation tissue. This replacement tissue is never as strong as the tissue that was lost and hence is more prone to future breakdown.

• Clinical standards do not support reverse staging or backstaging as a way to document healing, as it does not accurately characterize what is occurring physiologically as the ulcer heals. For example, over time, even though a Stage 4 pressure ulcer has been healing and contracting such that it is less deep, wide, and long, the tissues that were lost (muscle, fat, dermis) will never be replaced with the same type of tissue. Previous standards using reverse staging or backstaging would have permitted identification of such a pressure ulcer as a Stage 3, then a Stage 2, and so on, when it reached a depth consistent with these stages. Clinical standards now would require that this ulcer continue to be documented as a Stage 4 pressure ulcer until it has completely healed.
REVERSE STAGING

- Nursing homes can document the healing of pressure ulcers using descriptive characteristics of the wound (i.e., depth, width, presence or absence of granulation tissue, etc.) or by using a validated pressure ulcer healing tool. Once a pressure ulcer has healed, it is documented as a healed pressure ulcer at its highest numerical stage—in this example, a healed Stage 4 pressure ulcer. For care planning purposes, this healed Stage 4 pressure ulcer would remain at increased risk for future breakdown or injury and would require continued monitoring and preventative care.

DEFINITIONS

- **EPITHELIAL TISSUE**
  - New skin that is light pink and shiny (even in persons with darkly pigmented skin). In Stage 2 pressure ulcers, epithelial tissue is seen in the center and at the edges of the ulcer. In full thickness Stage 3 and 4 pressure ulcers, epithelial tissue advances from the edges of the wound.

- **GRANULATION TISSUE**
  - Red tissue with “cobblestone” or bumpy appearance; bleeds easily when injured.
**ASSESSMENT OF THE PRESSURE ULCER: EPITHELIALIZATION**

- Migration of cells across the top of the wound bed
- Necessary for wound closure

**ASSESSMENT OF THE PRESSURE ULCER: GRANULATION TISSUE**

- Pink/red moist tissue that contains new blood vessels and essential components to promote growth.
- Healthy components of a wound bed, presents like a “good beef steak”
SCABS & ESCHAR

• Scabs & eschar are different both physically & chemically. Eschar is a collection of dead tissue within the wound that is flush with the surface of the wound. A scab is made up of dried blood cells and serum, sits on the top of the skin, & forms over exposed wounds such as wounds with granulating surfaces (like pressure ulcers, lacerations, evulsions, etc.). A scab is evidence of wound healing. A pressure ulcer that was staged as a 2 & now has a scab indicates it is a healing stage 2, & therefore, staging should not change. Eschar characteristics & the level of damage it causes to tissues is what makes it easy to distinguish from a scab. It is extremely important to have staff who are trained in wound assessment & who are able to distinguish scabs from eschar.
STAGE 1 PRESSURE INJURY

• An observable, pressure-related alteration of intact skin whose indicators, as compared to an adjacent or opposite area on the body, may include changes in one or more of the following parameters: skin temperature (warmth or coolness); tissue consistency (firm or boggy); sensation (pain, itching); and/or a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the injury may appear with persistent red, blue, or purple hues

NON-BLANCHABLE

• Reddened areas of tissue that do not turn white or pale when pressed firmly with a finger or device.
ASSESSMENT STEPS

• For the purposes of coding, determine that the lesion being assessed is **primarily** related to pressure and that other conditions have been ruled out. If pressure is **not** the **primary** cause, do **not** code here.

• Reliance on only one descriptor is inadequate to determine the staging of a pressure injury between Stage 1 and deep tissue injury (see definition of “deep tissue injury” on page M-24). The descriptors are similar for these two types of injuries (e.g., temperature [warmth or coolness]; tissue consistency [firm or boggy]).
DEFINITION

STAGE 2 PRESSURE ULCER

• Partial thickness loss of dermis presenting as a shallow open ulcer with a red-pink wound bed, without slough or bruising.
• May also present as an intact or open/ruptured blister. The color of the fluid has no impact on how it is coded.
DEFINITION

- Examine the area adjacent to or surrounding an intact blister for evidence of tissue damage. If other conditions are ruled out and the tissue adjacent to or surrounding the blister demonstrates signs of tissue damage (e.g., color change, tenderness, bogginess or firmness, warmth or coolness), these characteristics suggest a deep tissue injury (DTI) rather than a Stage 2 pressure ulcer.

STEPS FOR ASSESSMENT

- Most Stage 2 pressure ulcers should heal in a reasonable time frame (e.g., 60 days).
- If a pressure ulcer fails to show some evidence toward healing within 14 days, the pressure ulcer (including potential complications) and the patient’s overall clinical condition should be reassessed.
- Stage 2 pressure ulcers are often related to friction and/or shearing force, and the care plan should incorporate efforts to limit these forces on the skin and tissues.
- Stage 2 pressure ulcers may be more likely to heal with treatment than higher stage pressure ulcers.
- The care plan should include individualized interventions and evidence that the interventions have been monitored and modified as appropriate.
STAGE 2: CODING TIPS

- *Stage 2* pressure ulcers by definition have partial thickness loss of the dermis. Granulation tissue, slough, and eschar are not present in *Stage 2* pressure ulcers.
- Do not code skin tears, tape burns, moisture associated skin damage, or excoriation here.
- When a pressure ulcer presents as an intact blister, examine the adjacent and surrounding area for signs of deep tissue injury. When a deep tissue injury is determined, do not code as a Stage 2.

STAGE 3 PRESSURE ULCER: DEFINITION

- Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining or tunneling (see definition of undermining and tunneling on page M-17).
- *Tissue characteristics of pressure ulcers should be considered when determining treatment options and choices.*
- *Changes in tissue characteristics over time are indicative of wound healing or degeneration.*
CODING TIPS FOR STAGE 3

- The depth of a Stage 3 pressure ulcer varies by anatomical location. Stage 3 pressure ulcers can be shallow, particularly on areas that do not have subcutaneous tissue, such as the bridge of the nose, ear, occiput, and malleolus.
- In contrast, areas of significant adiposity can develop extremely deep Stage 3 pressure ulcers. Therefore, observation and assessment of skin folds should be part of overall skin assessment. Do not code moisture-associated skin damage or excoriation here.
- Bone/tendon/muscle is not visible or directly palpable in a Stage 3 pressure ulcer.

DEFINITION: STAGE 4

- Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunneling.
DEFINITIONS

TUNNELING
• A passage way of tissue destruction under the skin surface that has an opening at the skin level from the edge of the wound.

UNDERMINING
• The destruction of tissue or ulceration extending under the skin edges (margins) so that the pressure ulcer is larger at its base than at the skin surface.
CODING TIPS

• The depth of a Stage 4 pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue, and these ulcers can be shallow.
• Stage 4 pressure ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon, or joint capsule) making osteomyelitis possible.
• Exposed bone/tendon/muscle is visible or directly palpable.
• Cartilage serves the same anatomical function as bone. Therefore, pressure ulcers that have exposed cartilage should be classified as a Stage 4

UNSTAGEABLE

SLOUGHTISSUE
• Non-viable yellow, tan, gray, green or brown tissue; usually moist, can be soft, stringy and mucinous in texture. Slough may be adherent to the base of the wound or present in clumps throughout the wound bed.

ESCHAR TISSUE
• Dead or devitalized tissue that is hard or soft in texture; usually black, brown, or tan in color, and may appear scab-like. Necrotic tissue and eschar are usually firmly adherent to the base of the wound and often the sides/edges of the wound.
CODING TIPS

• Pressure ulcers that are covered with slough and/or eschar, and the wound bed cannot be visualized, should be coded as unstageable because the true anatomic depth of soft tissue damage (and therefore stage) cannot be determined. Only until enough slough and/or eschar is removed to expose the anatomic depth of soft tissue damage involved, can the stage of the wound be determined.

• Stable eschar (i.e., dry, adherent, intact without erythema or fluctuance) on the heels serves as “the body’s natural (biological) cover” and should only be removed after careful clinical consideration, including ruling out ischemia, and consultation with the resident’s physician, or nurse practitioner, physician assistant, or clinical nurse specialist if allowable under state licensure laws.
DEFINITION

FLUCTUANCE

• Used to describe the texture of wound tissue indicative of underlying unexposed fluid.

DEEP TISSUE INJURY

• DEFINITION

• Purple or maroon area of discolored intact skin due to damage of underlying soft tissue. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
DEEP TISSUE INJURY ASSESSMENT

- Examine the area adjacent to, or surrounding, an intact blister for evidence of tissue damage. If the tissue adjacent to, or surrounding, the blister does not show signs of tissue damage (e.g., color change, tenderness, bogginess or firmness, warmth or coolness), do not code as a deep tissue injury.

DEEP TISSUE INJURY CODING TIPS

- Once deep tissue injury has opened to an ulcer, reclassify the ulcer into the appropriate stage. Then code the ulcer for the reclassified stage.
- Deep tissue injury may be difficult to detect in individuals with dark skin tones.
- Evolution may be rapid, exposing additional layers of tissue even with optimal treatment.
- When a lesion due to pressure presents with an intact blister AND the surrounding or adjacent soft tissue does NOT have the characteristics of deep tissue injury, do not code here (see definition of Stage 2 pressure ulcer on page M-12).
VENOUS AND ARTERIAL ULCERS

VENOUS ULCERS
• Ulcers caused by peripheral venous disease, which most commonly occur proximal to the medial or lateral malleolus, above the inner or outer ankle, or on the lower calf area of the leg.

ARTERIAL ULCERS
• Ulcers caused by peripheral arterial disease, which commonly occur on the tips and tops of the toes, tops of the foot, or distal to the medial malleolus.

Venous Insufficiency Ulcer
Vascular Problems

- Incompetent venous system of the legs
- Increased fibrous tissue
- Hyperpigmentation (Hemosiderin)

Chronic stasis dermatitis

- Increased venous pressure induced by incompetent valves
- Induces inflammation
HEMOSIDERIN
DEFINITION

- An intracellular storage form of iron; the granules consist of an ill-defined complex of ferric hydroxides, polysaccharides, and proteins having an iron content of approximately 33% by weight. It appears as a dark yellow-brown pigment.
ARTERIAL ULCERS

• Key areas for arterial ulcer development include the distal part of the foot, dorsum or tops of the foot, or tips and tops of the toes

• Arterial ulcers are often painful and have a pale pink wound bed, necrotic tissue, minimal exudate, and minimal bleeding.

ARTERIAL ULCERS CODING TIPS

• Trophic skin changes (e.g., dry skin, loss of hair growth, muscle atrophy, brittle nails) may also be present. The wound may start with some kind of minor trauma, such as hitting the leg on a wheelchair. The wound does not typically occur over a bony prominence, however, can occur on the tops of the toes. Pressure forces play virtually no role in the development of the ulcer, however, for some residents, pressure may play a part. Ischemia is the major etiology of these ulcers. Lower extremity and foot pulses may be diminished or absent.
VENOUS ULCERS

- The wound may start with some kind of minor trauma, such as hitting the leg on a wheelchair. The wound does not typically occur over a bony prominence, and pressure forces play virtually no role in the development of the ulcer.
Venous Ulcers

- Key areas for venous ulcer development include the area proximal to the lateral and medial malleolus (e.g., above the inner and outer ankle area).
- Venous ulcers may or may not be painful and are typically shallow with irregular wound edges, a red granular (e.g., bumpy) wound bed, minimal to moderate amounts of yellow fibrinous material, and moderate to large amounts of exudate. The surrounding tissues may be erythematous or reddened, or appear brown-tinged due to hemosiderin staining. Leg edema may also be present.
**Diabetic Neuropathic Ulcer**

- Characteristically occurs on the foot e.g. at mid-foot, at the ball of the foot over the metatarsal heads, or on the tops of toes with Charcot deformity.
- Requires that the resident be diagnosed with diabetes mellitus and have peripheral neuropathy.

---

**DIABETIC FOOT ULCERS**
Diabetic Neuropathic Ulcer

Underlying Condition

- Diabetic neuropathic ulcer
  - Diabetes
  - Spinal cord injury
  - Hansen’s disease
  - Relief of pain with ambulation
  - Parasthesia of extremities
Characteristics

- Diabetic Neuropathic Ulcer Wound Bed
  - Variable depth
  - Variable exudate
  - Granulation tissue frequently present
  - Gangrene uncommon, necrotic tissue variable

Characteristics

- Diabetic Neuropathic Ulcer
  - Ulcer edges: well defined
  - Shape: variable
  - Surrounding tissue: normal skin tones, fissuring and/or callus formation
  - Location: Plantar aspect of foot, metatarsal heads, heels
**Perfusion**

- **Diabetic Neuropathic Ulcer**
  - Pain: diminished sensitivity to touch
  - Peripheral pulses: palpable/present
  - Capillary refill: normal

**REFERENCES:**

REFERENCES:


• http://www.globalwoundacademy.com