Apple “PIE” – Pressure Injury Explanation

NPUAP 2016 Staging System

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National Pressure Injury Rates, 2003-2014
% of Patients

The goal to achieve 0% has stalled at 3.8%
Pressure Ulcer Prevention
SKIN

Support surfaces

Keep on turning

Incontinence skin care

Nutritional assessment
Support Surfaces

Overlays and Mattress Replacements

- Support surface check for objects in the bed
- Support heels off of the bed

Low-Air loss and Alternating Air
Keep on Turning

Patients are repositioned at least every 2 hours

Keep turning all patients every 2 hours regardless of support surface

Keep 30 degree lateral for side lying positions

Keep using pillows wedges for support

Keep HOB no more than 30-40 degrees

30 degrees
Incontinence/Moisture

High risk moisture issues are managed appropriately

Moisturizers prevent or treat the effects of dry skin

Clear ointments/creams should be used on clear intact skin

Paste should be used on irritated broken skin & is applied by the nurse

Problem areas may require medicated ointments or powders and are applied by the nurse
**Nutritional Assessment**

- Risk assessment
  - Mini Nutritional Assessment (MNA)
- Dietary intake
  - Food consumption
  - Need for assistance
- Anthropometric parameters
- Visceral proteins
  - Serum Albumin, Pre-Albumin, Transferrin

AHRQ, 2008
The National Pressure Ulcer Advisory Panel (NPUAP) serves as the authoritative voice for improved patient outcomes in pressure ulcer prevention and treatment through public policy, education and research.

The National Pressure Ulcer Advisory Panel - NPUAP » News » Hot Topics » National Pressure Ulcer Advisory Panel (NPUAP) announces a change in terminology from pressure ulcer to pressure injury and updates the stages of pressure injury

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FOR IMMEDIATE RELEASE
April 13, 2016
The NPUAP?

• National Pressure Ulcer Advisory Panel
  • The National Pressure Ulcer Advisory Panel (NPUAP) serves as the authoritative voice for improved patient outcomes in pressure ulcer prevention and treatment through public policy, education and research.
  • 1986

• Members:
  • Board : 14 Members
  • Panel:
    • Collaborating Organization Council
    • Corporate Advisory Council*
    • Provider Organization Council
    • NPUAP Alumni Council
WHY?

• The stages were revised based on questions received by the NPUAP from clinicians attempting to diagnose and identify the stage of pressure injuries.
• To help clarify and hopefully simplify the definitions
• The rest of the world uses “Pressure Injuries”, not “Ulcers”
The term “pressure injury” replaces “pressure ulcer”

Arabic numbers are now used in the names of the stages instead of Roman numerals

The term “suspected” has been removed from the Deep Tissue Injury diagnostic label.

Updated staging definitions

New definitions, illustrations and photos are available on the NPUAP website (NPUAP.org)
Pressure Ulcer/ 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.

Because they are not all “ulcers”

To increase awareness – putting the Medical device verbage in the definition

Added more description of the “pressure”

Instead of saying “not yet elucidated”...they added these conditions into the definition
Deep Tissue Pressure Injury (DTPI)

Stage 1

Stage 2

Stage 3

Unstageable

Stage 4

Stage 3

Stage 4

BONE
Stage 1 Pressure Injury

- 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.

The terminology refers to "erythema", not just "redness".

Specifically mentions that purple or maroon are NOT Stage 1, they indicate DTPI.
Stage 1

Think of the normal state of a red delicious apple. The red color is something that will not go away. We can’t “touch” a red apple and make the color be less vibrant or make the color go away. A red apple can’t become a green or a yellow apple. Just like a Stage 1 pressure injury, we can’t take away the redness simply by touching it. It will not blanch because there are already signs of capillary compromise within the layers of skin.
Stage 1 (NOT I)
Stage 2

Partial-thickness loss of skin 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. This stage should not be used to describe moisture associated skin damage (MASD) including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive related skin injury (MARSI), or traumatic wounds (skin tears, burns, abrasions).

The terminology clarifies that a Stage 2 does not have adipose, granulation, slough, or eschar.

If the cause of the injury is NOT pressure – don't stage it....(MASD, IAD, MARSI, and Skin tears)

Could be an intact blister
Stage 2

Think of an apple being peeled where you would just want to remove the skin. Just the outside layer, or “skin” is being removed or impacted when we carefully peel that apple. The same superficial layer, or epidermis, has been removed or compromised in a Stage 2 pressure injury and the wound is only into the dermis or inner most layer, but no deeper. These wounds will not have slough, and they will be superficial in nature.
Stage 2 (NOT II)
Key Assessment Criteria Differentiating Stage 2/Partial Thickness Wounds

- Cannot have or ever have had slough or eschar (necrotic tissue)
- Heals by regeneration of the dermis and epidermis
- Heals without granulation tissue
- “Flat edge”
- No undermining or tunneling
Stage 3 (NOT III)

- 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 and/or bone are not exposed. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.

Mentions that adipose tissue and granulation are often present

Specifically calls out epibole...with the illustration, too

Further clarification – not just “bone/tendon”
Stage 3

Pressure injuries at this stage are full thickness. They involve the underlying adipose tissue. All layers of skin, epidermis and dermis, are gone, so typically the wound has greater depth. Think of what your apple looks like when you take a nice healthy bite out of it... and the skin is gone, you are into the juicy “meat” of the apple. A Stage 3 pressure injury is similar. It now involves adipose tissue and there is usually more depth to these wounds.
Stage 3 (NOT III)

Stage 3

Stage 3 with Epibole

Area of Focus
Stage 3 / Full Thickness
Stage 4

• 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.

  Fascia, muscle, tendon, ligament, cartilage or bone is either exposed or directly palpable

  Again, epibole is mentioned

  There is no mention of how much slough or eschar has to be in the wound – just that it obscures the ability to fully observe the tissue
Stage 4

These pressure injuries are also full thickness wounds, but the difference from Stage 3 is that there is underlying structure involved. If you were to bite too far into your apple, you would get to the core... to the inner structure of the apple. This is what happens in a Stage 4 pressure injury. You are down to the inner structures under that adipose layer.
Stage 4 (NOT IV)
What is Epibole?

- The upper edges of the epidermis roll to envelop the basement membrane or lower edges of the epidermis, so that epithelial migration does not occur at wound edges. (AAWC, 2012)
Deep Tissue Pressure Injury

- 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. 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.
Deep Tissue Pressure Injury (DTPI)

- The definition elaborates on the pressure and shear force involved at the bone-muscle interface
- Added “...or non-intact”
- The term "suspected" was removed, but "...or may resolve without tissue loss" was added
- Further clarification from non-pressure related injuries was added
Deep Tissue Pressure Injury (DTPI)

What if your apples had a purple or dark spot on it? You wouldn’t know how ‘bad’ that apple was underneath that spot. The skin looks intact, but you know that part of that apple is bad and is not good to eat. That’s what happens with a deep tissue pressure injury. Just like an apple with a soft discolored spot, a deep tissue injury presents with a skin intact, but with a top layer of maroon or purple localized discoloration, letting you know that there is tissue damage underneath even though the skin is intact.
Unstageable Pressure Injury

- 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 removed.

It used to say “completely obscured”, now it allows for Staging, if possible

Added “ischemic limb” to the rule exception along with the heel
Unstageable pressure ulcers are completely covered with eschar or slough, so that the depth of the base of the wound cannot be visualized. Think of a caramel-covered apple. That thick, tannish brown caramel completely coats the apple. Because of that caramel, we don’t really know the state of the apple underneath. Just like an unstageable pressure ulcer, because of the slough obstructing the base of the wound, we don’t know how deep it is, and therefore, we cannot stage it, and we must consider it unstageable.
Unstageable

Unstageable - dark eschar

Unstageable - slough & eschar
Medical Device Related PI

This describes an etiology.

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.
Device Related Pressure Injury
Masks – CPAP/BiPAP

Tubing

Tracheostomy

Splints/Braces

Compression Stockings
Mucosal Membrane Pressure Injury:

• Mucosal membrane pressure injury is found on mucous membranes with a history of a medical device in use at the location of the injury. Due to the anatomy of the tissue these injuries cannot be staged.
Thank You!

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