Pressure Ulcer Staging

Elizabeth A. Ayello
PhD, RN, ACNS-BC, CWON, ETN, MAPWCA, FAAN
Clinical Editor, Advances in Skin and Wound Care
Faculty, Excelsior College School of Nursing
Co-Director and Course Coordinator, IIWCC-NYU
Senior Adviser, Hartford Institute for Geriatric Nursing
President, Ayello Harris & Associates, Inc

Presented at the IRF Provider Training
Baltimore, Maryland May 12, 2014

Objectives- Participants will:

• Differentiate pressure ulcers from other skin injuries
• Describe pressure ulcer stages
• Compare CMS and NPUAP staging definitions

© Ayello, 2014
Objectives - Participants will:

- Differentiate pressure ulcers from other skin injuries
- Describe pressure ulcer stages
- Compare CMS and NPUAP staging definitions

CMS Pressure Ulcer Definition

“A pressure ulcer is a 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 and/or friction.”
Determine that the skin lesion is a pressure ulcer (PrU)

- **Primarily** related to pressure
- If shear present, lower pressure may cause PrU
- **Moisture** and **friction** are most likely associated with other conditions


© Ayello, 2014

Get the skin injury etiology correct!
Superficial skin changes and deep tissue framework

- **Superficial**
  - Stage 1 or 2 pressure ulcers
  - Skin tears
  - Moisture associated skin damage (MASD) of the incontinence-associated dermatitis (IAD) type
  - Contact dermatitis
  - Friction blisters

- **Deep**
  - Stage 3 or 4 pressure ulcers
  - Unstageable including slough and/or eschar, deep tissue injury pressure ulcers


© Sibbald & Ayello, 2014
## Determine the Wound Etiology

<table>
<thead>
<tr>
<th>Type of Ulcer</th>
<th>Pressure</th>
<th>Venous</th>
<th>Arterial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Cause</strong></td>
<td>• Pressure</td>
<td>• Venous disease</td>
<td>• Inadequate arterial blood flow (ischemia)</td>
</tr>
<tr>
<td></td>
<td>• Shear will lower threshold for ulcer</td>
<td>• Trauma or infection can precipitate ulcer</td>
<td>• Trauma, infection can precipitate ulcer</td>
</tr>
</tbody>
</table>

| **Typical Location**                   | • Bony prominences                           | • Lower leg-around malleolar                | • Distal (gangrene) toes                             |
|                                        | • Often oval in shape                        | • Lower third of calf (gaitor)              | • May localize proximal (punched out, fibrous base) |
|                                        |                                               |     serpiginous margin                      | trauma/infection                                    |

**Clinical example**

© Photos Sibbald and Ayello 2014

© Ayello & Sibbald, 2014

---

## Determine the Wound Etiology

**Pressure Ulcer**

© Ayello & Sibbald, 2014

**Diabetic Neuropathic Foot Ulcer with underlying osteomyelitis**

© Ayello & Sibbald, 2014
**Determine the Wound Etiology**

<table>
<thead>
<tr>
<th>Type of Wound</th>
<th>Pressure Ulcer</th>
<th>Skin Tears</th>
<th>MASD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Cause</td>
<td>Pressure with or without shear</td>
<td>Trauma or friction</td>
<td>Moisture and friction</td>
</tr>
<tr>
<td>Typical Location</td>
<td>Bony prominences</td>
<td>Arms &amp; legs. Areas underneath tape</td>
<td>Buttocks, perineal area, skin folds</td>
</tr>
</tbody>
</table>

**Clinical example**

© Photos Sibbald and Ayello 2014

---

**Skin Tears**

*Do not use the pressure ulcer staging system for Skin tears*

New information and resources from the International Skin Tear Advisory Panel (ISTAP)


© Ayello, 2014

[Free download](http://www.woundcarejournal.com)
Moisture Associated Skin Damage (MASD)

Inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture, including urine or stool, perspiration, wound exudate, mucus, or saliva.

<table>
<thead>
<tr>
<th>Intertriginous Dermatitis</th>
<th>Incontinence Associated skin Dermatitis (IAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periwound moisture associated Dermatitis (maceration)</td>
<td>Peristomal moisture associated Dermatitis</td>
</tr>
</tbody>
</table>
**SKIN ASSESSMENT SCALE for Brown Pigmented Skin®**

<table>
<thead>
<tr>
<th>Redness Level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO REDNESS</td>
<td>0</td>
</tr>
<tr>
<td>Mild Redness</td>
<td>1</td>
</tr>
<tr>
<td>Moderate Redness</td>
<td>2</td>
</tr>
<tr>
<td>Severe Redness</td>
<td>3</td>
</tr>
</tbody>
</table>

© Ayello & Sibbald 2010


---

**Differentiating Moisture Damage from Pressure Ulcer**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>MASD</th>
<th>Pressure Ulcer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Larger skin area in contact with moisture</td>
<td>Usually localized over bony prominence</td>
</tr>
<tr>
<td>Edges</td>
<td>Irregular</td>
<td>Distinct</td>
</tr>
<tr>
<td>Color</td>
<td>Red, usually blanchable erythema</td>
<td>Varies, Non blanchable erythema</td>
</tr>
<tr>
<td>Depth</td>
<td>Superficial</td>
<td>Superficial to full thickness</td>
</tr>
<tr>
<td>Necrosis</td>
<td>None</td>
<td>Yes</td>
</tr>
</tbody>
</table>

© Ayello & Sibbald

Zulkowski, K. Perineal dermatitis versus pressure ulcer: Distinguishing characteristics. ASWC 2008 21(8):382-8
Objectives- Participants will:

- **Differentiate** pressure ulcers from other skin injuries
- Describe pressure ulcer stages
- Compare CMS and NPUAP staging definitions

Determine that the skin lesion is a pressure ulcer....

- **History**
- **Primarily** related to pressure
- Rule out **potential contributing factors and conditions**
  - Moisture
  - Vascular-Arterial, Venous
  - Friction
  - Trauma
CMS determination of Pressure Ulcer

If a skin lesion being assessed is primarily related to pressure, and other conditions have been ruled out, then it is a pressure ulcer.

Determine that the skin lesion is a pressure ulcer....

Classify using the staging system

- History
- Primarily related to pressure
- Rule out potential contributing factors and conditions
  - Moisture
  - Vascular-Arterial, Venous
  - Friction
  - Trauma

© Ayello, 2014
US Prevalence Data - Rehabilitation

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>493</td>
<td>751</td>
<td>707</td>
<td>1,588</td>
</tr>
<tr>
<td>Overall prevalence</td>
<td>16.3%</td>
<td>18.8%</td>
<td>19.4%</td>
<td>19.0%</td>
</tr>
<tr>
<td>FA prevalence</td>
<td>4.0%</td>
<td>4.1%</td>
<td>6.6%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Prevalence excluding Stage 1</td>
<td>10.4%</td>
<td>13.0%</td>
<td>14.7%</td>
<td>14.6%</td>
</tr>
<tr>
<td>FA prevalence excluding stage 1</td>
<td>2.3%</td>
<td>2.1%</td>
<td>4.7%</td>
<td>3.1%</td>
</tr>
</tbody>
</table>


Objectives- Participants will:

- **Differentiate** pressure ulcers from other skin injuries
- **Describe** pressure ulcer *stages*
- **Compare** CMS and NPUAP staging definitions

© Ayello, 2014
Pressure Ulcer Definitions

CMS has adapted but not adopted the National Pressure Ulcer Advisory Panel (NPUAP) 2007 pressure ulcer stages

Stage 1
Stage 2
Stage 3
Stage 4
Unstageable (3 categories)
Pressure Ulcer Staging Quiz

True or False

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>An ulcer on the mucosa from a medical device should be staged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure ulcer staging is based on the depth in cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As the ulcer heals, “reverse or back” stage the ulcer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staging of pressure ulcers requires clinical skills including minimally observation and palpation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMS definition of stage 2 pressure ulcer differs from NPUAP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Ayello, 2014
Pressure ulcer staging is based on:

- History
- Actual assessment - visual observation and palpation
- Full body head to toe skin assessment, especially areas over on bony prominences that are pressure-bearing areas (think patient position also)
- Clean the ulcer before staging
- Deepest anatomic type of soft tissue damaged - Tissue type, not depth in centimeters

© Ayello, 2014

Tissue Types

- New Epithelial Tissue
- Granulation
- Eschar
- Slough

© Ayello, 2011

Photos: D. Weir
Slough Tissue

Non-viable yellow, tan, gray, green or brown tissues, 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.

© Ayello, 2014

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. Eschar tissue is usually firmly adherent to the base of and wound and often the sides/edges of the wound.

© Ayello, 2014
How much of the wound bed covered makes it unstageable?

Is the pressure ulcer:

• Only partially covered, and you can visualize or palpate to identify the anatomical depth of tissue type damaged
• Then numerically stage the ulcer rather than classifying as unstageable.

If the pressure ulcer:

• Wound bed is completely covered with eschar, then classify as unstageable

© Ayello, 2014

NPUAP Pressure Ulcer Staging

Diagrams Copyright 2009 NPUAP
NPUAP Category/Stage I Pressure Ulcer

**Definition**
- **Intact skin** with non-blanchable erythema of a localized area, usually over a bony prominence.
- **Discoloration** of the skin, warmth, edema, hardness, or pain may be present.
- Darkly pigmented skin may not have visible blanching.

**Description**
- The area may be more painful, firmer or softer, or warmer or cooler than adjacent tissue.
- Category/Stage I may be difficult to detect in individuals with dark skin tones.
- This may indicate an at-risk individual.

CMS Stage 1 Pressure Ulcer Definition

- **Intact skin** with non-blanchable of a localized area, usually over a bony prominence.
- **Discoloration** of the skin, warmth, edema, hardness, or pain may be present.

- Darkly pigmented skin may not have visible blanching.

  In dark skin tones it may appear with persistent blue or purple hues.
**Blanchable** versus **Non-blanchable**

- Check ability for skin to blanch by firmly pressing a finger into the redden tissue and then releasing it.

  **Blanchable** (not pressure ulcer)
  - Skin color pales or changes color

  **Non-blanchable** (pressure ulcer)
  - If *no loss* of skin color or pale, or pressure induced pallor at the site, it is non-blanchable, a pressure ulcer

---

**Key points for detecting stage 1 pressure ulcers**

- Need **adequate light** to assess the skin
- Do not rely on only one descriptor to distinguish between stage 1 or DTI.

- Besides, color changes, assess **skin temperature**
NPUAP Category/Stage II

**Definition**
- Partial thickness loss of dermis presenting as a shallow open ulcer with a red/pink wound bed, without slough.
- It may also present as an intact or open/ruptured serum-filled or sero-sanguineous filled blister.

**Description**
- Presents as a shiny or dry shallow ulcer without slough or bruising.*
- This category/stage should not be used to describe skin tears, tape burns, incontinence-associated dermatitis, maceration or excoriation.

Definition Copyright 2009 NPUAP

---

CMS Category/Stage 2

**Definition**
- Partial thickness loss of dermis presenting as a shallow open ulcer with a red/pink wound bed, without slough.
- May also present as intact or open/ruptured blister.

**Coding Tips**
- Presents as a shiny or dry shallow ulcer without slough or bruising.*
- Do NOT code skin tears, tape burns, moisture associated dermatitis, maceration or excoriation.
Detecting **Stage 2 Pressure Ulcer**

- Inspect skin for shallow wounds or shiny areas of skin loss
- Do **not** include skin tears, erosion from urine or feces
- Do not include wounds covered with **slough**

Examine the area surrounding the **blisters** for signs of **tissue damage** (color change, tenderness, bogginess, firmness, warmth or coolness.)

These characteristics suggest a suspected deep tissue injury rather than a stage 2 pressure ulcer.

© Zulkowski & Ayello

---

**NPUAP Category/Stage III**

**Definition**

- **Full thickness** tissue loss.
- **Subcutaneous fat** may be visible but bone, tendon or muscle are **not** exposed.
- Some **slough** may be present but does not obscure the depth of tissue loss.
- It **may** include **undermining** and **tunneling**.

**Coding Tips**

- The depth of a category/stage III pressure ulcer varies by anatomical location.
- The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and category/stage III ulcers can be shallow.
- In contrast, areas of significant adiposity can develop extremely deep category/stage III pressure ulcers.
- Bone / tendon is not visible or directly palpable.
### CMS Category/Stage 3 Definition

- **Full thickness** tissue loss.
- **Subcutaneous fat** may be visible but bone, tendon or muscle are *not* exposed.
- **Slough** may be present but does not obscure the depth of tissue loss.
- *May* include *undermining* and *tunneling*.

### NPUAP Category/Stage IV Definition

- Full thickness tissue loss with exposed bone, tendon or muscle.
- **Slough or eschar** may be present.
- It *often* includes undermining and tunneling.

### Coding Tips

- 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.
- Bone / tendon/muscle is *not visible or directly palpable* in a stage 3 pressure ulcer.

### Photo © Ayello

Definition Copyright 2009 NPUAP
CMS Category/Stage IV Definition

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

Coding Tips

- The depth of a category/stage IV pressure ulcer varies by anatomical location.
- The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and these ulcers can be shallow.
- Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis possible.
- Exposed bone / tendon is visible or directly palpable.

Exposed Cartilage Pressure Ulcer
NPUAP Position Statement

August 27, 2012

- **Pressure Ulcers with Exposed Cartilage Are** **Stage IV** Pressure Ulcers

- Although the presence of visible or palpable cartilage at the base of a pressure ulcer was not included in the stage IV terminology; it is the **opinion of the NPUAP that cartilage serves the same anatomical function as bone**. Therefore, pressure ulcers that have exposed cartilage **should be classified as a Stage IV**.

www.npuap.org
Coding tips on staging pressure ulcers with cartilage

- **Cartilage** serves the same anatomical function as **bone**.
- Therefore, non-mucosal pressures ulcers that have **exposed cartilage** should be classified as **Stage 4 pressure ulcers**.

Unstageable pressure ulcers

**NPUAP**

- Unstageable

**CMS**

- Unstageable pressure ulcers due to **non-removable dressing/device**.
- Unstageable pressure ulcers due to **slough ad/or eschar**.
- Unstageable pressure ulcers with **suspected deep tissue injury**.
CMS- Unstageable pressure ulcers due to non-removable dressing/device

- Pressure ulcers should be coded as unstageable when the wound bed cannot be visualized due to a non-removable dressing/device and the pressure ulcer can thus not be numerically staged.

Examples of non-removable dressing or device include a primary surgical dressing that cannot be removed, an orthopedic device, or a cast.

CAST

Are these Non - Removable Dressings?
NPUAP Unstageable Definition

- **Full thickness tissue loss** in which the *actual depth* of the ulcer is completely *obscured by slough* (yellow, tan, gray, green or brown) and/or *eschar* (tan, brown or black) in the wound bed.

- Until enough slough and/or eschar is removed to expose the base of the wound, the true depth cannot be determined but it will be either a category/stage III or IV.

- **Stable** (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as “the body’s natural (biological) cover” and should not be removed.

Definition Copyright 2009 NPUAP

CMS Unstageable Definition

- Pressure ulcers that are known but not stageable due to coverage of the wound bed by slough and/or eschar.

- Visualization of the wound bed is necessary for accurate numerical staging.

Coding Tips

Lets go to the next slide
CMS Unstageable Coding tips

• Pressure ulcers that are covered with slough and/or eschar should be coded as unstagable because the true anatomic depth of soft tissue damage (and therefore, the numerical stage) cannot be determined.

• Only until enough slough and/or eschar are removed to exposed the anatomic depth of soft tissue damage involved can the numerical 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 in conjunction with the patient’s physician, or nurse practitioner, physician assistant, or clinical nurse specialist if allowable under state licensure laws.

CMS Unstageable Coding tips

• Once the pressure ulcer is debrided of enough slough and/or eschar such that the anatomic depth of soft tissue damage within the wound bed can be identified, the ulcer can then be numerically staged.

The pressure ulcer does not have to be completely debrided or free of all slough and/or eschar tissue for restaging of the ulcer to occur.
NPUAP Suspected Deep Tissue Definition

- **Purple** or **maroon** localized area of discolored, intact skin or **blood-filled blister** due to damage of underlying soft tissue from pressure and/or shear.

- The area may be preceded by tissue that is **painful, firm, mushy, boggy, warmer or cooler** than adjacent tissue.

- Deep tissue injury may be difficult to detect in individuals with dark skin tones.

- Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar.

- Evolution may be rapid exposing additional layers of tissue even with treatment.

Definition Copyright 2009 NPUAP

CMS Unstageable pressure ulcers Deep Tissue Injury in evolution

- **Pressure ulcers with suspected DTI present**; a **purple** or **maroon** are 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 may be difficult to detect in individuals with dark skin tones.

**TIP:** Once the suspected DTI has opened to an ulcer, reassess and stage at the appropriate numerical stage.
CMS Unstageable pressure ulcer with suspected Deep Tissue Injury (DTI) in evolution

Steps for assessment:

• Examine the area adjacent to, or surrounding the 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 suspected DTI.

• In dark-skinned individuals, the area of injury is probably not purple/maroon, but rather darker than the surrounding tissue.

Where are most sDTI ulcers located?

<table>
<thead>
<tr>
<th>ORANGE: Buttocks</th>
<th>BLUE: Sacrum</th>
</tr>
</thead>
<tbody>
<tr>
<td>YELLOW: Heels</td>
<td>GREEN: Ankles and foot</td>
</tr>
<tr>
<td>RED: Elbow</td>
<td></td>
</tr>
</tbody>
</table>

Are the NPUAP definitions of all pressure ulcer stages clearly differentiated?

Stage 1
• Intact skin with non-blanchable redness of a localized area usually over a bony prominence
• Darkly pigmented skin may not have visible blanching: its color may differ from the surrounding area.
• The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Category/Stage I may be difficult to detect in individuals with dark skintones. May indicate “at risk” persons (a heralding sign of risk

Deep Tissue Injury
• Purple or maroon localized area of discolored intact skin or blood filled blister due to damage of underlying soft tissue from pressure and/or shear
• The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue
• Deep tissue injury may be difficult to detect in individuals with dark skin tones.
• Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid exposed additional layers of tissue even with optimal treatment.

Are the CMS definitions of pressure ulcer stages clearly differentiated?

Stage 1
• Intact skin 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 defined area of persistent redness in lightly pigmented skin whereas in darker skin tone, the ulcer may appear with persistent red, blue or purple hues.

Deep Tissue Injury
• Pressure ulcers with suspected DTI present as a 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

Reliance on only one descriptor is inadequate to distinguish stage 1 and suspected deep tissue ulcers. The descriptors are similar for these two types of ulcers (e.g., temperature [warmth or coolness], tissue consistency [firm or boggy]
Make sure the blister is a pressure ulcer

Blister- Identify the correct cause
Pressure Ulcer or something else?

© Sibbald & Ayello
NPUAP Blister Pressure Ulcers

Stage II

- Partial thickness loss of dermis presenting as a shallow open ulcer with a red/pink wound bed, **without slough**. It may also present as an intact or open/ruptured **serum-filled or serosanguineous-filled blister**.

Suspected Deep Tissue Injury

- Purple or maroon localized area of discolored, intact skin or **blood-filled blister** due to damage of underlying soft tissue from pressure and/or shear.

Photos courtesy of Dot Weir and Cindy Labish

© Ayello, 2013  Definition Copyright 2009 NPUAP

Are the CMS definitions of pressure ulcer stages clearly differentiated?

Stage 2

- Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open ruptured **blister**.

- 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, boggy**, **warmth** or **cooler** as compared to adjacent tissue)

- Pressure ulcers with suspected DTI present as a 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

- 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, boggy** or **firmness, warmth** or **cooler**) do not code as suspected DTI.
Revised Figure 4- Blistered Pressure ulcers and sDTI


<table>
<thead>
<tr>
<th>Appearance</th>
<th>Acute Care</th>
<th>LTC MDS 3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serous Filled Blister</td>
<td>Stage II</td>
<td>Stage 2, code under section M0300B. (f no signs of suspected deep tissue injury) Unstageable- sDTI, code under section M0300G. (if signs of suspected deep tissue)</td>
</tr>
<tr>
<td>Blood filled Blister</td>
<td>sDTI- depth unknown</td>
<td>Stage 2, code under section M0300B. (f no signs of suspected deep tissue injury) Unstageable- sDTI, code under section M0300G (if signs of suspected deep tissue)</td>
</tr>
<tr>
<td>Intact purple maroon skin injury due to pressure</td>
<td>sDTI- depth unknown</td>
<td>Unstageable- DTI, code under section M0300G.</td>
</tr>
</tbody>
</table>

Table © Ayello 2010
Photos courtesy of Dot Weir and Cindy Labish

CMS Pressure Ulcer Classification at a glance

<table>
<thead>
<tr>
<th>Ulcer/Surrounding Skin Characteristics</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Intact skin, non blanchable erythema</td>
<td>1</td>
</tr>
<tr>
<td>• Open shallow ulcer with no slough</td>
<td>2</td>
</tr>
<tr>
<td>• Intact or ruptured blister no signs of tissue damage in surrounding skin</td>
<td></td>
</tr>
<tr>
<td>• full thickness ulcer</td>
<td>3</td>
</tr>
<tr>
<td>• can have necrotic tissue, but can see wound bed</td>
<td></td>
</tr>
<tr>
<td>• No bone, tendon, muscle visible</td>
<td></td>
</tr>
<tr>
<td>• Full thickness ulcer</td>
<td>4</td>
</tr>
<tr>
<td>• Can have necrotic tissue, but can see wound bed</td>
<td></td>
</tr>
<tr>
<td>• Bone, tendon, muscle visible</td>
<td></td>
</tr>
<tr>
<td>• Known pressure ulcer underneath non-removable cast, dressing or medical device</td>
<td>Unstageable-non-removable dressing/device</td>
</tr>
<tr>
<td>• Necrotic tissue covers wound bed</td>
<td>Unstageable-slough/eschar</td>
</tr>
<tr>
<td>• Purple, maroon discoloration of intact</td>
<td>Unstageable DTI</td>
</tr>
<tr>
<td>• Signs of tissue damage in skin surrounding the blister</td>
<td></td>
</tr>
</tbody>
</table>

© Ayello 2012
Distribution of pressure ulcer staging 2006 to 2009

<table>
<thead>
<tr>
<th>Stage</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>31%</td>
<td>30%</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>II</td>
<td>38%</td>
<td>37%</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>III</td>
<td>8%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>IV</td>
<td>7%</td>
<td>7%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>sDTI</td>
<td>3%</td>
<td>4%</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Unstageable</td>
<td>13%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>


Look at skin under skin folds and medical devices (e.g. tubes, drains)

What’s under this strap?

© Ayello, 2012
Mucosal Pressure Ulcers (MPrU)  
An NPUAP Position Statement

• **Definition:** MPrU are pressure ulcers found on mucous membranes with a history of a medical device in use at the location of the ulcer.

• **Devices** include oxygen tubing, endotracheal tubes, bite blocks, orogastric and nasogastric

• Epithelium of mucosa is not keratinized

• “Pressure ulcers on mucosal surfaces are not to be staged using the pressure ulcer staging system.”

www.npuap.org

---

Are all skin injuries staged as pressure ulcers?

CMS provides guidance that

Mucosal pressure ulcers:

• Are not staged using the pressure ulcer staging system because anatomical tissue comparisons cannot be made.

• Are not reported in the pressure ulcer section.

© Ayello, 2014
Pressure Ulcer treated with a surgical flap

• Once a pressure ulcer has been closed with a surgical flap
• It is no longer counted or coded as a pressure ulcer.
• It is now a surgical wound

Don’t Reverse Stage
NPUAP Position Statement
www.npuap.org

• Physiologically inaccurate
• Ulcer filled with granulation not original tissue

Stage 4 The initial pressure ulcer stage does not change despite healing
Stage 1
As the pressure ulcer heals

- Do not reverse or back stage!
- So how do you document the stage of the pressure ulcer as it heals?

If the pressure ulcer has ever been classified at a higher numerical stage than what is observed now, it should continue to be classified at the higher numerical stage.
Skin and Wound Quiz

How should you stage this wound?

- Stage 1
- Stage 2
- Stage 3
- Stage 4
- DTI
- Unstageable eschar

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello, 2014

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello, 2014

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello & Sibbald, 2014
How should you stage this wound?

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>DTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstageable eschar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Photo: C. Harris
© Ayello, 2014

How should you stage this wound?

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>DTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstageable eschar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Photo: Slbbald
© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello, 2014
Objectives- Participants have:

• Differentiated pressure ulcers from other skin injuries
• Described pressure ulcer stages
• Compared CMS and NPUAP staging definitions

Answers to Interactive Questions and Wound Staging Quiz
**Pressure Ulcer Staging Quiz - True or False**

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>An ulcer on the mucosa from a medical device should be staged</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Pressure ulcer staging is based on the depth in cm</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>As the ulcer heals, “reverse or back” stage the ulcer</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Staging of pressure ulcers requires clinical skills including minimally observation and palpation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>CMS definition of stage II pressure ulcer differs from NPUAP</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Where are most sDTI ulcers located?

<table>
<thead>
<tr>
<th>Color</th>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORANGE:</td>
<td>Buttocks</td>
<td>12.9%</td>
</tr>
<tr>
<td>BLUE:</td>
<td>Sacrum</td>
<td>19.1%</td>
</tr>
<tr>
<td>YELLOW:</td>
<td>Heels</td>
<td>41.4%</td>
</tr>
<tr>
<td>GREEN:</td>
<td>Ankles and foot</td>
<td>9.9%</td>
</tr>
<tr>
<td>RED:</td>
<td>Elbow</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

© Ayello, 2014

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

MASD, Not a pressure ulcer
Do not stage this

© Ayello, 2014

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Pressure ulcer
Stage 3

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Not a Pressure ulcer
Peripheral vascular ulcer

© Ayello & Slbbald, 2014

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Pressure ulcer
Stage 4

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Not a Pressure ulcer
Venous ulcer

© Ayello & Sibbald, 2014

How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Basal cell carcinoma,
Not a pressure ulcer

Photo Sibbald

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Pressure ulcer
Stage 4

© Ayello, 2014
How should you stage this wound?

Stage 1
Stage 2
Stage 3
Stage 4
DTI
Unstageable eschar

Pressure ulcer
Unstageable

© Ayello, 2014