APPLES to APPLE P.I.E
A course on Pressure Injury Explanation
Blanchable Erythema

• NOT a Pressure Injury
Stage 1

• A red apple whose color will not change

- Intact skin with a localized area of non-blanchable erythema
- 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.

NPUAP 2016
Stage 1

[Image of Stage 1 stage of a skin condition]
Stage 2

• Just the Peeling is removed

- 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.
Stage 2

Courtesy of Gordian Medical, Inc. dba American Medical Technologies
Stage 3

• A bite out of the Apple

- 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.
Stage 3

Adipose Tissue
Stage 4

• The core is exposed

- 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
Stage 4

- Bone
- Ligament

Medline

Apples to Apple P.I.E.
Deep Tissue Pressure Injury (DTPI)

• The Apple is Bruised

- 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
Unstageable

• The Apple is Covered in Caramel

- 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.
Unstageable

Slough

Eschar
Pressure Device Related Injury

• The Stem of the Apple Presses into the Flesh of the Apple
Medical Device Related Pressure Injury

• Devices including compression, heel boots, cannulas, catheters, etc.
Pressure Injury Prevention
Pressure Injury Risk Assessment
Pressure Injury Prevention

• Begins with Comprehensive Skin Care Treatment
Skin Care

- CLEANSE
- MOISTURIZE
- PROTECT
- TREAT
Dry Skin

• Xerosis

  ▪ A consequence of the skin’s loss of natural moisturizing factors
  ▪ In dark skinned individuals, the skin can turn gray & ash color
  ▪ Can present as dry and flaky
Cleanse

- Soaps - oldest cleaning agent, can be highly alkaline
- Surfactants - synthetic detergents, may be pH balanced
- Phospholipids - derived from natural oils (coconut) that provide excellent cleansing and conditioning without striping or drying

C. Fleck 2010
Moisturize

- Transepidermal water loss (TEWL) is a normal process in which skin transpires up to one liter per day

- Minimize excessive TEWL by using dimethicone or silicone products

- Emollients replace intercellular lipids and slow TEWL

- Humectants attract and hold water within the skin cells

Doughty JWOCN 2012
Protect skin from moisture, chemical irritants, pathogens, and mechanical forces

- Products should be breathable and not occlude the pores
- Products should improve skin integrity with nutrients, amino acids, vitamins, anti-oxidants
- Products should protect the epidermis from epidermal stripping
Treat

• Treat skin disorders quickly to prevent complications
  • Pressure Injuries
  • MASD
  • Skin Tears
Pressure Injury Prevention

• Assess the Patient
Pressure Injury Risk Tools

- Braden
- Braden Q (pediatrics)
- Braden Q + P (pediatrics and perioperative)
- Norton
- Norton Plus
- Gosnell
- Waterlow
### Braden Scale

**BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK**

<table>
<thead>
<tr>
<th>Patient's Name</th>
<th>Evaluator's Name</th>
<th>Date of Assessment</th>
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<table>
<thead>
<tr>
<th>SENSORY PERCEPTION</th>
<th>MOISTURE</th>
<th>MOBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unresponsive (does not mean, think, or grasp) to painful stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body</td>
<td>Skin is kept moist almost constantly by perspiration, urine, etc. Changes is detected every time patient is moved or turned</td>
<td>Does not make even slight changes in body or extremity position without assistance.</td>
</tr>
<tr>
<td>Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness</td>
<td>Skin is often, but not always moist. Linen must be changed at least once a shift</td>
<td>Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.</td>
</tr>
<tr>
<td>Responds to verbal commands, but cannot always communicate discomfort or the need to be turned OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body</td>
<td>Skin is occasionally moist, requiring an extra linen change at least once a shift</td>
<td>Makes frequent though slight changes in body or extremity position independently.</td>
</tr>
<tr>
<td>Responds to verbal commands. Has no sensory defect which would limit ability to feel or voice pain or discomfort</td>
<td>Skin is usually dry, linen only requires changing at routine intervals</td>
<td>Makes major and frequent changes in position without assistance.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>ACTIVITY</th>
<th>NUTRITION</th>
<th>FRICTION &amp; SHEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bedfast</td>
<td>1. Very Poor</td>
<td>1. Problem</td>
</tr>
<tr>
<td>Confined to bed.</td>
<td>Never eats a complete meal. Rarely eats more than ½ of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement OR is NPO and/or maintained on clear liquids or TPN for more than 5 days.</td>
<td>Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</td>
</tr>
<tr>
<td>Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.</td>
<td>Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake may include only 3 servings of meat or dairy products per day. Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.</td>
<td>Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair restraints or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.</td>
</tr>
<tr>
<td>3. Walks Occasionally</td>
<td>3. Adequate</td>
<td>3. No Apparent Problem</td>
</tr>
<tr>
<td>Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.</td>
<td>Eats over half of meals. Eats a total of 4 servings of meat and dairy products per day. Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.</td>
<td>Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair.</td>
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<th>TOTAL SCORE</th>
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**Impacts intensity of pressure**

**Affects tissue tolerance**

**Impacts intensity of pressure**

**Affects tissue tolerance**

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Braden Risk Scale

- Subscores
  - Sensory Perception
  - Moisture
  - Activity
  - Mobility
  - Nutrition
  - Friction and Shear
Beyond Risk Assessment Tools

• “Caution: Do not rely on the results of a risk assessment tool alone when assessing an individual’s pressure ulcer risk.”
  • Not all risk factors will be captured for all patients

• Remember... it’s just a tool

NPUAP, 2014
Summary

• Apples to Apple PIE is an effective method of teaching pressure injury staging
• Preventative skin care includes: Cleansing, Moisturizing, Protecting, Treating
• Risk Assessment tools assess some risks; assess the patient, not the risk
THANK- YOU!