The Power of Pressure Ulcer Assessment

American Medical Technologies
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Purpose of Series

- The purpose of this series is to provide education related to best practices regarding pressure ulcer prevention, assessment, treatment and documentation.
- These programs are consistent with guidelines set forth in F-314 and evidence based practice, standards of care, and guidelines discussed in current literature.

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Disclaimer

- The information presented herein is provided for educational and informational purposes only. It is for the attendees' general knowledge and is not a substitute for legal or medical advice. Although every effort has been made to provide accurate information herein, laws change frequently and vary from state to state. The material provided herein is not comprehensive for all legal and medical developments and may contain errors or omissions. If you need advice regarding a specific medical or legal situation, please consult a medical or legal professional. Gordian Medical, Inc. dba American Medical Technologies shall not be liable for any errors or omissions in this information.

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Objectives

- Define pressure ulcer staging according to the revised NPUAP staging definitions
- Identify additional potential F-Tag investigations which may be triggered by an F-314 tag
- Describe criteria that should be part of the resident and pressure ulcer assessment
- Recognize guidelines and standards of practice as they pertain to the assessment of pressure ulcers

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What is the F314?

- A guide to ensure that all nursing homes are held to the same standards in the survey process
- Medicare wants providers (nursing homes) to be aware of the current standards and PrU prevention, assessment and care
- Use it to create an effective Wound Care and Risk Management program
- Surveyors use it to assess a facility's risk assessment and wound care protocols and procedures
- An outline for best Wound Care practice
- It should be used as a tool

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F314 Interpretative Guidelines

- Overview
- Prevention
- Assessment
  - Subsections include:
    - Risk Factors
    - Pressure Points and Tissue Tolerance
    - Under-Nutrition and Hydration Deficits
    - Moisture and Its Impact
- Interventions
- Monitoring
- Assessment and treatment of pressure ulcers

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F314 Interpretative Guidelines

- Types of ulcers
- Ulcer characteristics
- Stages of pressure ulcers
  - System consistent with the MDS/RAI
  - The definitions used are from the National Pressure Ulcer Advisory Panel [NPUAP] prior to the 2007 revisions
- The healing pressure ulcer
  - Includes description of PUSH tool but states need for current MDS which requires reverse staging until the MDS is revised
- Infections related to pressure ulcers
- Pain
- Dressings and treatments

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Regulatory Standard F314

- 483.25(c)(1)
- Based on the Comprehensive Assessment of a resident, the facility must ensure that
  - (1) A resident who enters the facility without pressure ulcers (PrUs) does not develop PrUs unless the individual's clinical condition demonstrates that they were unavoidable; and,
  - (2) A resident having PrUs receives necessary treatment and services to promote healing, prevent infection, and prevent new PrUs from developing

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Potential Tag Investigations

- Survey & Certification Memo 05-20 →Independent but associated deficiency citations
  - F157 Notification of Changes
  - F272 Comprehensive Assessment
  - F315 Urinary Incontinence
  - F279 Comprehensive Care Plan
  - F280 Comprehensive Care Plan Revision
  - F281 Services Provided Meet Professional Standards
  - F309 Quality of Care
  - F353 Sufficient Staff
  - F385 Physician Supervision
  - F501 Medical Director

http://www.cms.hhs.gov/SurveyCertificationGenInfo/downloads/SCletter05-20.pdf

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Potential Tags for Additional Investigations

- F157
  - Notification of Changes
- Determine whether staff notified the physician of significant changes in the resident's condition or failure of the treatment plan to prevent or heal PrUs; or the resident's representative (if known) of significant changes in the resident's condition in relation to the development of a PrU or a change in the progression of healing of an existing PrU

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Potential Tags for Additional Investigations

- F279
  - Comprehensive Care Plans
- Determine whether the facility developed a care plan that was:
  - Consistent with the resident's specific conditions, risks, needs, behaviors, preferences
  - Consistent with current standards of practice
  - Included measurable objectives and timetables, specific interventions/services to prevent the development of PrUs and/or to treat existing PrUs

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Potential Tags for Additional Investigations

- F272
  - Comprehensive Assessments
- Determine whether the facility comprehensively assessed the resident's skin condition, including existing PrUs, and resident-specific risk factors (including potential causative factors) for the development of a PrU or non-healing of the ulcer

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Potential Tags for Additional Investigations

- F309
  - Quality of Care
- Determine whether staff identified and implemented appropriate measures for the management of pain as indicated as related to PrUs and PrU treatment
  - i.e. Pain…was it assessed…treated and reassessed

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Assessment Context

A PrU should be assessed in the context of the residents overall clinical, functional and cognitive status

American Medical Directors Association. Pressure Ulcers in Long-Term Care Setting Clinical Practice Guideline. Columbia, MD: AMDA 2008

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Risk Assessment → Skin Assessment

- Research suggests that skin, the largest organ of the body, begins to fail with the other organ systems, making prevention not always possible
- It is imperative that a comprehensive head to toe assessment of the skin is conducted on all residents (low and high risk individuals alike)
- Skin assessment involves all the senses (look, listen, feel, smell→ This is particularly important in residents with darker pigmentation

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Difference Between Skin Assessment and PrU Risk Assessment

- Skin Assessment Goal
  - Gather info to describe the current health of the skin
  - Detect variations from normal (erythema, rashes, lesions, dryness, etc)
  - Identify age-related or disease-related changes (thinning, decreased elasticity, trophic changes, etc)
- PrU Risk Assessment Goal
  - Gather info about specific factors, such as immobility, poor nutrition, etc that place a resident at risk for developing a PrU

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Purpose: Assessment of Pressure Ulcers

- Collect information to evaluate:
  - Resident's general condition
  - Characteristics of PrU
  - Identify related causes and complications
- Well-coordinated, comprehensive assessment and related documentation can:
  - Avoid repetitive diagnostic tests
  - Avoid duplication of paperwork
  - Provide important communication between and among caregivers
  - Ensure legal and regulatory mandates are met

American Medical Directors Association. Pressure Ulcers in Long-Term Care Setting Clinical Practice Guideline. Columbia, MD: AMDA 2008 17

What Should Be Assessed?

- Each resident's current medical condition(s)
- Stage III-IV sacral PrU in elderly have been found to be associated with low body weight, low pre-albumin and inadequate nutritional intake (Guenter et al., 2000)
- Nutritional status
  - Dietary and fluid intake…(see AMDA's clinical practice guidelines *Altered Nutritional Status* and *Dehydration and Fluid Maintenance*)
  - Presence of conditions that may interfere with independent feeding or decreased overall or intake
    - Bradykinesia, contractures, dysphagia, hemiparesis, tremors
  - Labs related to nutrition – (see lab table)

• Guideline for Prevention and Management of Pressure Ulcers; WOCN, 2003
• American Medical Directors Association. Pressure Ulcers in Long-Term Care Setting Clinical Practice Guideline. Columbia, MD: AMDA 2008 18

F314 and Nutrition

- Recognize that there are no wound-specific nutritional interventions
  - Goals should be directed at the whole person (not the hole in the person)
- Protein is addressed
  - 1.2-1.5 gm/kg body weight daily
- "A simple multivitamin is appropriate, but unless the resident has a specific vitamin or mineral deficiency, supplementation with additional vitamins or minerals may not be indicated"

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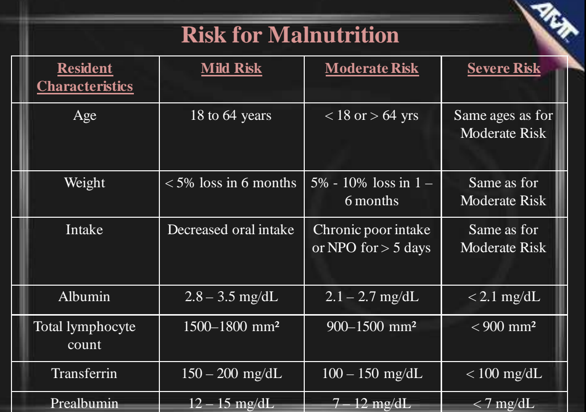
F314 and Nutrition

- Before instituting a nutritional care plan assess (and document):
  - Severity of nutritional compromise
  - Rate of weight loss or appetite decline
  - Probable causes
  - Resident's prognosis
  - Projected clinical course
  - Resident's wishes and goals



Nutritional support by itself does not invariably lead to the healing of ulcers

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Risk for Malnutrition

Resident Characteristics	Mild Risk	Moderate Risk	Severe Risk
Age	18 to 64 years	< 18 or > 64 yrs	Same ages as for Moderate Risk
Weight	< 5% loss in 6 months	5% - 10% loss in 1 – 6 months	Same as for Moderate Risk
Intake	Decreased oral intake	Chronic poor intake or NPO for > 5 days	Same as for Moderate Risk
Albumin	2.8 – 3.5 mg/dL	2.1 – 2.7 mg/dL	< 2.1 mg/dL
Total lymphocyte count	1500–1800 mm²	900–1500 mm²	< 900 mm²
Transferrin	150 – 200 mg/dL	100 – 150 mg/dL	< 100 mg/dL
Prealbumin	12 – 15 mg/dL	7 – 12 mg/dL	< 7 mg/dL

Lab Values to Identify Dehydration

	Normal	Dehydration
▪Blood urea nitrogen (BUN) level	5 - 20 mg/dL	>25 mg/dL
▪BUN/Creatinine rations	15:1	>25:1
▪Serum osmolality values	280 - 200mOsm/kg H2O	>295 mOsm
▪Urine specific gravity	1,016 - 1,033 g/mL	>1,016 g/mL
▪Serum sodium	135 – 145 mEq/L	>145 mEq/L

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Nutrition & Hydration

Nutrition

- Sedentary adult to maintain weight
  - 20 - 25 kcals/kg body weight
- Resident with wounds should receive adequate calories
  - Residents with wounds lose protein through wound exudate
  - 30 - 45 kcals/kg body weight/day
- Utilize the protein in the diet as protein rather than energy

Hydration

- Dehydration reduces blood volume and circulation thereby reducing the delivery of oxygen, nutrients, and cell building substances that assist in wound healing
- Recommended amount of fluid per day is 30 – 35 milliliters/kg of body weight/day or one milliliter of fluid per calorie if a resident is being fed enterally

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F314 and Tissue Tolerance

- Definition:
  - The ability of the skin and its supporting structures to endure the effects of pressure without adverse effects
    - Every person's tissue tolerance is different
    - Some residents may tolerate an hour in the wheelchair without breakdown and others may not
- Skin inspection for tolerance
  - Inspect for any skin discoloration (note darker skin tones my not show any change in color)
  - Sensation (pain and itching)
  - Palpate for any changes in temperature (warm or cold) or consistency (firm or boggy)

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Assessment of Tissue Tolerance

- Note that after pressure is relieved from any area of the body a hyperemia (redness) response will appear from the blood flow going back to that area (again note darker skin tones may not present with this)
- If this response doesn't resolve right away, check again within 30-45 minutes to hour
  - If it is still discolored, then it is a Stage I ulcer
- This process will allow you to determine if the turning intervals are adequate for the individual resident

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What Else Should Be Assessed?

- Assess for history of prior ulcer and presence of current ulcer, previous treatments, or surgical interventions that increase risk for additional pressure ulcers
- Assess and monitor pressure ulcer(s) at each dressing change
- Assess for factors that impede healing status such as co-morbid conditions and medications
- Assess for potential complications such as fistula, abscess, osteomyelitis, bacteremia, cellulitis and cancer

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Intrinsic Factors for PrU Formation Same Considerations for Assessing Opportunities for Healing

- Previous Hx of pressure ulcer
- Malnutrition
- Dehydration
- Excessive perspiration
- Wound exudate
- Urinary/fecal incontinence
- ↓ sensory perception
- Altered mental status
- ↓ mobility
- Age >70 years
- Altered blood pressure
- Impaired circulation
- Increased temperature
  - either internal to the resident or at the resident/surface interface
- Body build
- Co-existing health conditions
  - malignancy, diabetes, stroke, pneumonia, heart failure, Sepsis, renal failure, anemia, immune compromised
- Acute illness

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University of Iowa Pressure Ulcer Prevention and Treatment Algorithm

Assessment of PrU
Focus on Following Factors

- Location and stage of ulcer
- Size of ulcer
- Presence of tracts or undermining
- Ulcer bed appearance
  - Granulation tissue
  - Slough
  - Eschar
  - Drainage
  - Presence of rolled wound edges (epiboly)
- Odor
- Periwound skin condition

University of Iowa Pressure Ulcer Prevention and Treatment Algorithm

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NPUAP: February 2007

- "The National Pressure Ulcer Advisory Panel has redefined the definition of a pressure ulcer and the stages of pressure ulcers, including the original 4 stages and adding 2 stages on deep tissue injury and unstageable pressure ulcers."
- NPUAP Pressure Ulcer definition:
  - "A pressure ulcer is 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."
  - *"A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated."*

BODY WEIGHT PRESSURE

SURFACE PRESSURE

NPUAP
Comprehensive Assessment of a PrU

Distinguish pressure ulcers from other wounds or skin disorders

A. Definition of a pressure ulcer

B. Characteristics of a pressure ulcer

C. Clinical signs and symptoms that distinguish pressure ulcers from other chronic wounds such as vascular ulcers

PrU Treatment-RN Competency-based Curriculum - NPUAP 2001

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NPUAP
Comprehensive Assessment of a PrU

A. Staging the ulcer

1. Classify the stage of a pressure ulcer using standard NPUAP definitions
2. Identify pressure ulcers that cannot be staged (e.g., eschar covered, purple pressure ulcers…AKA DTI)
3. Staging of recurring pressure ulcers (e.g., a pressure ulcer closed with a flap or graft, reopening of a healed pressure ulcer)

PrU Treatment-RN Competency-based Curriculum - NPUAP 2001 31

NPUAP
Comprehensive Assessment of a PrU

B. Measurement of Size

1. Techniques for determining:
   - Length – clock reference
   - Width – widest at 90 degrees perpendicular
   - Depth – at the deepest area
2. Distinguishing between healed and unhealed portion of the wound

PrU Treatment-RN Competency-based Curriculum - NPUAP 2001 32

NPUAP
Comprehensive Assessment of a PrU

C. Exudate (drainage)

1. Identify the characteristics of exudate (e.g., purulent, serosanguinous)
2. Determine the quantity of exudate
3. Identify the significance of drainage to wound status and treatment plan

PrU Treatment-RN Competency-based Curriculum - NPUAP 2001 33

NPUAP
Comprehensive Assessment of a PrU

D. Wound bed characteristics

1. Identify the types of wound tissue (e.g., slough, necrotic, granulation, epithelial)
2. List the common pitfalls in distinguishing wound tissue (e.g., tendons, scabs)

NPUAP
Comprehensive Assessment of a PrU

E. Pain

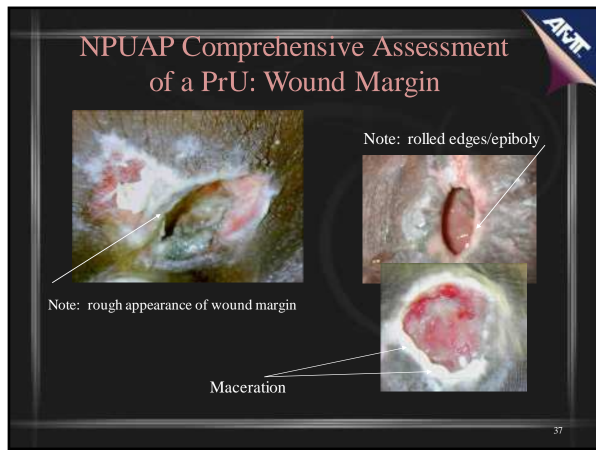
1. Assess pain using a population - appropriate scale
2. Appropriate pain management prior to wound care treatments and/or interventions

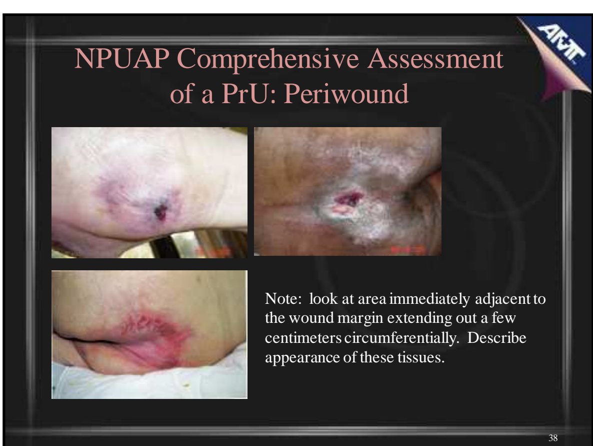
NPUAP
Comprehensive Assessment of a PrU

F. Surrounding skin

1. Assess for signs:
   - Maceration
   - Infection
   - Pressure injury
   - Tape injury

See slides on wound margin and periwound





NPUAP Comprehensive Assessment of a PrU

G. Tunnel/sinus tract/undermining

1. Differentiate characteristics of tunneling from sinus tract and undermining
2. Determine the presence and extent of tunneling, sinus tract, and undermining in a pressure ulcer
3. Describe modifications in local treatment if tunnels/sinus tracts are present
4. State the significance of undermining

PrU Treatment-RN Competency-based Curriculum - NPUAP 2001

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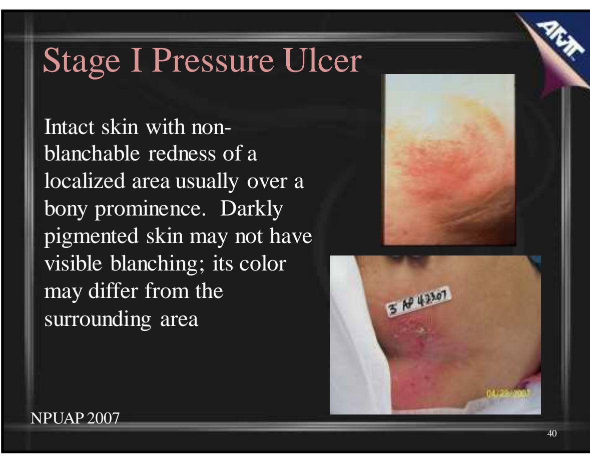
Stage I Pressure Ulcer
Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area
NPUAP 2007
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Stage I Description
• This area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue
• Stage I may be difficult to detect in individuals with dark skin tones
• May indicate "at risk" persons (a heralding sign of risk)
NPUAP 2007
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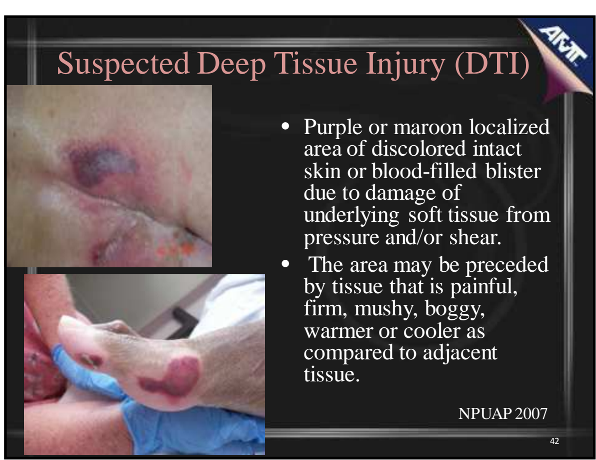
Suspected Deep Tissue Injury (DTI)
• Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear.
• The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
NPUAP 2007
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Deep Tissue Injury Description

- The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue
- Difficult to detect in 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 optimal treatment

NPUAP 2007

Progression of DTI

- Eschar formation – common at heels
- Necrosis and formation of full thickness wound
- Infection and abscess formation – usually requires surgical intervention
- DTI have potential for rapid deterioration

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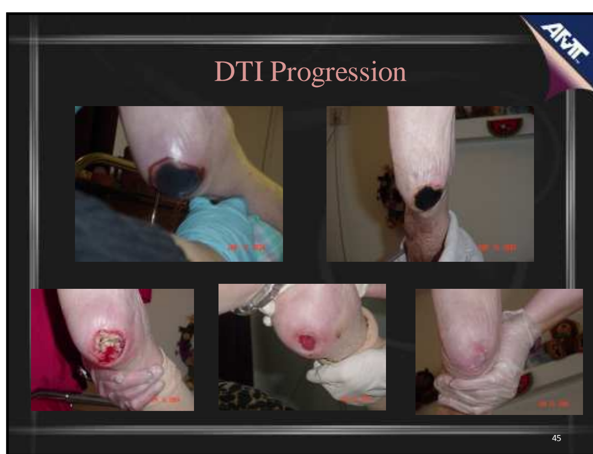

Stage II Pressure Ulcer

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

NPUAP 2007

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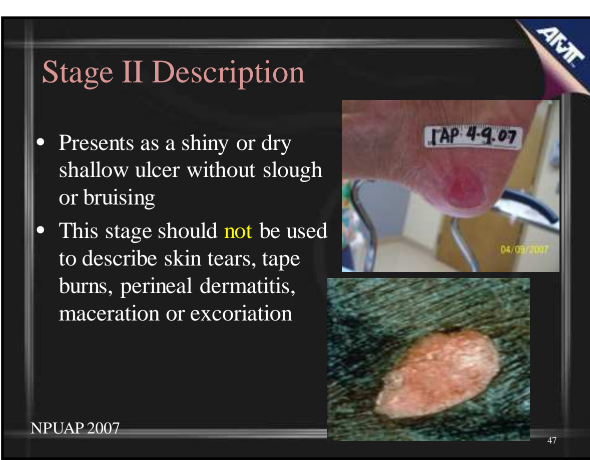

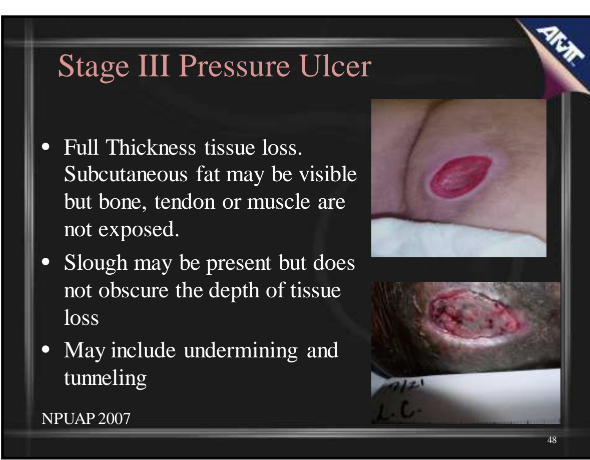

Stage III Description

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

NPUAP 2007

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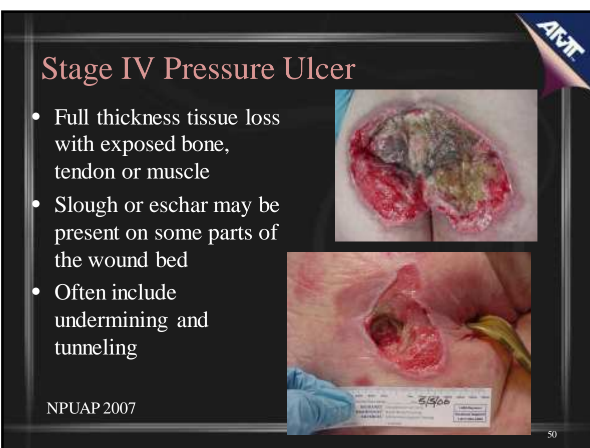

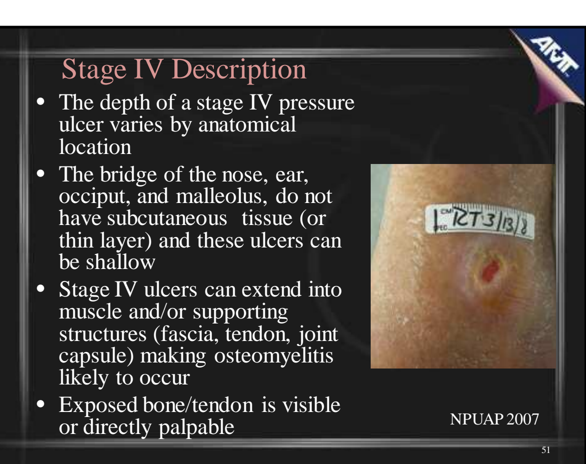

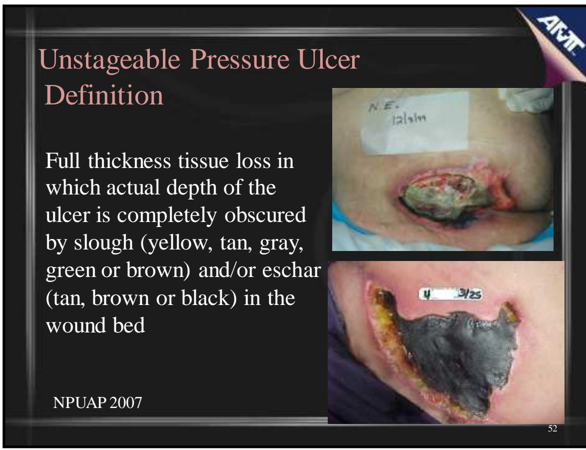

Unstageable Description

- Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined
- 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

NPUAP 2007

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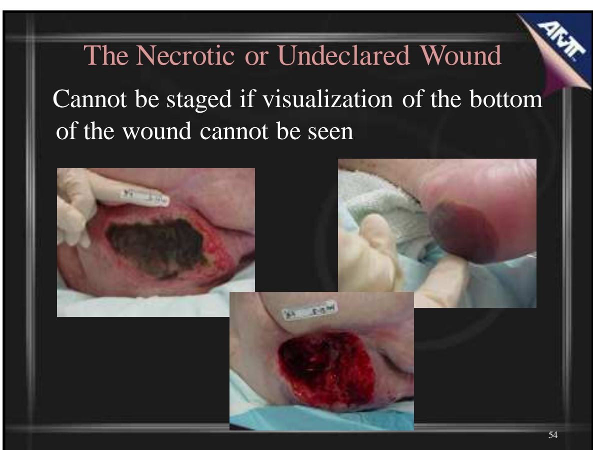

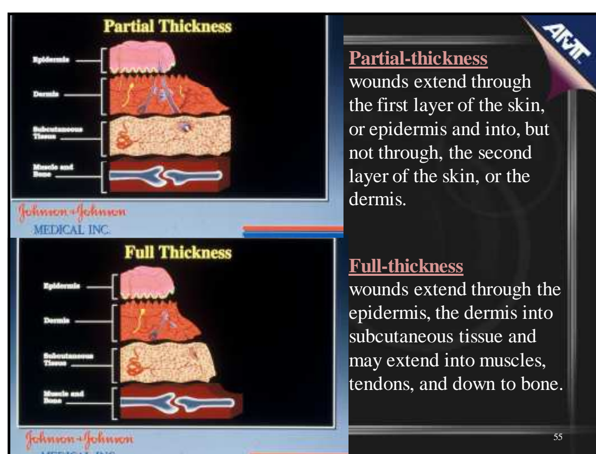

Partial-thickness wounds extend through the first layer of the skin, or epidermis and into, but not through, the second layer of the skin, or the dermis.

Full-thickness wounds extend through the epidermis, the dermis into subcutaneous tissue and may extend into muscles, tendons, and down to bone.

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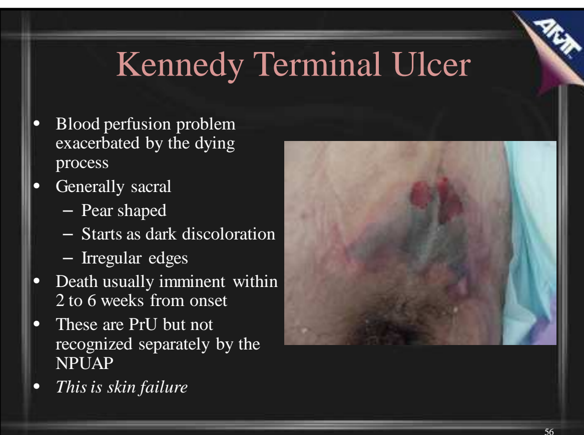
Kennedy Terminal Ulcer

- Blood perfusion problem exacerbated by the dying process
- Generally sacral
  - Pear shaped
  - Starts as dark discoloration
  - Irregular edges
- Death usually imminent within 2 to 6 weeks from onset
- These are PrU but not recognized separately by the NPUAP
- *This is skin failure*



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Assessment of Healing

- Avoid "down-" or reverse staging
  - Physiologically incorrect
  - Wounds heal with scar; original tissues not replaced
  - Healing Stage III or IV
  - *Must continue to backstage for MDS 2.0 for coding purposes only*
- Can be as simple as documenting and monitoring changes in assessment parameters

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Tools to Monitor Healing

- It is inappropriate to reverse stage pressure ulcers to describe/monitor healing in the nursing notes
- Several tools have been developed and validated to assess the healing pressure ulcers
- Two most widely used:
  - Pressure Sore Status Tool (PSST)
  - Pressure Ulcer Scale for Healing (PUSH)

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PSST

- Comprised of 13 variables to provide a numerical indicator of the PrU status (healing or deteriorating)
- Scores range from 1 indicating tissue health (resolved) to 65 indicating wound degeneration
- Provides comprehensive ulcer assessment

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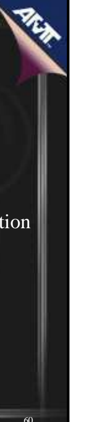
PSST Variables

- Size (L x W)
- Depth
- Edges
- Undermining
- Necrotic tissue type
- Necrotic tissue amount
- Exudate type
- Exudate amount
- Periwound skin color
- Peripheral tissue edema
- Peripheral tissue induration
- Granulation tissue
- Epithelialization



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PUSH

- Comprised of 3 variables:
  - Surface area (L x W)
  - Exudate amount
  - Tissue appearance
- Score of 0 indicates PrU has resolved; highest score of 17 indicates wound degeneration
- Score is plotted on a PrU healing record and graph

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PUSH

- NPUAP is working with CMS to incorporate the PUSH tool in Resident Assessment Protocols to accompany the MDS in LTC facilities
- Only applicable to PrU

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F314 & Documentation

- The F314 addresses the **minimum** requirements for documentation for a resident with a PrU
  - Protocol for assessment
  - Mandated daily monitoring
  - Mandated weekly or dressing change monitoring

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Protocol for Assessment

- Differentiate type of ulcer (pressure related versus non-pressure related)
- Determine stage (if pressure) or depth of tissue involvement for non-pressure related ulcers (partial or full-thickness)
- Describe and monitor the ulcer's characteristics
- Monitor the progress toward healing and potential complications
- Determine if infection is present
- Assess, treat, and monitor pain
- Monitor dressings and interventions

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Mandated Daily Monitoring

- Evaluation of ulcer if no dressing is present
- Evaluation of the status of the dressing, if present
  - Is it intact? Is there drainage? Is it leaking?
- Status of the peri-ulcer area
  - Area around the ulcer that can be observed without removing the dressing
- Presence of possible complications
  - Increased redness, swelling, drainage…
- Whether pain, if present, is being adequately controlled

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Mandated Weekly or Dressing Change Monitoring

- Size, depth, and the presence, location and extent of undermining or tunneling/sinus tract
- Exudate if present: type, color, amount, odor
- Pain if present: nature and frequency
- Wound bed: color and type of tissue
  - Evidence of healing or necrosis?
- Description of wound edges and periwound
  - Rolled edges, erythema, induration, maceration?

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Wound Care Team

- Recommendations from AMDA
  - Interdisciplinary wound care team (IDT)
  - Team may consist of
    - Designated wound care nurse
    - Nursing assistant
    - Dietitian
    - Physical or occupational therapist
    - Practitioner (MD, DO, NP, PA)
  - At lease one team member should have training in wound care
  - The team should have access to a wound care specialist

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Where Does One Get the Guidelines and Standards of Care?

- Who is writing the guidelines and standards of care?
- Which guidelines and standards are the surveyors using?
- Where do I find them?
- How do I use them?

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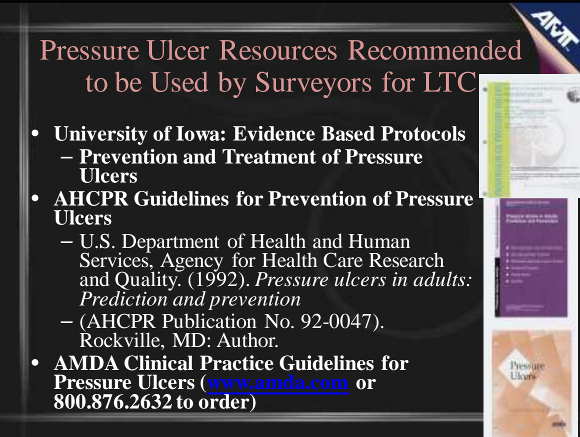

Pressure Ulcer Resources Recommended to be Used by Surveyors for LTC

- **National Pressure Ulcer Advisory Panel**
  - Pressure Ulcer Prevention: A Competency-based Curriculum
  - Pressure Ulcer Treatment: A Competency-based Curriculum
  - PUSH tool
  - Other valuable resources

http://npuap.org/resources.htm

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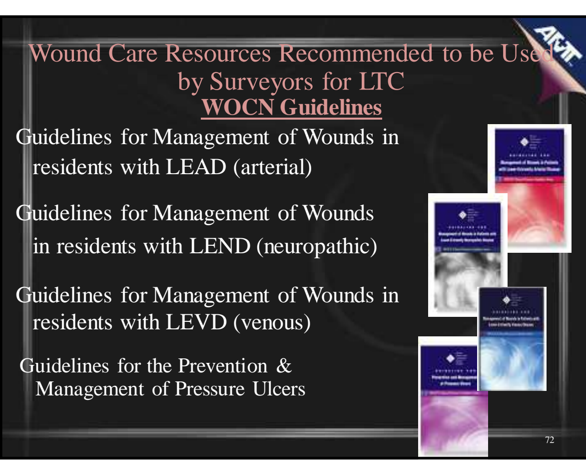

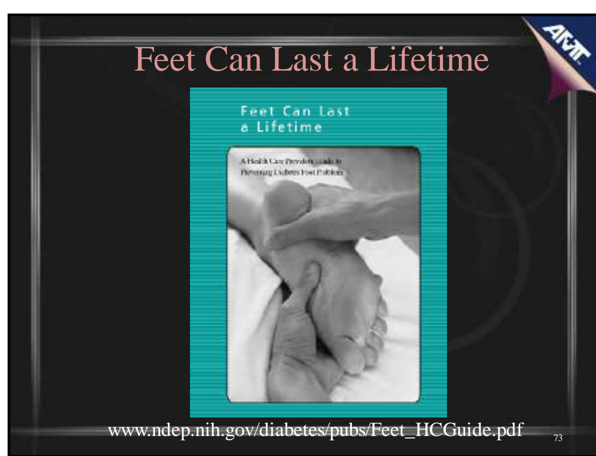

Surveyor Webinar for Survey Process F-314 & F-309

- http://media1.wi.gov/DHFS/Viewer/Viewers/Viewer320TL.aspx?mode=Default&peid=4a5ff257-05a2-4ccd-a4f9-70c3ba9bd079&pid=43fa99e9-d4d7-4326-8b97-c44bdec69d31&playerType=WM7#

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Questions?

For information about this or other educational activities, please contact info@amtwoundcare.com

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