



## F314: Soar to New Heights with Pressure Ulcer Prevention

An OHCA Presentation  
Session T-22  
Wednesday April 28, 2015  
10:00 am -11:30 am

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Today's Session is Presented By:

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- ❖ Nurse Consultant, Institutional Care Pharmacy
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### Program Objectives

- Explore F 314 and its regulatory requirements
- Identify pressure ulcer characteristics
- Review section M in accordance with pressure ulcer documentation
- Discuss preventive interventions/treatment options for pressure ulcer management

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### Why this session?

- Pressure ulcers are a hot topic in all care settings. In long term care, we all know that a surveyors radar is pointed at this care area, being a Quality Measure, with focus on prevention. Interdisciplinary knowledge of standards of practice joined with regulatory requirements are vital in prevention and treatment of pressure ulcers. Keeping current with resources and knowledge is the foundation of this program, with a promise to send a wealth of tools/'tricks of the trade' with each attendee to share with their care community, making them soar to new heights with excellent quality of care.

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**IMPORTANT BULLETIN**  
*Immediate Jeopardy Issues*  
 First Quarter 2014

PLEASE REVIEW THIS BULLETIN TO STAY UP TO DATE REGARDING:

During the first quarter of 2014 there were five Immediate Jeopardy citations in the facilities. These were cited as follows, and as it has been 90 days since each citation, the facilities have not received any of the required corrective actions for these citations. Please review this bulletin to see if you have any questions.

Summaries of these citations are listed below, along with the Immediate Jeopardy Task Force's comments and recommendations.

**Facility A - 100% of Long-Term Residents Receive the Standard Minimum Physical Exam**

The facility's Medical Director was not available for the long-term exam. The affected unit of 17 residents received the exam on a regular basis. The facility's Medical Director was not available for the long-term exam. The facility's Medical Director was not available for the long-term exam. The facility's Medical Director was not available for the long-term exam.

**Facility B - 100% of Long-Term Residents Receive the Standard Minimum Physical Exam**

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**Facility C - 100% of Long-Term Residents Receive the Standard Minimum Physical Exam**

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**Facility D - 100% of Long-Term Residents Receive the Standard Minimum Physical Exam**

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**Facility E - 100% of Long-Term Residents Receive the Standard Minimum Physical Exam**

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### OHCA Comments/Recommendations for Pressure Ulcer Prevention:

- Facilities can be cited at an IJ level for pressure ulcer development for stage 4 and infected stage 3 ulcers. Therefore, the development of all stage 3 or Unstageable ulcers should be cause for review and possibly a corrective action plan.
- It is significant that the original time frame for the IJ was from September 8, 2013 – February 17, 2014 (168 days), and only one of the cited examples had pressure ulcers from 9/8/13 – January 2, 2014. The time frame was later reduced by CMS to only 5 days. Consequently, facilities that have more than one resident with pressure ulcers or a resident with multiple ulcers may be at risk for prolonged periods of immediate jeopardy and should evaluate accordingly.

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### Why Prevent Pressure Ulcers?

- Increased morbidity and mortality
- Increased infection rates
- Debilitation
- Pain
- Increased cost
- Additional medications
- Increased staff time to provide appropriate care necessary to heal the ulcer

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### Care Community Responsibility for Providing Adequate Care

- Commitment to high quality pressure ulcer management that permeates all aspects of the facility's operation
- Instituting a prevention program based on accepted clinical guidelines for "at risk" residents
- Use of Quality Measures to develop and implement systems for pressure ulcer reduction

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### Care Community Responsibility for Providing Adequate Care

- Thorough knowledge of the federal requirements in order to comply with the regulations and ultimately to provide for the health and safety of residents
- Understanding of the survey process in helping providers evaluate the quality of care delivered and target quality improvement efforts

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F309 – Intent

- The facility must ensure that the resident obtains **optimal improvement or does not deteriorate** within the limits of a resident's right to refuse treatment, and within the limits of recognized pathology and the normal aging process.

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F-314 §483.25(c) Pressure Ulcers

**Based on the Comprehensive Assessment of a resident, the facility must ensure that-**

- (1) A resident who enters the facility without pressure sores does not develop pressure sores unless the individual's clinical condition demonstrates that they were unavoidable; and
- (2) A resident having pressure sores receives necessary treatment and services to promote healing, prevent infection and prevent new sores from developing.

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F314 Intent

- Part 1: Residents do not develop pressure ulcers unless they are unavoidable.

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### F314 – Intent

Part 2: The facility provides care and services to:

- Promote healing of current ulcers
- Promote prevention
- Prevent infection
- Prevent development of additional pressure ulcers

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### F314 Surveyor Guidance: Monitoring Considerations

#### Daily Monitoring

- Evaluate ulcer if no dressing is present
- Evaluate status of dressing if present: Is dressing intact? Is drainage present? If so, is it leaking?
- Status of area surrounding ulcer that can be observed without removing the dressing
- Presence of possible complications (e.g., signs of increasing area of ulceration, soft tissue infection)
- Evaluate whether pain, if present, is adequately controlled
- Document when a change or complication is identified

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### F314 Surveyor Guidance: Monitoring Considerations

#### Weekly or Dressing Change Monitoring

- Location and staging of ulcer
- Size (perpendicular measurement of greatest extent of length and width of ulceration); depth; and presence, location, and extent of undermining, tunneling, or sinus tract\*
- Presence of exudate; if present, type (e.g., purulent, serous), color, odor, approximate amount
- Presence of pain; if present, nature and frequency (e.g., episodic, continuous)
- Status of wound bed: color and type of tissue; evidence of healing (e.g., granulation tissue); necrosis (slough, eschar)
- Description of wound edges and surrounding tissue (e.g., rolled edges, redness, hardness/induration, maceration)

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### Deficiency Determination – “Avoidable vs. Unavoidable”

- Was preventive care
  - aggressive?
  - consistent?
  - appropriate?
  - resident specific?

If not, the development of a pressure ulcer may have been “avoidable.”

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### Thoughts from a Surveyor Perspective....

*“The presence of any one, or even several, risk factors or conditions does **NOT** make a pressure ulcer “Unavoidable”!*

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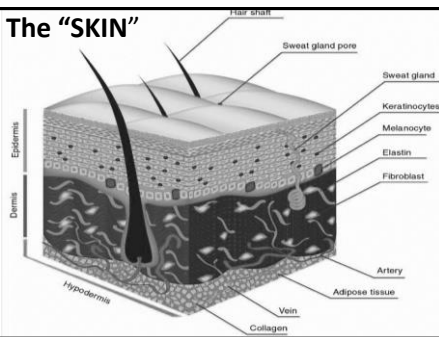
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### The “SKIN”



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### The Skin

- **Epidermis**
  - Outermost Layer
  - Regenerates on average every 28-30 days
  - Melanocytes: Produce and distribute melanin (the brown pigment in skin)
  - Slightly Acidic: Average pH of 5.5
- **Dermis**
  - Middle layer
  - Very vascular
- **Hypodermis**
  - Inner layer (subcutaneous layer)
  - Supports the dermis and epidermis
  - Provides insulation and temperature regulation

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### Skin Functions

- Protection – UV light, outside contamination
- Thermoregulation & Excretion – regulates body temperature
- Sensation – pain, touch, temperature and pressure
- Metabolism – vitamin D synthesis in presence of sunlight
- Communication – body image

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### Aging Skin



- Easily traumatized
- Decrease in sebaceous glands
- Decrease in immune response
- Changes in thermoregulation
- Less elasticity
- Acid Mantle Changes

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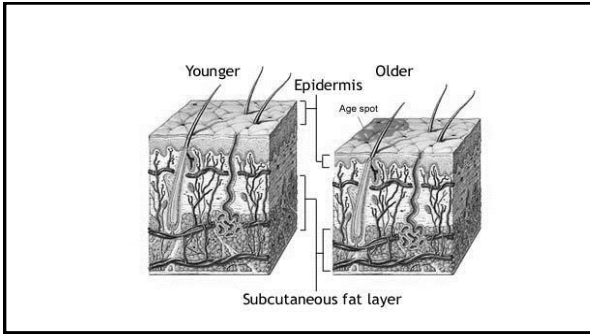
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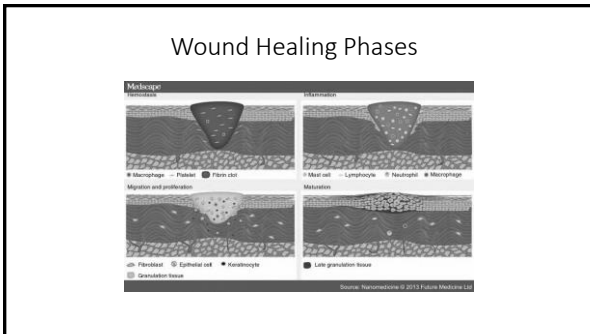
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### F314 Surveyor Guidance: Risk Factors for Developing Pressure Ulcers

According to the surveyor guidance accompanying F314, the risk factors that increase a patient's susceptibility to developing pressure ulcers, or that may impair the healing of an existing pressure ulcer, include but are not limited to the following:

- Co-morbid conditions (e.g., diabetes mellitus, end-stage renal disease, thyroid disease)
- Drugs that may affect ulcer healing (e.g., steroids)
- Exposure of skin to urinary or fecal incontinence
- History of a healed Stage III or IV pressure ulcer
- Impaired diffuse or localized blood flow (e.g., generalized atherosclerosis, lower-extremity arterial insufficiency)

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Client's Name	Evaluator's Name		Date of Assessment	
<b>SENSORY PERCEPTION</b> Ability to respond meaningfully to pressure-related discomfort	1. Completely limited	2. Very limited	3. Slightly limited	4. No impairment
<b>MOISTURE</b> Degree to which skin is exposed to moisture	1. Constantly moist	2. Very moist	3. Occasionally moist	4. Rarely moist
<b>ACTIVITY</b> Degree of physical activity	1. Bedfast	2. Chairfast	3. Walks occasionally	4. Walks frequently
<b>MOBILITY</b> Ability to change and control body position	1. Completely immobile	2. Very limited	3. Slightly limited	4. No limitations
<b>NUTRITION</b> Usual food intake pattern	1. Very poor	2. Probably inadequate	3. Adequate	4. Excellent
<b>FRICION AND SHEAR</b>	1. Problem: Requires moderate assistance in moving	2. Minimal problem: Moves freely or requires minimum assistance	3. No apparent problem	

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### Risk Assessment Frequency Suggestion

- Significant number of pressure ulcers develop within the first 4 weeks of admission.
  - Use a standardize risk assessment on admission
  - Repeat weekly for the first 4 weeks
  - Repeat quarterly
  - Repeat whenever there is a change

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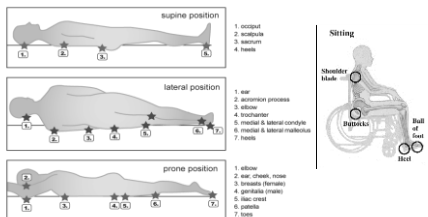
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### Pressure Points




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### Pressure Ulcer

- 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.



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### Statistics:

- Reported prevalence rates have ranged from 2.3 percent to 28 percent and reported incidence rates from 2.2 percent to 23.9 percent
- 95% of pressure ulcers develop on the lower body (about 65% in the pelvic area and 30% in the lower extremities)
- 2-6 times greater mortality risk
- Effective pressure ulcer treatment best achieved through interdisciplinary team approach

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### Pressure Ulcer Etiology:

- Compression of soft tissue interferes with the tissue blood supply, leading to vascular insufficiency, tissue anoxia, and cell death.
- Pressure ulcers usually occur over bony prominences such as the sacrum, ischium, heel, and trochanter, where there is less tissue to compress

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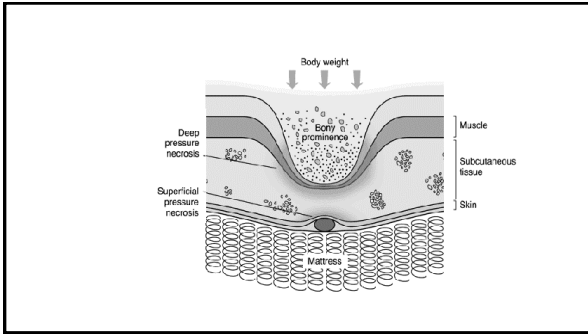
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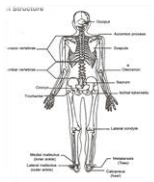
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Pressure Ulcer Location

- Location should be precisely identified
- Use directional terms such as left or right, medial or distal
- Use correct anatomic location(s):
  - Examples: Buttocks, sacrum, coccyx, and ischial




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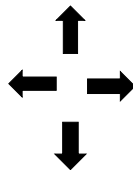
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Anatomical Lingo:

- Lateral – toward side
- Distal – away from center
- Medial – toward middle
- Dorsal – located near
- Posterior – back, underside
- Superior – Top, up
- Anterior – Front, top
- Inferior – below, down
- Proximal – toward center, nearest




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### Wound Edges

- Definition – Defined or undefined edges
- Attachment – Attached or unattached edges
- Rolled Under (Epibole) – Macerated – Fibrotic – Callused
- Border shape

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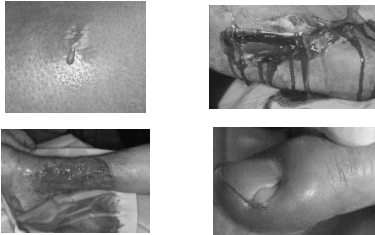
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### Wound Drainage



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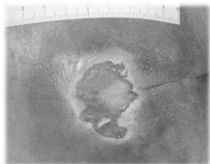
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### Periwound Assessment:

- Color, edema, firmness, intact, induration, pallor, lesions, texture, scar, rash, staining, moisture



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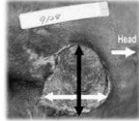
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### Measurement

- Determine longest length - white arrow line (note arrow to head)
- Determine greatest width - black arrow line
- Determine depth in deepest aspect of ulcer, after debridement



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### Undermining & Tunneling

- Tissue destruction or ulceration extending under the skin edges (margins) so that the pressure ulcer is larger at its base than at the skin surface
- Passageway of tissue destruction under the skin surface that has an opening at the skin level from the edge of the wound

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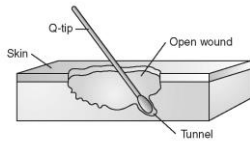
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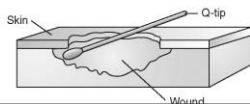
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A. Tunneling



B. Undermining



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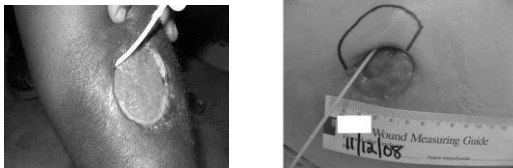
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### Undermining



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### Tunneling



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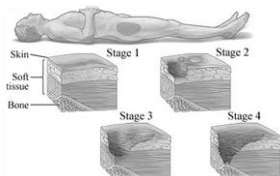
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### Pressure Ulcer Classification

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Stage 1: M0300A

- 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 ulcer may appear with persistent red, blue, or purple hues.

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Non-Blancheable Erythema

- Reddened areas of tissue that do not turn white or pale when pressed firmly with a finger or device

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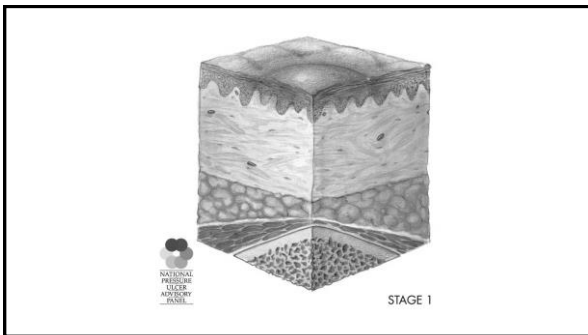
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Stage 2: M0300B

- 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 blister

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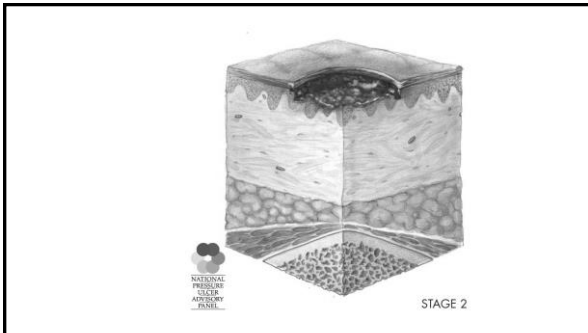
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Stage 3: M0300C

- 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.**

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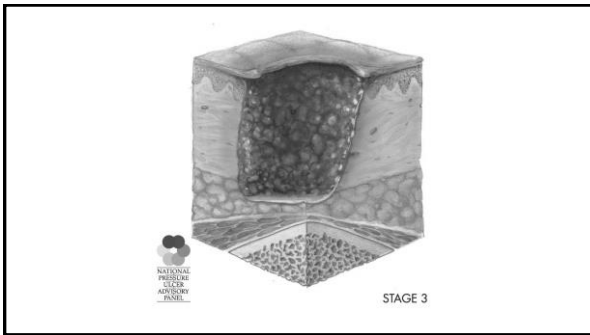
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Stage 4: M0300D

- 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.

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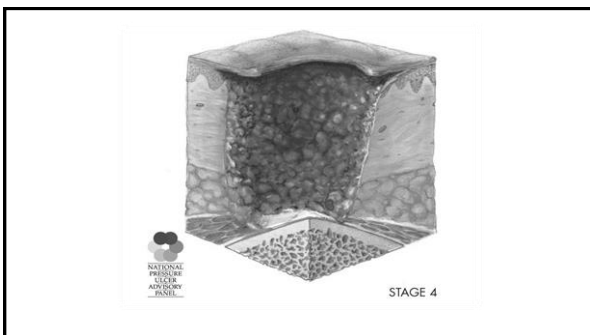
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### Unstageable

- Full thickness tissue loss in which 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.
- 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

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### Unstageable : Related to Non-Removable Dressing/Device: M0300E

- Non-Removable Dressing/Device:
  - Includes, for example, a primary surgical dressing that cannot be removed, an orthopedic device, or cast.



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### Unstageable: Related to Slough and Eschar: M0300F

**Slough:**

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

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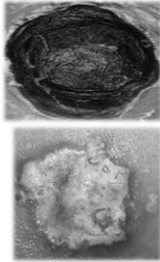
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Unstageable: Related to Slough and Eschar: M0300F

**Eschar**

- Dead or devitalized tissue that is hard or soft in texture; usually black, brown, or tan, & may appear scab-like
- Eschar, & necrotic tissue firmly adhere to base, sides & edges of wound



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Unstageable: Related to Suspected Deep Tissue Injury: M0300G

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

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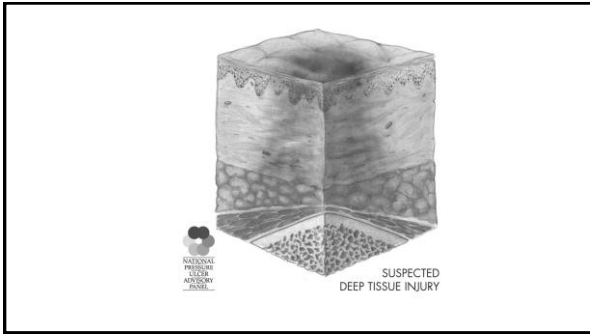
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M0700: Most Severe Tissue Type for Any Pressure Ulcer

- Identify Tissue Type
- Tissue characteristics should be considered when determining treatment options and choices
- Changes in tissue characteristics over time are indicative of wound healing or degeneration
- Code most severe tissue type present

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M0700: Most Severe Tissue Type for Any Pressure Ulcer

- Epithelial
- Granulation
- Slough
- Eschar

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### Epithelial Tissue

- New skin: light pearly pink & shiny
- Partial thickness wound: in center & edges of wound
- Full thickness wound: advances from edges to assist in closure

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### Granulation

- Red moist tissue with “cobblestone” or bumpy appearance
- Fills a full thickness wound when it starts to heal

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### Slough

- Non-viable/Necrotic 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.

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### Eschar

- 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.

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### Healed Pressure Ulcer: M0900

- Completely closed, fully epithelialized, covered completely with epithelial tissue, or resurfaced with new skin even if the area continues to have some surface discoloration

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### What's in Your Facility Arsenal?

- Standards of Practice
- Facility Policies and Procedures (protocols)
- Regulatory Requirements



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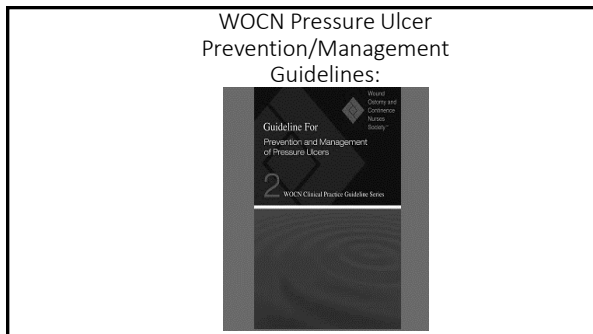
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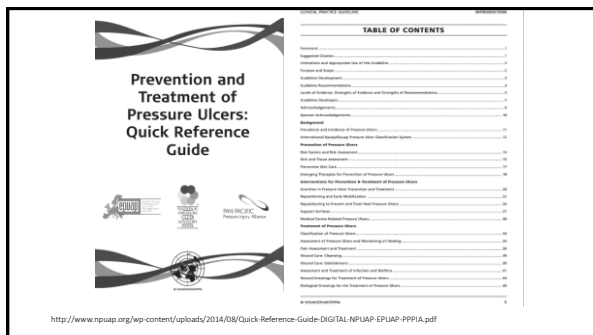
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### Skin Care

- Head to toe assessment at least daily
- Mild Cleansing agents
- Use lotion/cream after bathing
- Moisturizers for dry skin
- Minimize environmental factors leading to dry skin (low humidity, cold air)
- Avoid massage over bony prominences

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### Nutrition

- Utilize your team: Dietician/Diet Technician
- Identify and correct factors compromising protein/calorie intake
- Keep residents hydrated
- Consider supplementation for nutritionally compromised residents

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**The Role of Nutrition in Pressure Ulcer Prevention and Treatment:  
National Pressure Ulcer Advisory Panel White Paper**  
Authors: Denis Dorrner, MD, L.D., Mary Ellen Proffitt, MD, GD,  
and David Parsons, MD, CDE, CDEP,  
National Pressure Ulcer Advisory Panel

**Introduction**  
The purpose of this white paper is to review the currently available scientific evidence related to nutrition and hydration for pressure ulcer prevention and treatment in adults. Evidence for the nutrition and hydration interventions is based on the highest quality of evidence. This Advisory Panel (AP) of the National Pressure Ulcer Advisory Panel (NPUAP) conducted a literature search for the purpose of this white paper.

**Objective of Pressure Ulcer Prevention, Treatment, Care and Nutrition.**  
Evidence indicates that 1 to 2 million people in the US develop pressure ulcers each year (1). According to the most conservative estimates, 2.8 million people in the United States (US) develop pressure ulcers each year (2). The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3). The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3). The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3).

**Background**  
The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3). The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3). The NPUAP estimates that the number of new cases of pressure ulcers annually in the United States is approximately 2.8 million (3).

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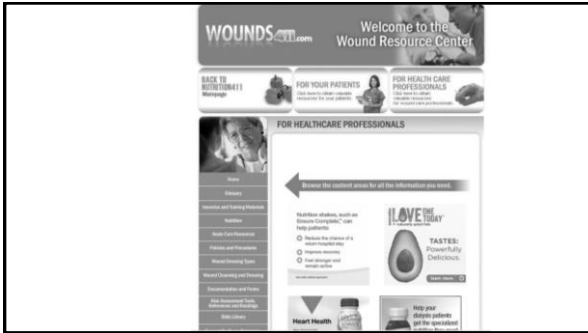
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**Mechanical Loading and Support Surfaces**

- Reposition bed-bound residents at least every 2 hours and chair-bound residents at least every hour
- Use pressure-redistributing devices
- Use lifting devices (trapeze, bed linen, Hoyer lifts)
- Use pillows or foam wedges to off-load pressure from bony prominences
- Maintain head of bed at or below 30 degrees
- Utilize your team: Restorative, OT/PT

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**Education**

- Educate the multidisciplinary team (Nursing, Therapy, MD, Dietary, STNAs, Activities, Restorative, residents/families, etc..)
- Competencies
- Include information on
  - Etiology, risk factors, risk assessment, skin assessment, nutritional support, bowel and bladder management, treatments, repositioning, documentation, etc...

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### Heel Ulcers

- It is generally recommended not to debride heel ulcers with dry, hard eschar unless there is edema, erythema, fluctuance, or drainage.
- Monitor heel ulcers closely for evidence of infection, at which time debridement should occur.

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### Factors to Consider When Selecting Ulcer Care Products

- Burden to patient (i.e., number of daily dressing changes required)
- Cost-effectiveness of product
- Costs of ancillary supplies and equipment associated with treatment
- Ease of use and cost of staff time to use the product
- Safety, efficacy, and likelihood and potential severity of complications
- Ulcer characteristics (e.g., depth, condition of surrounding skin, location near sources of contamination, presence and amount of exudate)

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### Dressing Categories

- Alginate
- Foam
- Gauze
- Hydrogel
- Hydrocolloid
- Transparent Film

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Document, Document, Document

The 5 C's:

- Clear
- Concise
- Chronological
- Continuing
- Complete




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Thank You!

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## **White Paper Pressure Ulcer**

A pressure ulcer is an area of skin that breaks down when one maintains a position for too long without shifting of the weight or removing the force. The constant pressure against the skin reduces the blood supply to that area, and the affected tissue dies.

A pressure ulcer starts as reddened skin, or an area of altered skin color on various skin tones, but gets progressively worse, forming a blister, then an open sore, and finally a crater. The most common places for pressure ulcers are over bony prominences (bones close to the skin) like the elbow, heels, hips, ankles, shoulders, back, and the back of the head.

The Pressure Ulcer White Paper was created to provide assistance to providers in their efforts to promote the comfort and safety of our residents. We recognize frail elderly are at increased risk for the development of pressure ulcers. Additionally, the development of a pressure ulcer or the improper care of a pressure ulcer places the facility at an increased risk for legal and regulatory issues.

### *Legal Considerations / Risk Management Considerations*

In addition to survey citations and sanctions, actions have been brought against SNFs based on pressure sores in the form of private lawsuits based on negligence, prosecutions by states attorney general (AG) for abuse/neglect, and the federal Department of Justice (DOJ) based on a theory of health care fraud.

The regulatory terms “avoidable” and “unavoidable” are not generally utilized in civil litigation. If sued for negligence, the main issue of inquiry would generally be geared around whether the facility met the standard of care with regard to the assessment, prevention, treatment and evaluation of the pressure ulcer.

The development of pressure sores in some cases can lead to a fraud action brought by the Department of Justice (DOJ). The theory behind this form of federal enforcement is that the provider failed to provide (or provided substandard) pressure ulcer prevention or treatment to the resident, and then billed for and was reimbursed by Medicare or Medicaid. This theory has been used to prosecute SNFs in other states, but not yet in Ohio.

The State Attorney General (AG) has the authority to prosecute a provider under Ohio's neglect statutes for the development of pressure sores. Although involvement from the AG's offices would likely only occur in the most egregious cases, it remains a possibility for all providers.

### *Regulatory/Survey Considerations*

Risk of higher level citations, including actual harm and immediate jeopardy is noted with pressure ulcer development or inadequate care and treatment of ulcers developing outside of the facility.

- Inadequate Care and treatment of pressure ulcers result in citations often noted in the following areas:
  - F-314 Pressure Sores and interpretive guidelines, F-157 Notification of Changes, F-272 Comprehensive Assessments, F-279 Comprehensive Care Plans, F-280 Comprehensive Care Plan Revision, F-281 Services Provided Meet Professional Standards, F-309 Quality of Care, F-353 Sufficient Staff, F-385 Physician Supervision, and F-501 Medical Director.
  - Pressure sores can also bring attention from Ohio's Quality Improvement Organization (QIO) (currently KePro). The QIO role is to assist facilities with problems related to pressure ulcers, under contract with CMS. They would also have the ultimate authority to refer the facility to the Office of Inspector General (OIG) for further attention and possible sanctions.

### *Policy/Process Considerations*

- Policies should include identifying patients at risk for pressure ulcers.
- Each facility should have a well developed system for documenting the existence of a pressure ulcer upon admission, readmission, discharge or following any extended leave of absence.

- Documentation policies should address the recording of the treatments applied, and the improvement or worsening of the ulcer.
- Additionally, systems for monitoring patients with or at risk for pressure ulcers should be in place.
- Each facility should apply adequate pressure ulcer prevention methods as well as educational programs for staff, residents, and family members.
- Policies should be developed that address all disciplines involved in the prevention and treatment of Pressure Ulcers.
- Nutritional Service policies need to be developed that address the nutritional needs of wounds and wound healing.
- Therapy procedures for various treatment modalities should be well defined and cross multiple disciplines who will work together in the care and treatment of ulcers.
- Each facility should utilize Pressure Ulcer Prevention Assessment tools and display a compliant process with treatment interventions, prevention strategies, nutritional interventions and the review of unavoidable ulcers due to co morbid conditions.
- Care planning should be in place that is shows the proactive interventions for each risk identified as well as their effectiveness.

*Purchase Considerations:*

- The selection of appropriate support surfaces should address the prevention abilities of the product to off load the at risk tissue, regardless of where the at risk tissue is located on the body.
- Providers should follow all manufacturers' guidelines on the use of any product.

*Educational Considerations:*

- Staff education, annually and upon hire, should include the identification of a pressure ulcers on all skin tones, the adequate staging of pressure ulcers, the appropriate treatment based on the various forms of ulcers as well as the standards behind prevention.
- Additional staff education should include use of risk assessment tools, selection of support surfaces and the demonstration of positioning to prevent ulcer development.
- GPRA (Government Performance Results Act of 1993) was to improve public confidence in the federal government by holding federal agencies accountable for the achievement of program results that are publicized. CMS's 2006 goals, adopted 4/1/06 are to reduce restraints+ pressure sores in NFs – utilizing Quality Measures/MDS data

Pressure Ulcers	Baseline QM	Goal QM	Stretch Goal QM
Region V	7.8	7.4	6.8
Nation	8.5	8.0	7.5
Ohio	8.5		

Recent Ohio data:  
 3<sup>rd</sup> quarter 2006 = 13 for hi risk, 2 for low risk  
 3<sup>rd</sup> quarter 2007 = 12 for hi risk, 2 for low risk

*Additional Information:*

- <http://www.npuap.org>
- <http://www.worldwidewounds.com/2001/july/Butcher/NICE-pressure-ulcer-review.html>
- [http://www.mao.org/bestpractices/PDF/BPG\\_Pressure\\_Ulcers\\_v2.pdf](http://www.mao.org/bestpractices/PDF/BPG_Pressure_Ulcers_v2.pdf)
- <http://www.epuap.org/glprevention.html>
- [http://www.guideline.gov/summary/summary.aspx?ss=15&doc\\_id=3458+nbr=2684](http://www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3458+nbr=2684)
- <http://www.kennedyterminalulcer.com>
- <http://www.medicaledu.com/pressure.htm>
- <http://www.medicaledu.com/staginh.htm>
- <http://www.npuap.org/PDF/preventionpoints.pdf>
- [http://www.nhccf.org/QI\\_Services/NursingHomes/Topics/Pressure%20Ulcer%20Toolkit%202006/1-Guideline](http://www.nhccf.org/QI_Services/NursingHomes/Topics/Pressure%20Ulcer%20Toolkit%202006/1-Guideline)
- <http://www.health.state.mn.us/div/fpc/cww/pressureulcersbrochure.pdf>
- <http://www.RD411.com>
- <http://www.Wounds411.com>

\*The National Pressure Ulcer Advisory Panel's Summary of the AHCPR Clinical Practice Guideline, *Pressure Ulcers in Adults: Prediction and Prevention* (AHCPR Publication No. 92-0047. Rockville, MD: May 1992).



## Position Paper

### Avoidable versus Unavoidable Pressure Ulcers

**Purpose:** To refute the assumption that all pressure ulcers are avoidable.

**Statement of Position:** There are clinical circumstances in which a pressure ulcer is unavoidable. Pressure ulcer formation is a complex process that may not be halted, even with excellent multidisciplinary care (Thomas, 2003). The skin is the largest organ in the body and its integrity is dependent upon the function of all other organ systems for nutrition, circulation, and immune function (Langemo & Brown, 2006). The burden of disease can overwhelm the skin, even with appropriate preventive interventions (Witkowski & Parish, 2000). Yet, the responsibility of the healthcare facility or agency to adopt best practices aimed at pressure ulcer prevention should not be minimized. There are increasing reports of success in reducing the prevalence and incidence of pressure ulcers by implementing evidence-based clinical practice guidelines (Ayello & Lyder, 2008).

#### **Definitions of Avoidable and Unavoidable Pressure Ulcers (Centers for Medicare and Medicaid, 2004)**

**Avoidable Pressure Ulcer:** "Avoidable" means that the resident developed a pressure ulcer and that the facility did not do one or more of the following: evaluate the resident's clinical condition and pressure ulcer risk factors; define and implement interventions that are consistent with resident needs, resident goals, and recognized standards of practice; monitor and evaluate the impact of the interventions; or revise the interventions as appropriate.  
(483.25c/TagF314)

**Unavoidable Pressure Ulcer:** "Unavoidable" means that the resident developed a pressure ulcer even though the facility had evaluated the resident's clinical condition and pressure ulcer risk factors; defined and implemented interventions that are consistent with resident needs, goals, and recognized standards of practice;

monitored and evaluated the impact of the interventions; and revised the approaches as appropriate. (483.25c/TagF314)

**Previous Statements:** In May 1992, the Agency for Health Care Policy and Research (AHCPR), part of the U.S. Department of Health and Human Services, published a clinical practice guideline entitled "Pressure Ulcers in Adults: Prediction and Prevention." (Bergstrom et al., 1992). Many of the specific recommendations were based on expert opinion and panel consensus because of the lack of published evidence in peer-reviewed literature. The consensus of the panel was that most pressure ulcers could be prevented. They reported, "However, , even the most vigilant nursing care may not prevent the development and worsening of ulcers in some very high risk individuals." (p.2). In December 1994, the AHCPR published a companion guide entitled "Treatment of Pressure Ulcers," (Bergstrom et al., 1994) in which they re-affirmed their previous position that "Unfortunately, not all pressure ulcers will be prevented and those that do develop may become chronic." (p.1).

In the November 2004 "Guidance to Surveyors for Long Term Care Facilities," the Centers for Medicare and Medicaid Services (CMS) acknowledged some pressure ulcers are "unavoidable" (Centers for Medicare and Medicaid, 2004). The long-term care facility is required to evaluate the resident's pressure ulcer risk factors and to implement preventive interventions consistent with the resident's needs and goals. The pressure ulcer is determined to be unavoidable if it develops in spite of the facility's efforts to prevent it. CMS has not applied this standard in other healthcare settings.

**History:** Recorded history suggests the presence of pressure ulcers for at least 5,000 years. Early writings suggest that the occurrence of a pressure ulcer actually signaled impending death (Bansal, Stewatt, & Cockerell, 2005). But the study of pressure ulcer prevention is a relatively new phenomenon. The knowledge base is still being researched and developed. It wasn't until 1990 that there was a government-sponsored effort to develop a standardized and consistent approach to pressure ulcer prevention and treatment. At that time, several healthcare disciplines came together to begin the process of developing clinical practice guidelines that would address these two areas of concern. The AHCPR guidelines were to be based on published scientific literature. When scientific evidence was limited or inconsistent, recommendations were based on the consensus of the experts. The two companion practice guidelines were finally completed and disseminated to the public in 1994 (Bergstrom et al, 1992; Bergstrom et al, 1994). These guidelines were landmark in their scope, and although dated, are still utilized today.

The past forty years has produced a variety of pressure ulcer risk assessment tools (Braden & Bergstrom, 1988; Gosnell, 1989; Norton, McLaren, & Exton-

Smith, 1962; Waterlow Scale, 2005). The clinical practice guidelines on pressure ulcer prevention and treatment have been updated by a variety of groups (Keast, Parslow, Houghton, Norton, & Fraser, 2007; WOCN, 2003). Still, scientific literature supporting specific pressure ulcer prevention interventions is lacking (Thomas, 2001; 2003). Current evidence often does not address the multiple medical and clinical situations that may affect a patient.

**Supportive Statements:** Current literature supports the following points:

- The development of a pressure ulcer can be complex and multifactorial (Berlowitz & Brienza, 2007). Pressure intensity and duration as well as tissue tolerance are known to be risk factors. Individuals may have various intrinsic risks associated with pressure ulcer development (Lyder, 2003) that are not always captured by risk-assessment tools, and not all pressure ulcer risk factors can be removed or modified. While wound care experts do not know or fully understand the degree to which these intrinsic risks play a role in pressure ulcer development, it is reasonable to state that the greater the number of risks, the greater the challenge can be in preventing pressure ulcer development and deterioration.
- Pressure ulcer prevention has long been considered a nurse-sensitive quality indicator. But pressure ulcer prevention and management is complex and not exclusively under nursing control. Also, there are clinical circumstances when pressure ulcer prevention interventions may be medically contraindicated.
- The most widely recognized classification for pressure-related skin injury is by the National Pressure Ulcer Advisory Panel (NPUAP). In February 2007, the four stages of pressure ulcers were expanded to include definitions for unstageable and deep tissue injury (DTI). The staging definitions and descriptions are based largely on visible changes to the skin/tissues (Black et al., 2007). While there is still much to understand about the causes and etiology of pressure ulcers, some cannot be identified visually until they have reached a dangerous and often irreversible state (Black et al., 2007; Doughty et al., 2006; Brown, 2006). Deep tissue injury can result from skin damage occurring hours or days before the clinical findings are evident, especially if the patient falls or becomes immobilized by a vascular event, trauma, fracture, or prolonged operating room time. When a patient develops a rapidly deteriorating pressure ulcer within several days of hospitalization, it is possible the damage may have occurred prior to hospitalization.

- Individuals in all care settings have the right to make informed decisions and to determine their goals for care. This is especially crucial in acute care where patient condition and associated goals may change rapidly. Respect for those rights includes the right to be non-adherent with a pressure ulcer prevention and treatment plan. Individuals may refuse some or all aspects of their care (American Hospital Association, 1992). A pressure ulcer may be unavoidable if the individual refuses to adhere to prevention strategies in spite of pressure ulcer prevention education.
- The presence of pressure ulcers can suggest an overall deterioration of the medical condition (Langemo et al., 2006; Witkowski et al., 2000). In the case of palliative care, pressure ulcer prevention may be displaced by the greater need for comfort and the family's need for support. Many pressure ulcer prevention interventions may be inappropriate if the measures cause intractable pain or undue family burden near the end of life (Brink, Smith, & Linkewich, 2006; Reifsnnyder & Magee, 2005).

### **Recommendations:**

- Further study is needed regarding the degree to which comorbidities and intrinsic factors contribute to pressure ulcer development and the corresponding implications for clinical practice. Current evidence-based clinical practice guidelines are based on the utilization of risk assessment tools and targeting prevention efforts towards risk modification. Not all intrinsic risk factors may be captured in current risk assessment tools, nor can they always be modified.
- Further research is needed to provide the scientific evidence supporting pressure ulcer prevention interventions, and to guide critical thinking and decision making when deviation from the interventions is indicated. Current clinical practice guidelines reflect well-established practices and consensus. These guidelines, however, give little direction to care modifications that might be necessary when faced with the combined impact of aging, illness, and quality-of-life priorities.
- Continued study is needed to support the development of an expanded list of risk factors that are more predictive of pressure ulcer development. While many wound care experts agree some pressure ulcers are unavoidable, the accurate identification of these wounds is made after appropriate preventive interventions have failed.

- Clinical practice guidelines should be developed to address patient management when death is expected, and the goals of treatment should include comfort measures and family support.
- Continued effort is needed to support the development of effective processes to ensure the consistent implementation of evidence-based preventive interventions by staff across the healthcare continuum.
- In the current healthcare environment, accurate documentation of preventive measures targeted at the reduction of risk is recommended. The clinician should also document the clinical reasons why prevention interventions are not appropriate or feasible, such as severe pain or patient refusal. If the pressure ulcer is determined to be unavoidable, the rationale must be evident.

### **Conclusion:**

The WOCN supports the early evaluation of risk for pressure ulcer development and the application of evidence-based interventions to prevent pressure ulcers, based on available scientific evidence and expert opinion.

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**Adopted By:** WOCN Society Board of Directors

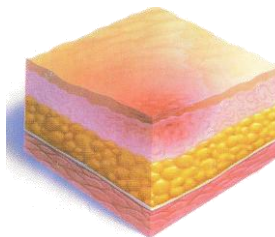
# Pressure Ulcer Staging Guide

## Stage I:

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.

### Further description:

The 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)



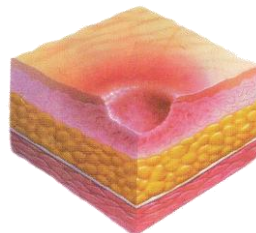
## Stage II:

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.

### Further description:

Presents as a shiny or dry shallow ulcer without slough or bruising\* This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.

\*Bruising indicates suspected deep tissue injury

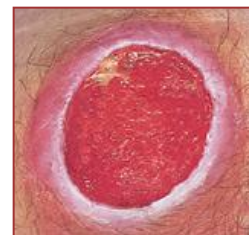
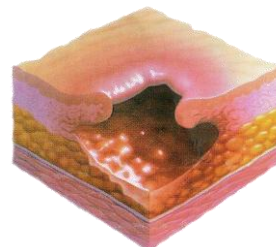


## Stage III:

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.

### Further 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 subcutaneous tissue 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.

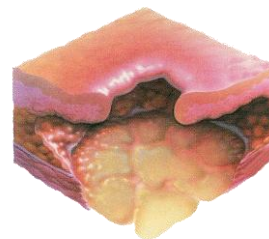


## Stage IV

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

### Further description:

The depth of a stage IV 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 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.

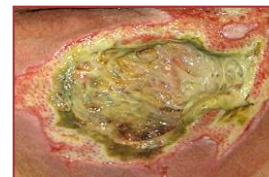


## Un-stageable

Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

### Further 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.



## 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.

### Further description:

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 optimal treatment.





## **Friction Induced Skin Injuries – Are They Pressure Ulcers? A National Pressure Ulcer Advisory Panel White Paper**

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**Keywords:** pressure ulcers, shear, friction, friction blisters, friction injuries, repetitive friction

### **Introduction**

The 2009 International NPUAP-EPUAP Pressure Ulcer Prevention and Treatment Clinical Practice Guideline eliminated reference to friction as a factor in pressure ulcer development. The classification system in the Guideline defines a pressure ulcer as "... 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." The NPUAP staging system published in 2007 defined a pressure ulcer as 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." One reason for the deletion of the words "and/or friction" is to reinforce that skin injuries caused by friction are not to be considered pressure ulcers. Despite this, differentiating wounds that have friction as a primary or contributing cause from those caused by pressure and/or shear is sometimes difficult and continues to be a frequently asked question. For example, the following question was posted on the NPUAP website: If a patient develops an ulcer from a shoe rubbing on the side of the foot, is that wound a pressure ulcer?

The literature on the role of friction in pressure ulcer development is not definitive due to inconsistent use of terminology and definitions that have evolved and changed over time. This white paper is intended to raise awareness of the issues concerning the difficulties differentiating pressure and/or shear induced injuries from friction induced injuries, and help to clarify why it was removed from the definition in the classification system.

### **Background**

What is friction? As far as the potential for skin injury is concerned, we are concerned with the types of friction generally classified as dry friction. Friction is the rubbing of one body against another or the force that resists relative motion between two bodies in contact and/or material elements sliding against each other. There are two types of dry friction – static and dynamic (a.k.a. kinetic). Static friction is the force resisting the relative motion between two bodies when there is no sliding. Static friction is the force that prevents a person from sliding down the bed when the head of the bed is raised. The amount of friction that exists at the skin surface depends on the skin's surface properties (e.g. hydration level) and what is in contact with it (e.g. bed linens, clothing, etc.) and the magnitude of pressure (normal force). Moisture is an important factor too, high humidity and liquid moisture tends to increase the friction and cause a person stick to a surface. Dynamic friction is the force resisting relative movement between two bodies in contact as they are moving relative to one another, that is, sliding. Dynamic friction exists when a person is sliding in bed or when their foot rubs against the inside of a shoe and might result in the formation of blisters, skin tags, abrasions, skin tears, and acute skin trauma, and may be misdiagnosed as a pressure ulcer.

## Discussion

The origin of considering friction a causative factor for pressure ulcers was a study published by Sidney Dinsdale in 1974. The study was performed on swine and aimed to determine if friction increased the susceptibility to injury when combined with pressure. The results showed significantly less pressure was required to induce full and partial thickness lesions when friction force was also applied. Unfortunately, Dinsdale's description of the methodology makes it difficult to ascertain if the friction applied was static or dynamic. If it were only static friction, and no sliding occurred, then it would be safe to assume that the friction caused significant shear strain in the tissue. If there was sliding, the shear strain would likely be less in magnitude and accompanied by other factors such as heating of the tissue and possibly abrasions. The study also included an experiment to test the theory that friction forces reduced blood flow in the skin more than pressure alone. The result showed that blood flow was not significantly different in the epidermis when friction and pressure were applied together compared to pressure alone. This led the investigator to conclude that the increased susceptibility of lesions with friction was not due to ischemia (reduced blood flow) in the epidermis.

Thirty-five years later, the commonly accepted etiological factors of pressure ulcer development are ischemic injury, reperfusion injury, and excessive deformation of muscle cells (Stekelenburg, 2007). Reexamining Dinsdale's results in light of more recent information, we hypothesize that, since susceptibility to ulcers increased and blood flow was not reduced in the superficial layers of the skin when friction was added, the friction used in Dinsdale's experiment was creating shear strain (deformation) in the deeper layers of tissue. An alternative, yet still consistent, hypothesis as to how friction increases susceptibility to pressure injury is that friction may cause mechanically damaging shear strain of superficial tissue cells. That is, tissue damage results directly from excessive deformation and is not related to ischemia.

So friction appears to be an important factor because it may lead to harmful shear stress and strain. Hence in the current definition of a pressure ulcer, shear remains listed as a primary causative factor and friction is eliminated. To include friction would be redundant because friction appears to be a factor only because it causes shear. Eliminating reference to friction may discourage the mislabeling of with other types of injuries to the skin such as serum filled blisters, etc. that are caused by friction force on the skin.

To answer the question raised regarding an ulcer caused as a result of a shoe rubbing on the side of the foot, this is not a classic pressure ulcer that occurred in a bed- or chair-bound patient. Nonetheless, ulcers of this type can be reduced in ambulatory patients by providing proper fitting footwear.

A question related to the discussion of friction as a risk factor for pressure ulcer development concerns the use of strategies, such as skin lubricants, low friction covering materials and dressings to control friction between load bearing surfaces to help prevent pressure ulcers. These would appear to be valid strategies since reducing of friction on the skin could reduce internal shear in deeper tissues.

## Summary

Does friction alone cause a pressure ulcer? No. Friction can cause minor to substantial skin impairment, however, friction alone is not a direct cause of a 'pressure ulcer', but rather is a risk factor that may contribute to or exacerbate pressure ulcer development due to the shear it creates. That is, friction causes the shear strain in the tissue, which can increase the risk of tissue breakdown and lead to pressure ulcers.

Should all friction injuries be labeled as 'pressure ulcers'? No. In distinguishing wound types that have friction as a factor, all factors should be considered. If the cause is solely a friction force, which lends to visible skin impairment, such as a skin tear or laceration, it would NOT be categorized as a pressure ulcer. If however the

lesion presented as a blood filled blister with surrounding purple or maroon discoloration then a pressure ulcer may be suspected. Superficial friction wounds can occur in the same location as pressure ulcers due to the surface effects combined with the deeper effects of shear and pressure. In these circumstances, interventions may need to account for reductions in both pressure and friction.

## **Disclaimer**

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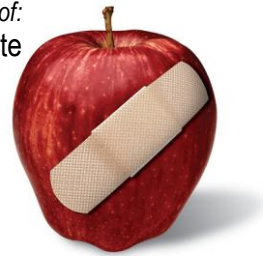
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# Wound Documentation Tips

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1. Document the type of wound and location.
2. Describe if the wound is a partial or full thickness wound
  - Partial Thickness - tissue destruction through the epidermis extending into but not thru the dermis.
  - Full Thickness- tissue destruction extending thru the dermis to involve subcutaneous tissue and possibly bone and muscle.
3. Describe the stage (if wound is pressure ulcer) **National Pressure Ulcer Advisory Panel Staging Guidelines 2/2007**
  - 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. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue. Further description: 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 optimal treatment.
  - Stage I: 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 areas. Further description: The 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)
  - Stage II: 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. Further description: Presents as a shiny or dry shallow ulcer without slough or bruising.\* This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation. \*Bruising indicated suspected deep tissue injury
  - Stage III: 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. Further 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 subcutaneous tissue 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.
  - Stage IV: Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling. Further description: The depth of a stage IV 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 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.
  - Unstageable: Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed. Further 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.  
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4. Document Size. Measure in centimeters – ALWAYS Document Length x Width X Depth
  - Length = head to toe direction
  - Width = hip to hip direction
  - Depth = measure deepest part of visible wound bed
5. Document any undermining/tunneling/sinus tracts. Document using the "Clock System" with head = 12:00 (example: 2cm undermining at 3 o'clock)
  - Tunneling- course or pathway that can extend in any direction from the wound, results in dead space
  - Undermining – tissue destruction underlying intact skin along wound margins
  - Sinus Tract – A drainage pathway from a deep focus of acute infection through tissue and/or bone to an opening on the surface
6. Describe any drainage (exudate) – type, amount, or odor using descriptions below:
  - Type
    - Sanguineous – thin, bright red
    - Serosanguineous – thin, watery, pale red to pink
    - Serous – thin, watery, clear
    - Purulent – thick or thin, opaque tan to yellow
    - Foul Purulent – thick opaque yellow to green with offensive odor
  - Amount –
    - None – wound tissues dry
    - Scant – wound tissues moist, no measurable drainage

- Small – wound tissues very moist, drainage <25% dressing
  - Moderate – wound tissues wet, drainage involves 25 – 75% dressing
  - Large – wound tissues filled with fluid – involves > 75% dressing
7. Odor – Describe presence or absence of odor- strong, foul, pungent, fecal, musty, sweet
  8. Describe the various types/characteristics of tissue in wound bed including:
    - Adherence of the tissue
      - Nonadherent – easily separated from wound base
      - Loosely adherent – pulls away from wound, but attached to wound base
      - Firmly adherent – Does not pull away from wound
    - Amount – Describe in % (example: 50% wound bed covered with soft yellow slough, 50% beefy red granulation tissue) May also use “clock system” in describing location of necrotic tissue in wound bed.
    - Tissue Types
      - Slough – usually lighter in color, thinner and stringy in consistency; Color – Can be yellow, gray, white, green, brown
      - Eschar – usually darker in color, thicker and hard consistency black or brown in color.
      - Granulation Tissue – it is usually beefy red, granular, bubbly in appearance; should be differentiated from a smooth red wound bed; color of tissue – red, pink, pale pink or full dusky red
      - Epithelialization – can appear as deep pink, then progress to pearly pink/ light purple from the edges in full thickness wound or may form islands in the wound base with superficial wounds
      - Foreign Bodies
  9. Describe wound edges:
    - Definition – Defined or undefined edges
    - Attachment – Attached or unattached edges –
    - Rolled Under (Epibole) – Macerated – Fibrotic – Callused
    - Border shape
  10. Describe surrounding tissue: Color, edema, firmness, intact, induration, pallor, lesions, texture, scar, rash, staining, moisture
  11. Describe any indicators of infection: fever, streaking, redness, increased drainage, odor, warmth, elevated WBC, induration, malaise, edema, weeping, increased pain, discolorations
  12. Document any pain – location, causative factors, intensity, quality, duration, alleviating factors, patterns, variations, interventions
  13. Document interventions for healing: dietary supplements, vitamins, lab tests, turning repositioning schedules, support surface, cushion, padding, pillows, elevation, heel protection, incontinence management, skin protection(barrier ointments)
  14. Document any conditions which would affect healing: Mobility/Turning Surface and Positioning Limitations, Nutritional Status, continence, abnormal labs, infections, deterioration of medical condition, non-compliance.
  15. Document current topical treatment plan, response to treatment , modifications to plan, implementation of new orders, reason for not changing treatment plan, referrals.
  16. Patient and caregiver education.

## Anatomical Directions

Lateral – toward side

Distal – away from center

Medial – toward middle

Dorsal – located near

Posterior – back, underside

Superior – Top, up

Anterior – Front, top

Inferior – below, down

Proximal – toward center, nearest

*Specialized directions for limbs*

Proximal - Towards body

Distal - Away from body

*Specialized directions for Hand*

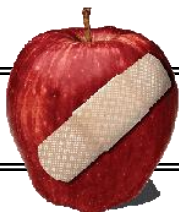
Palmar - towards palm, also volar

Dorsal - opposite of palmar

*Specialized directions for Foot*

Plantar - towards bottom of foot, also volar

Dorsal - opposite of plantar





# Dressing Categories

Category	Description	Applications
<b>*Alginate</b>	This seaweed extract contains guluronic and mannuronic acids, which provide tensile strength, and calcium and sodium alginates, which confer absorptive capacity. Some of these can leave fibers in the wound if not thoroughly irrigated.	<ul style="list-style-type: none"> <li>• Highly absorbent</li> <li>• Useful for wounds with copious exudates</li> <li>• (Alginate rope is particularly useful for packing exudative wound cavities or sinus tracts)</li> <li>• Requires secondary dressing</li> </ul>
<b>Contact Layer</b>	This is a variety of materials designed to remove easily without damaging underlying skin. Single layer woven net, low adherence.	<ul style="list-style-type: none"> <li>• Primary dressing for partial or full thickness wounds</li> <li>• Donor sites, split thickness skin grafts,</li> <li>• Exudative wounds</li> </ul>
<b>*Foam</b>	Polyurethane foam has some absorptive capacity. Semi-occlusive.	<ul style="list-style-type: none"> <li>• Useful for clean granulating wounds with minimal-heavy exudates</li> <li>• Hypergranulation</li> <li>• Used as primary or secondary dressing</li> </ul>
<b>*Hydrocolloid</b>	This is a microgranular suspension of natural or synthetic polymers such as gelatin or pectin in an adhesive matrix. The granules transform from a semihydrated state to a gel as wound exudate is absorbed. Occlusive.	<ul style="list-style-type: none"> <li>• Useful for dry necrotic wounds or those with minimal exudate</li> <li>• Also useful for clean granulating wounds</li> <li>• Autolytic debridement of minimal to moderate amount of slough/necrosis</li> <li>• Prevent secondary infection from contamination</li> <li>• Maintain moist wound surface</li> <li>• Provide limited to moderate absorption</li> </ul>
<b>*Hydrogel</b>	These are water- or glycerin-based semipermeable hydrophilic polymers; cooling properties may decrease wound pain. These gels can lose or absorb water depending on the state of hydration of the wound. Dressings are secured with a secondary covering.	<ul style="list-style-type: none"> <li>• Useful for dry, sloughy, necrotic wounds (eschar)</li> <li>• Support autolytic debridement due to moisturizing effects</li> <li>• Maintain moist wound surface</li> <li>• Pain relief in radiation-damaged tissue and superficial burns</li> </ul>
<b>Negative Pressure Wound Therapy (NPWT)</b>	Used to treat acute and chronic wounds. A vacuum source creates continuous or intermittent negative pressure inside the wound to remove fluid, exudates, and infectious materials to prepare the wound for healing and closure. NPWT systems consist of a vacuum pump, drainage tubing, foam or gauze wound dressing, and an adhesive film dressing that covers and seals the wound.	<ul style="list-style-type: none"> <li>• May be used in acute, extended and home care settings.</li> <li>• It is intended to create an environment that promotes wound healing by secondary or tertiary (delayed primary) intention by preparing the wound bed for closure, reducing edema, promoting granulation tissue formation and perfusion, and by removing exudate and infectious material</li> <li>• It is indicated for patients with chronic, acute, traumatic, subacute and dehisced wounds, partial-thickness burns, ulcers (such as diabetic or pressure), flaps and grafts</li> </ul>
<b>Specialty Absorbent</b>	Multi-layered dressing, highly absorptive fiber layers such as cellulose, cotton, or rayon.	<ul style="list-style-type: none"> <li>• Manage light to heavy exudates</li> <li>• Partial or full thickness</li> <li>• Necrotic or granulating</li> <li>• May be used on infected wounds</li> </ul>
<b>*Transparent Film</b>	These are highly conformable acrylic adhesive films with no absorptive capacity and little hydrating ability. Dressings may be vapor permeable or perforated	<ul style="list-style-type: none"> <li>• Useful for clean dry wounds with minimal exudates</li> <li>• Also used to secure an underlying absorptive material</li> <li>• Protection of high-friction areas and areas that are difficult to bandage, such as heels</li> </ul>

# Types of Wound Debridement

Type of Debridement	Definition	Examples
<b>Autolytic</b>	Involves the use of semioclusive and occlusive dressings which create a moist/warm, environment for the body's enzymes to break down the necrotic tissue.	<ul style="list-style-type: none"> <li>• Semioclusive Dressings (Transparent film)</li> <li>• Occlusive Dressings (Hydrocolloid, hydrogel)</li> </ul>
<b>Biosurgical</b>	An effective and relatively quick method of debridement. This type of debridement is especially effective when sharp debridement is contraindicated due to the exposure of bone, joint, or tendon.	<ul style="list-style-type: none"> <li>• Maggot Therapy</li> </ul>
<b>Enzymatic</b>	Uses enzymes to remove necrotic tissue. This form of debridement is considered drug therapy; therefore it should be signed on the medication record.	<ul style="list-style-type: none"> <li>• Collagenase</li> </ul>
<b>Mechanical</b>	<p>Uses a nonselective, physical method of removing necrotic tissue and debris from a wound using mechanical force.</p> <ul style="list-style-type: none"> <li>• One common form of mechanical treatment is wet-to-dry gauze which adheres to and then removes necrotic tissue.</li> <li>• The challenge with mechanical debridement is the possibility that healthy granulation tissue may be removed as well, along with the devitalized tissue, thereby delaying wound healing and causing pain. Thus, CMS suggests that this method of debridement be used in limited circumstances.</li> </ul>	<ul style="list-style-type: none"> <li>• Irrigation</li> <li>• Wet to dry Dressings</li> </ul>
<b>Sharp</b>	The fastest and most effective type of debridement because of the time involved to remove the devitalized tissue. Should always be considered when the patient is suspected of having Cellulitis or Sepsis	<ul style="list-style-type: none"> <li>• Scalpel</li> <li>• Laser</li> </ul>

## Debridement Tips:

- The presence of necrotic devitalized tissue promotes the growth of pathologic organisms and prevents wounds from healing.
- The best method of debridement is determined by:
  1. The goals of the resident
  2. Absence or presence of infection
  3. Pain control
  4. Amount of devitalized tissue present
  5. Economic considerations for the resident and institution.
- In the State of Ohio, Registered Nurses may perform conservative sharp wound debridement in accordance with section 4723.01(B) of the Ohio Revised Code (ORC). Interpretive Guideline for Conservative Sharp Debridement: [http://nursing.ohio.gov/PDFS/Practice/IG\\_Debride\\_11907review\\_3-2013.pdf](http://nursing.ohio.gov/PDFS/Practice/IG_Debride_11907review_3-2013.pdf)
- Surgical dressings are covered by Medicare Part B when either of the following criteria are met:
  1. They are required for the treatment of a wound caused by, or treated by, a surgical procedure; or
  2. They are required after debridement of a wound
- Surgical dressings include both Primary, (I.e., therapeutic or protective coverings applied directly to wounds or lesions either on skin or caused by an opening to the skin), and secondary dressings, (I.e., materials that serve a therapeutic or protective function and are needed to secure a primary dressing).
- The surgical procedure or debridement must be performed by a physician or other healthcare professional to the extent permissible under state law.
- **Check with your Medicare part B biller to confirm dressing coverage.**