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Preserve and Protect the Skin Integrity of the Older Adult

Susan Rolfes MSN, RN

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Course Description

The session will highlight standards of practice in promoting skin integrity, prevention, and treatment of pressure injuries. Explore factors to facilitate healing, recognize indicators of infection and distinguish treatment modalities for pressure injuries and lower extremity wounds.

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Objectives

- Review the essential elements in preventing alterations in skin integrity.
- Examine fundamental treatment options for pressure injuries and lower extremity wounds.
- Discuss the key elements necessary to facilitate wound healing.
- Reveal the impact of facility- acquired pressure injuries on quality measures.

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The Facts - Pressure Injury

- Pressure injuries are one of the indicators measuring quality in nursing homes.
- Pressure injuries are a common health problem among nursing home residents and substantially increase morbidity, mortality, and the cost of care.
- 1 in 10 nursing home residents have pressure injuries and those in residence for a year or less are more likely to develop pressure injuries than those with longer stays.

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Functions of Skin

- Protection
- Sensation
- Thermoregulation
- Control of fluid loss
- Storage
- Excretion
- Absorption
- Water resistance
- Communication

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Pressure Injury: Location

- Coccyx
- Hips
- Ankles
- Elbows
- Shoulder blades
- Lateral malleolus

Pressure Injury - StatPearls - NCBI Bookshelf (nih.gov

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Risk Factors

Intrinsic Factors	Extrinsic Factors
Cardiovascular disease	Pressure
Diabetes	Moisture
Malnutrition	Shear
Pulmonary disease	Friction
Neurological disease	Reduced tissue tolerance
Body type-thin or obese	Heat
Incontinence	Posture
Immobility	Impact injury

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Causes of Pressure Injury

- Continuous pressure – if there is pressure on the skin on one side, and bone on the other reducing adequate blood supply.
- Moisture related to incontinence
- Warm micro-climate
- Friction – Attempting to reposition self .
- Thin and frail skin
- Poor circulation

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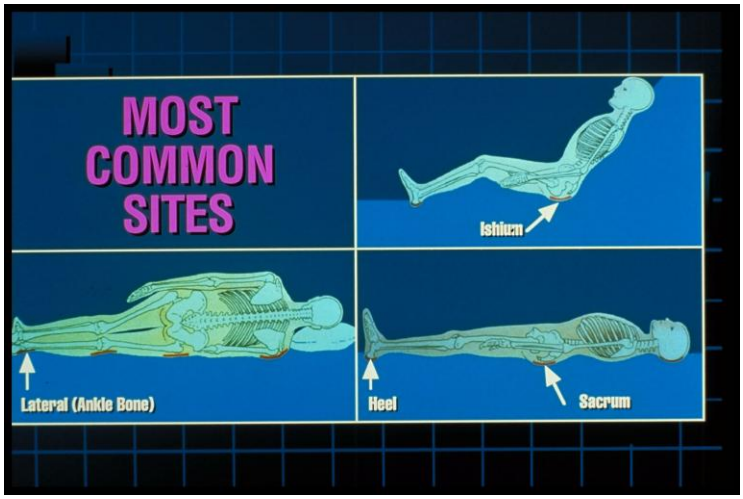
Friction and Shear



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Friction Injuries

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Shear Injury

Causes of Pressure Injury

- Shear – if the skin moves one way while the underlying bone moves in the opposite direction, this is known as shearing.
- When a patient slides down a bed or a chair, there is a risk of shearing – cells and minute blood vessels stretch and tear.
- The tailbone, especially if the skin is already very thin, is especially susceptible to pressure injury from shearing and moisture.

Prevention of Shearing Injuries

- Keep the head of the bed less than 30 degrees (if appropriate)
- Reposition with a lift sheet
- Avoid skin is not sliding against the skin
- Use knee gatch on bed during position changes
- Work with occupation and physical therapy
- Check placement of medical devices
- Engage direct care providers in approaches.

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The Aging Skin

- Loss of elasticity
- Increased transparency
- Increased fragility
- Decreased skin turnover
- Wrinkles
- Dryness
- Itching
- Risk of infection

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Assessment: Braden Scale

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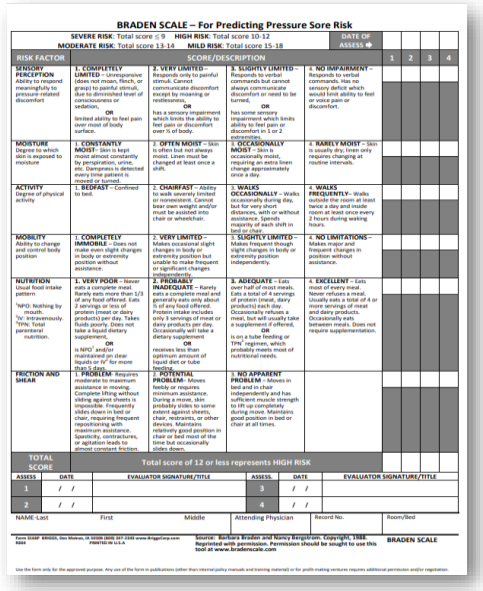
Braden Scale

Sensory Perception	1-4
Moisture	1-4
Activity	1-4
Mobility	1-4
Nutrition	1-4
Friction and Shear	1-3
Score Range from	6-23



BRADEN SCALE – For Predicting Pressure Sore Risk

SEVERE RISK: Total score ≤ 9 **HIGH RISK:** Total score 10-12
MODERATE RISK: Total score 13-14 **MILD RISK:** Total score 15-18

DATE OF ASSESS ➡

RISK FACTOR	SCORE/DESCRIPTION				1	2	3	4
SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort	**1. COMPLETELY LIMITED** – Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation, **OR** limited ability to feel pain over most of body surface.	**2. VERY LIMITED** – Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness, **OR** has a sensory impairment which limits the ability to feel pain or discomfort over ½ of body.	**3. SLIGHTLY LIMITED** – Responds to verbal commands but cannot always communicate discomfort or need to be turned, **OR** has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	**4. NO IMPAIRMENT** – Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.				
MOISTURE Degree to which skin is exposed to moisture	**1. CONSTANTLY MOIST**– Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	**2. OFTEN MOIST** – Skin is often but not always moist. Linen must be changed at least once a shift.	**3. OCCASIONALLY MOIST** – Skin is occasionally moist, requires an extra linen change approximately once a day.	**4. RARELY MOIST** – Skin is usually dry; linen only requires changing at routine intervals.				
ACTIVITY Degree of physical activity	**1. BEDFAST** – Confined to bed.	**2. CHAIRFAST** – Ability to walk severely limited or nonexistent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	**3. WALKS OCCASIONALLY** – Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	**4. WALKS FREQUENTLY**– Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.				
MOBILITY Ability to change and control body position	**1. COMPLETELY IMMOBILE** – Does not make even slight changes in body or extremity position without assistance.	**2. VERY LIMITED** – Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	**3. SLIGHTLY LIMITED** – Makes frequent though slight changes in body or extremity position independently.	**4. NO LIMITATIONS** – Makes major and frequent changes in position without assistance.				
NUTRITION Usual food intake pattern ¹NPO: Nothing by mouth. ²IV: Intravenously. ³TPN: Total parenteral nutrition.	**1. VERY POOR** – Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, **OR** is NPO¹ and/or maintained on clear liquids or IV² for more than 5 days.	**2. PROBABLY INADEQUATE** – Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement, **OR** receives less than optimum amount of liquid diet or tube feeding.	**3. ADEQUATE** – Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally refuses a meal, but will usually take a supplement if offered, **OR** is on a tube feeding or TPN³ regimen, which probably meets most of nutritional needs.	**4. EXCELLENT** – Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.				
FRICTION AND SHEAR	**1. PROBLEM**– Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.	**2. POTENTIAL PROBLEM**– Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	**3. NO APPARENT PROBLEM** – Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.					
TOTAL SCORE	**Total score of 12 or less represents HIGH RISK**							

ASSESS	DATE	EVALUATOR SIGNATURE/TITLE	ASSESS	DATE	EVALUATOR SIGNATURE/TITLE
1	/ /		3	/ /	
2	/ /		4	/ /	

NAME-Last First Middle | Attending Physician | Record No. | Room/Bed

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BRADEN SCALE

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Scoring of the Braden Scale

19-23= No Risk

15-18= Mild Risk

13-14= Moderate Risk

Less than 9= Severe Risk

1 = completely limited
2 = very limited
3 = slightly limited
4 = no impairment

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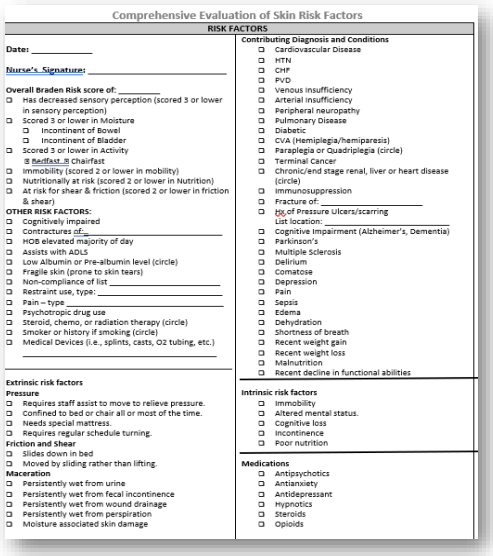
Risk Assessment



Comprehensive Evaluation of Skin Risk Factors

RISK FACTORS

Date: _____

Nurse's Signature: _____

Overall Braden Risk score of: _____
- ☐ Has decreased sensory perception (scored 3 or lower in sensory perception)
- ☐ Scored 3 or lower in Moisture
  - ☐ Incontinent of Bowel
  - ☐ Incontinent of Bladder
- ☐ Scored 3 or lower in Activity
  - ☒ Bedfast ☐ Chairfast
- ☐ Immobility (scored 2 or lower in mobility)
- ☐ Nutritionally at risk (scored 2 or lower in Nutrition)
- ☐ At risk for shear & friction (scored 2 or lower in friction & shear)

OTHER RISK FACTORS:
- ☐ Cognitively impaired
- ☐ Contractures of: _____
- ☐ HOB elevated majority of day
- ☐ Assists with ADLS
- ☐ Low Albumin or Pre-albumin level (circle)
- ☐ Fragile skin (prone to skin tears)
- ☐ Non-compliance of list _____
- ☐ Restraint use, type: _____
- ☐ Pain – type _____
- ☐ Psychotropic drug use
- ☐ Steroid, chemo, or radiation therapy (circle)
- ☐ Smoker or history if smoking (circle)
- ☐ Medical Devices (i.e., splints, casts, O2 tubing, etc.) _____

Extrinsic risk factors

Pressure
- ☐ Requires staff assist to move to relieve pressure.
- ☐ Confined to bed or chair all or most of the time.
- ☐ Needs special mattress.
- ☐ Requires regular schedule turning.

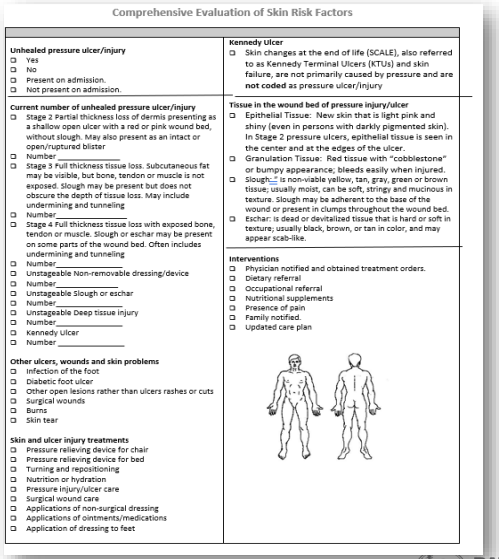
Friction and Shear
- ☐ Slides down in bed
- ☐ Moved by sliding rather than lifting.

Maceration
- ☐ Persistently wet from urine
- ☐ Persistently wet from fecal incontinence
- ☐ Persistently wet from wound drainage
- ☐ Persistently wet from perspiration
- ☐ Moisture associated skin damage

Contributing Diagnosis and Conditions
- ☐ Cardiovascular Disease
- ☐ HTN
- ☐ CHF
- ☐ PVD
- ☐ Venous insufficiency
- ☐ Arterial insufficiency
- ☐ Peripheral neuropathy
- ☐ Pulmonary Disease
- ☐ Diabetic
- ☐ CVA (Hemiplegia/hemiparesis)
- ☐ Paraplegia or Quadriplegia (circle)
- ☐ Terminal Cancer
- ☐ Chronic/end stage renal, liver or heart disease (circle)
- ☐ Immunosuppression
- ☐ Fracture of: _____
- ☐ Hx of Pressure Ulcers/scarring List location: _____
- ☐ Cognitive Impairment (Alzheimer's, Dementia)
- ☐ Parkinson's
- ☐ Multiple Sclerosis
- ☐ Delirium
- ☐ Comatose
- ☐ Depression
- ☐ Pain
- ☐ Sepsis
- ☐ Edema
- ☐ Dehydration
- ☐ Shortness of breath
- ☐ Recent weight gain
- ☐ Recent weight loss
- ☐ Malnutrition
- ☐ Recent decline in functional abilities

Intrinsic risk factors
- ☐ Immobility
- ☐ Altered mental status.
- ☐ Cognitive loss
- ☐ Incontinence
- ☐ Poor nutrition

Medications
- ☐ Antipsychotics
- ☐ Antianxiety
- ☐ Antidepressant
- ☐ Hypnotics
- ☐ Steroids
- ☐ Opioids



Comprehensive Evaluation of Skin Risk Factors

Unhealed pressure ulcer/injury
- ☐ Yes
- ☐ No
- ☐ Present on admission.
- ☐ Not present on admission.

Current number of unhealed pressure ulcer/injury
- ☐ Stage 2 Partial thickness loss of dermis presenting as a shallow open ulcer with a red or pink wound bed, without slough. May also present as an intact or open/ruptured blister
- ☐ Number _____
- ☐ Stage 3 Full thickness tissue loss. Subcutaneous fat may be visible, but bone, tendon or muscle is not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling
- ☐ Number _____
- ☐ Stage 4 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
- ☐ Number _____
- ☐ Unstageable Non-removable dressing/device
- ☐ Number _____
- ☐ Unstageable Slough or eschar
- ☐ Number _____
- ☐ Unstageable Deep tissue injury
- ☐ Number _____
- ☐ Kennedy Ulcer
- ☐ Number _____

Other ulcers, wounds and skin problems
- ☐ Infection of the foot
- ☐ Diabetic foot ulcer
- ☐ Other open lesions rather than ulcers rashes or cuts
- ☐ Surgical wounds
- ☐ Burns
- ☐ Skin tear

Skin and ulcer injury treatments
- ☐ Pressure relieving device for chair
- ☐ Pressure relieving device for bed
- ☐ Turning and repositioning
- ☐ Nutrition or hydration
- ☐ Pressure injury/ulcer care
- ☐ Surgical wound care
- ☐ Applications of non-surgical dressing
- ☐ Applications of ointments/medications
- ☐ Application of dressing to feet

Kennedy Ulcer
- ☐ Skin changes at the end of life (SCALE), also referred to as Kennedy Terminal Ulcers (KTUs) and skin failure, are not primarily caused by pressure and are **not coded** as pressure ulcer/injury

Tissue in the wound bed of pressure injury/ulcer
- ☐ Epithelial Tissue: New skin that is light pink and shiny (even in persons with darkly pigmented skin). In Stage 2 pressure ulcers, epithelial tissue is seen in the center and at the edges of the ulcer.
- ☐ Granulation Tissue: Red tissue with "cobblestone" or bumpy appearance; bleeds easily when injured.
- ☐ Slough: is non-viable 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.
- ☐ Eschar: is dead or devitalized tissue that is hard or soft in texture; usually black, brown, or tan in color, and may appear scab-like.

Interventions
- ☐ Physician notified and obtained treatment orders.
- ☐ Dietary referral
- ☐ Occupational referral
- ☐ Nutritional supplements
- ☐ Presence of pain
- ☐ Family notified.
- ☐ Updated care plan

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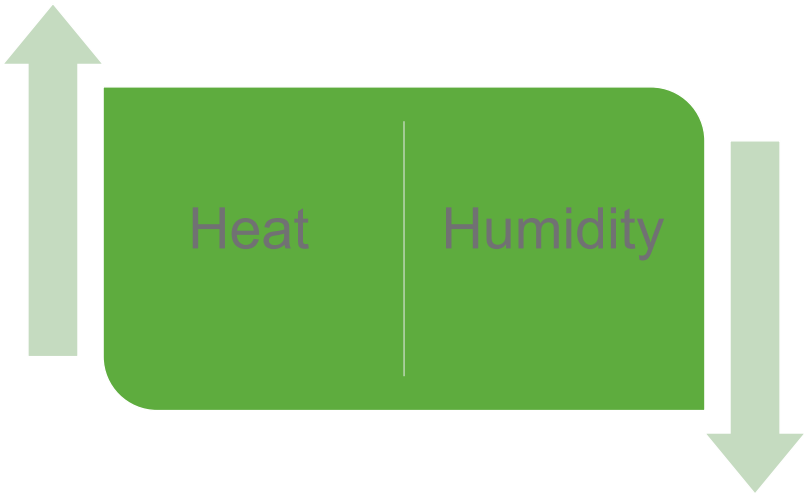
Microclimate



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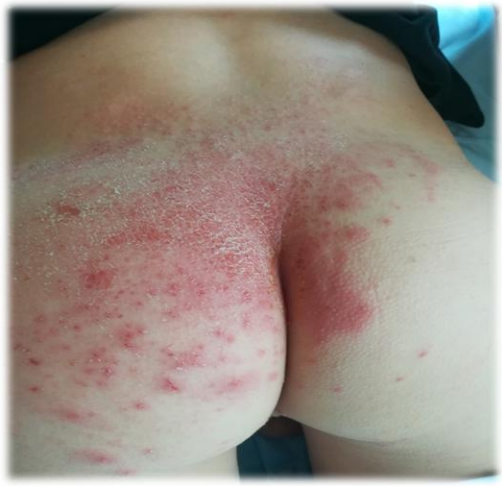
Moisture Associated Dermatitis- IAD



- Disposable products
- Urine and or feces
- Abrasive forces
- Breathable sheets
- Avoid using hot water and harsh soap
- Avoid excessive heat and humidity
- Breathable clothing
- Change briefs regularly
- Barrier cream

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Moisture Associated Dermatitis

A. Cleanse perineal skin after each incontinent episode
   a) Do not scrub the skin
   b) Use perineal cleansers, disposable wipes or 3-in-1 sprays
   c) Pay close attention to skin folds
   d) Keep skin cleansers at the bedside and available for use

B. Moisturize
   a) Apply an emollient to the skin.
   b) Avoid products with an intense concentration of humectants.

C. Protect
   a) Apply skin protectants such ad a zinc oxide, petrolatum, dimethicone.

Consider a skin sealant or a copolymer film to seal the skin for residents with frequent fecal incontinence

(Do not use a skin sealant on any open areas and must use a non – sting)

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Pressure Injury Identification

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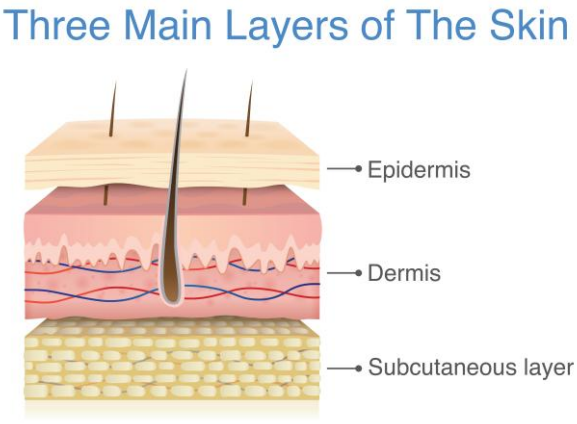
Layers of Skin



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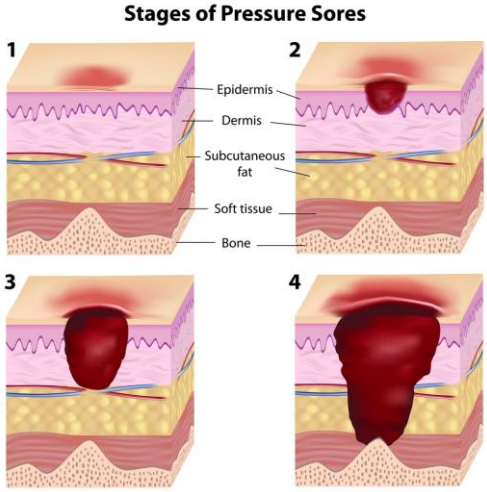
Stages of Pressure Injury



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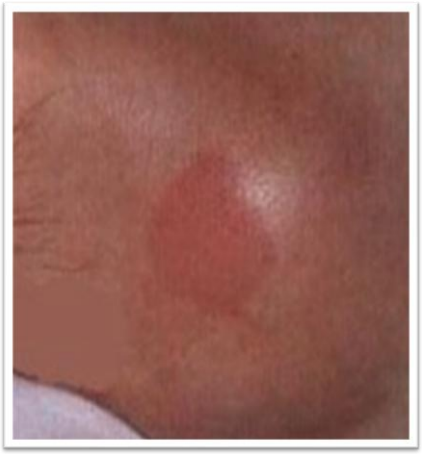
Stage 1

Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area, red, blue or purple hues.



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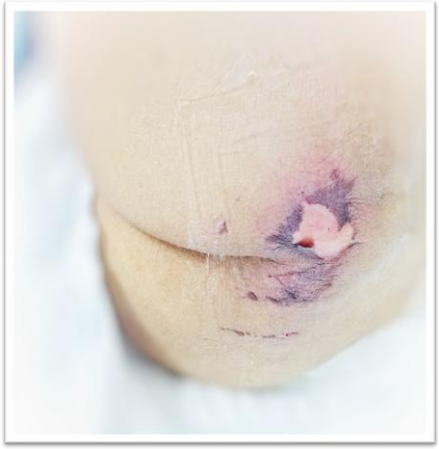
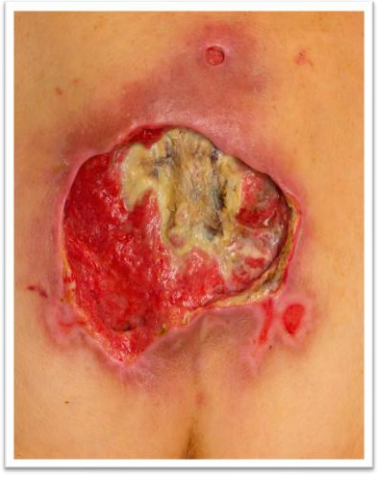
Stage 2

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.



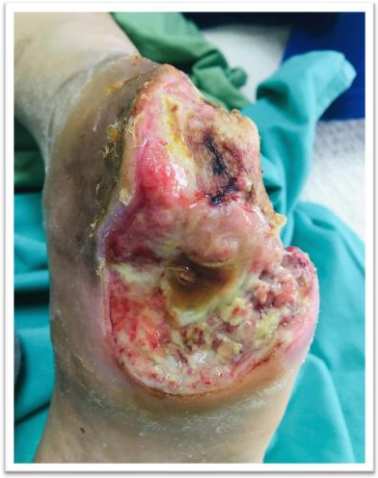
Stage 3

- 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.



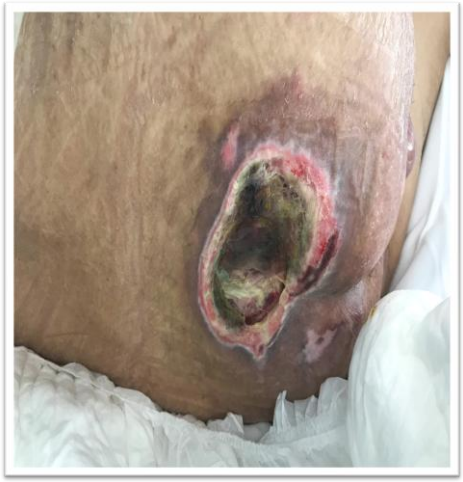
Stage 4

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.



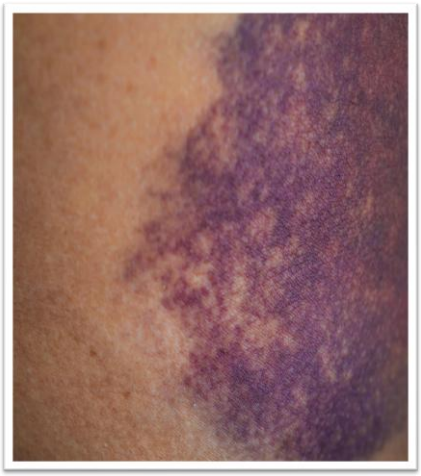
Unstageable

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.



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.



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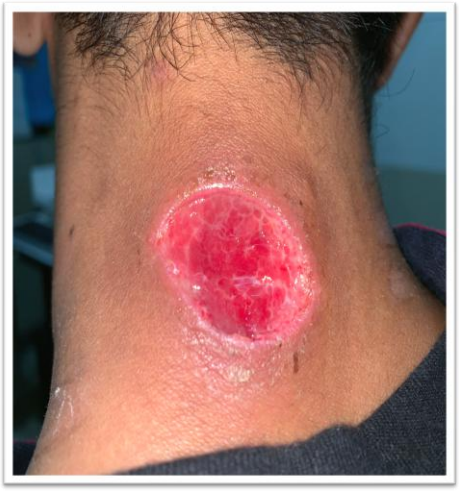
Granulation Tissue

Red tissue with “cobblestone” or bumpy appearance; bleeds easily when injured.



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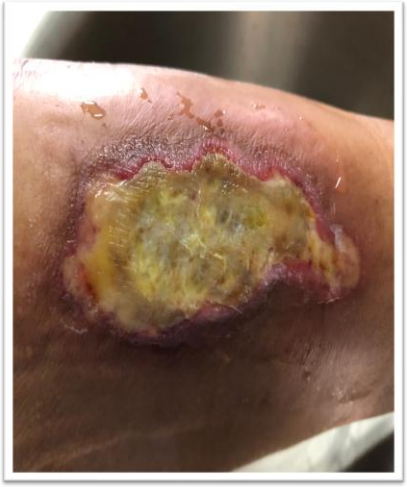
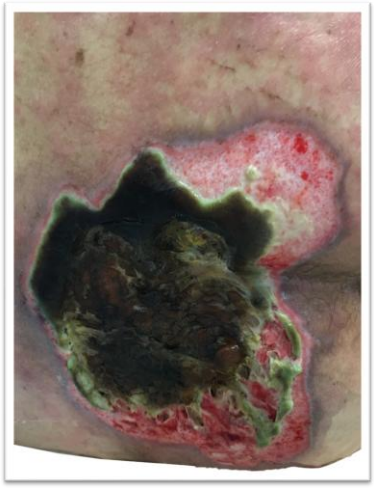
Slough

Non-viable 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.



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.



Wound Bed Cleansing- TIME Principle

T - Tissue-- Identify the type of tissue and the most appropriate method of debridement.

I - Infection and inflammation The presence of infection will prohibit wound healing

M - Moisture; Is the wound to dry or to moist. If the tissue is macerated at the wound edges

E - Edge of wound: Are the wound edges progressing, appear attached or unattached, tunneling and or undermining.

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Wound Cleansing

- Process of using fluids to remove surface debris
- Identify the type and frequency of cleansing
- Manage pain before the dressing change
- Cleansing with normal saline is acceptable
- 35cc – 19 gauge = 8psi

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Types of Debridement

- Surgical (Sharp=Selective)
- Enzymatic Debridement (Selective)
- Autolytic (Selective)
- Biological (Selective)
- Mechanical (Nonselective)
- Irrigation (Nonselective)

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Assessment Strategies

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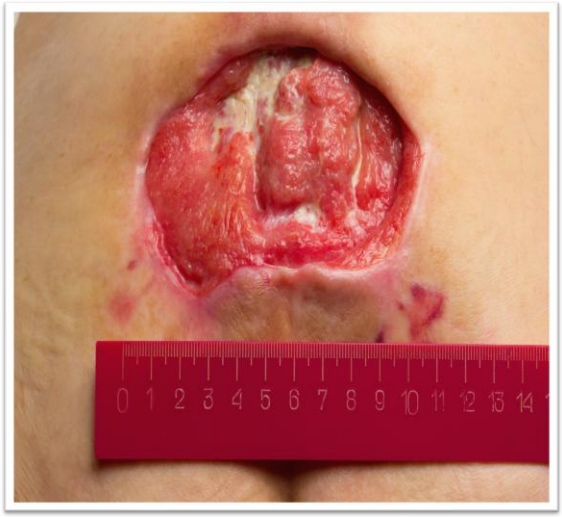
Wound Assessment

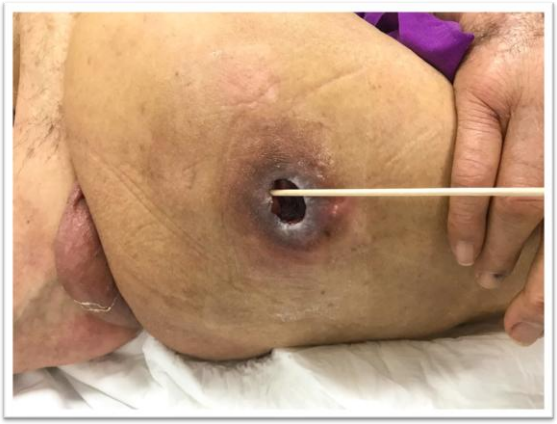
Weekly Wound Rounds

- Type of wound
- Location of wound
- Tissue type
- Clinical appearance
- Measurement and dimensions
- Wound Edge
- Exudate
- Presence of infection
- Pain



Wound Edges

- Color and Consistency Intact
- Inflammation or Induration
- Maceration
- Rolled under or Callused
- Epithelial – new or pink shiny tissue that grows in from the edges or as islands on the wound surface
- Closed/Resurfaced



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Treatment Strategies

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Topical Treatment

- Understand major categories of dressings
- No one dressing will work with all wounds
- Wound Characteristics should be assessed to determine treatment
- As the wound changes so will your topical treatment
- Write Physician order with the category of the product only, when possible

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Wound Bed Preparation

- All wounds should be cleansed/irrigated with each dressing change.
- Normal Saline is the preferred cleansing agent, because it is physiologic and won‘t harm tissue and adequately cleanses most wounds
- Wounds with adherent materials may benefit from the use of commercial wound cleansers that do not contain harmful chemicals.
- Use safe and effective ulcer irrigation pressures range from 4 to 15psi (8psi is achieved with a 35-mL syringe and 19-gauge angiocatheter)

Bryant, R.A. & Nix, D.P. (2023) Acute & Chronic Wounds, Current Management Concepts, Third Edition

43

Transparent Film

Indications:

- Superficial wounds with minimal to no drainage
- Protection for high-risk intact skin
- Eschar covered wounds to promote autolysis
- Commonly used as a cover dressing to other products

Precautions:

- Do not use on moderate to heavily draining wounds, cavities or sinus tracts unless as a secondary dressing
- Don not use on infected wounds, arterial ulcers, 3rd degree burns, or fragile peri wound skin.

Frequency: Can be left on up-to 7 days

European Pressure Ulcer Advisory Panel, National Pressure Injury advisory Panel and Pan Pacific Pressure Injury Allinace. Prevention and treatment of pressure ulcer/injuries: Clinical Practice Guideline. The International Guideline. Emily Haesier (ED). EPUAP/NPIA/PPIA: 2019.

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Hydrocolloids

Indications:

- Minimal to moderate draining wounds
- Wounds exposed to urine or feces
- Intact skin that needs protection
- Promotes autolytic debridement

Precautions:

- Infected
- Heavily exudating wounds
- Wounds with depth, tunnels/cavities,
- Fragile peri wound skin, and
- 3rd degree burns.

Frequency of Change:

- Every 3-7 days

European Pressure Ulcer Advisory Panel, National Pressure Injury advisory Panel and Pan Pacific Pressure Injury Allinace. Prevention and treatment of pressure ulcer/injuries: Clinical Practice Guideline. The International Guideline. Emily Haesier (ED). EPUAP/NPIA/PPIA: 2019.

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Hydrogels

Indications:

- Stage II, III, or IV wounds that are dry or have minimal drainage
- Appropriate for wounds with necrosis/eschar for autolytic debridement
- May be used in conjunction with other dressings

Precautions:

- Do not use with draining wounds
- Assess surrounding skin for maceration

Frequency:

- qd to 3 times per week depending on type

European Pressure Ulcer Advisory Panel, National Pressure Injury advisory Panel and Pan Pacific Pressure Injury Allinace. Prevention and treatment of pressure ulcer/injuries: Clinical Practice Guideline. The International Guideline. Emily Haesier (ED). EPUAP/NPIA/PPIA: 2019.

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Foams

Indications:

- Stage I (protection)
- Moderate to heavy exudate
- Infected wounds
- Can be used as a secondary dressing
- Use non-adhesive form with fragile peri wound skin

Precautions:

- Do not use with non-draining wounds

Frequency:

- Every day or up to 3 times per week

European Pressure Ulcer Advisory Panel, National Pressure Injury advisory Panel and Pan Pacific Pressure Injury Allinace. Prevention and treatment of pressure ulcer/injuries: Clinical Practice Guideline. The International Guideline. Emily Haesier (ED). EPUAP/NPIA/PPIA: 2019.

Calcium Alginates

Indications:

- Stage II, III, & IV with moderate to heavy drainage
- Can be used on contaminated or infected wounds

Precautions:

- Do not use on non-draining wounds
- Do not over pack
- Need a secondary dressing
- Ensure product is irrigated out of wound base

Frequency:

- Typically, daily depending on drainage

European Pressure Ulcer Advisory Panel, National Pressure Injury advisory Panel and Pan Pacific Pressure Injury Allinace. Prevention and treatment of pressure ulcer/injuries: Clinical Practice Guideline. The International Guideline. Emily Haesier (ED). EPUAP/NPIA/PPIA: 2019.

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Lower Extremity Wound

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Lower Extremity Wounds

- Arterial Insufficiency
- Venous Insufficiency
- Peripheral Neuropathy/Diabetic

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Arterial Insufficiency

- Extremity becomes pale/pallor with elevation and has dependent rubor
- Skin: shiny, taut, thin, dry, hair loss of lower extremities, atrophy of subcutaneous tissue
- Increased pain with activity and/or elevation (intermittent claudication, resting, nocturnal and positional)

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Arterial Ulcers

- Perfusion
  - Skin Temperature:
    - Cold/decreased
- Capillary Refill
  - Delayed – more than 3 seconds
- Peripheral Pulses
  - Absent or Diminished
- Location
  - Toe tips and/or web spaces
  - Phalangeal heads around lateral malleolus
  - Areas exposed to pressure or repetitive trauma (shoe, cast, brace, etc.)

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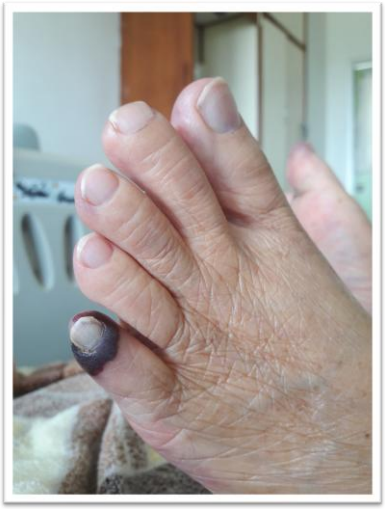
Arterial Ulcer



- Keep wound dry
- Consider vascular surgery
- Resident pain
- Keep leg in a dependent position
- Boots or pumps to facilitate healing

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Venous Insufficiency

Among lower extremity ulcer etiologies, venous leg ulcers comprise 60% to 80%.

Approximately 1% of the US population is affected by a VLU, with a higher prevalence in the geriatric population (nearly 3%)

Annually, the cost of care per patient with a VLU can reach $10,000 to $12,000, with total cost nearing $40,000 for one episode

Financial burden is only one of the multitude of factors driving aggressive prevention and treatment.

VLUs carry a steep rate of recurrence, with some estimates as high as 70% within 90 days after resolution

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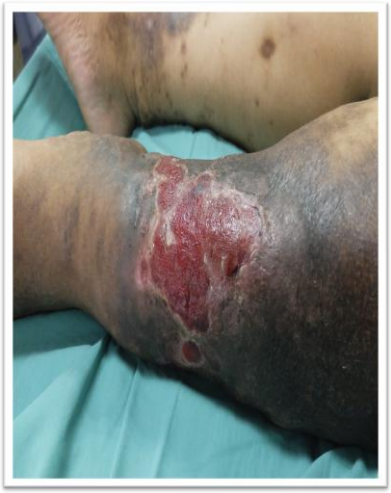
Venous Insufficiency Characteristics

- Lower Leg characteristics
  - Edema Pitting or non-pitting
  - Venous Dermatitis (erythema, scaling, edema and weeping)
  - Hemosiderin Staining Brown staining (hyperpigmentation)
  - Active Cellulitis



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Diabetic Foot Ulcer

- Circular punched-out appearance
- Often develops within a callosity on a pressure site
- May be preceded by a blister
- Can be painless, leading to a delay in presentation to a health professional
- Drainage on socks
- Redness and swelling
- Odor
- Black tissue (eschar) surrounding the ulcer
- Dry, cracked, scaly, or red skin
- Go un-noticed by the patient

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Quality Measure and 5-Star

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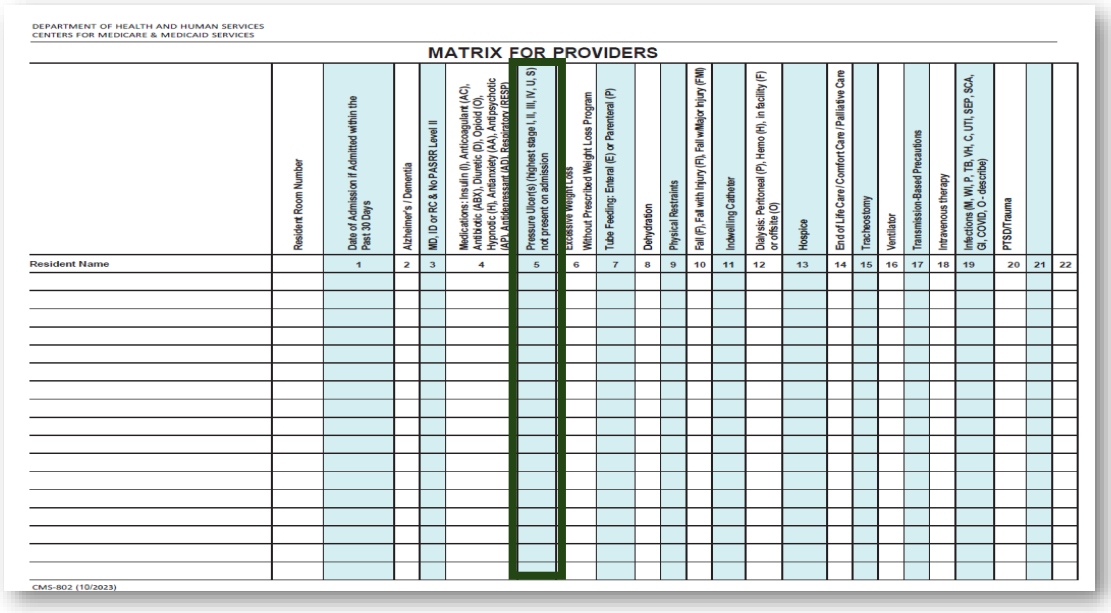

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MATRIX FOR PROVIDERS

Resident Name	Resident Room Number	1 Date of Admission if Admitted within the Past 30 Days	2 Alzheimer's / Dementia	3 MD, ID or RC & No PASRR Level II	4 Medications: Insulin (I), Anticoagulant (AC), Antiplatelet (APA), Diuretic (D), Opioid (O), Hypnotic (H), Antianxiety (AA), Antipsychotic (AP), Antidepressant (AD), Respirator (RESP)	5 Pressure Ulcer(s) (highest stage I, II, III, IV, U, S) not present on admission	6 Excessive Weight Loss Without Prescribed Weight Loss Program	7 Tube Feeding: Enteral (E) or Parenteral (P)	8 Dehydration	9 Physical Restraints	10 Fall (F), Fall with Injury (FI), Fall w/Major Injury (FMI)	11 Indwelling Catheter	12 Dialysis: Peritoneal (P), Hemo (H), In facility (F) or offsite (O)	13 Hospice	14 End of Life Care / Comfort Care / Palliative Care	15 Tracheostomy	16 Ventilator	17 Transmission-Based Precautions	18 Intravenous therapy	19 Infections (M, WI, P, TB, VH, C, UTI, SEP, SCA, GI, COVID, O - describe)	20 PTSD/Trauma	21	22

CMS-802 (10/2023)

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Table 2-30
Percent of Residents With Pressure Ulcers (LS)
(CMS ID: N045.01) (CMIT Measure ID: 512)[26]

Measure Description
This measure captures the percentage of long-stay residents with Stage II-IV or unstageable pressure ulcers.

Measure Specifications

Numerator

All long-stay residents with a selected target assessment that meet the following condition:

1. Stage II-IV or unstageable pressure ulcers are present, as indicated by *any* of the following six conditions:
   - 1.1. (M0300B1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) *or*
   - 1.2. (M0300C1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) *or*
   - 1.3. (M0300D1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) *or*
   - 1.4. (M0300E1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) *or*
   - 1.5. (M0300F1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]) *or*
   - 1.6. (M0300G1 = [1, 2, 3, 4, 5, 6, 7, 8, or 9]).

Denominator

All long-stay residents with a selected target assessment except those with exclusions.

Exclusions

1. Target assessment is an ORBA Admission assessment (A0310A = [01]) or a PPS 5-Day assessment (A0310B = [01]).
2. If the resident is not included in the numerator and any of the following conditions are true:
   - 2.1. (M0300B1 = [-]) *or*
   - 2.2. (M0300C1 = [-]) *or*
   - 2.3. (M0300D1 = [-]) *or*
   - 2.4. (M0300E1 = [-]) *or*
   - 2.5. (M0300F1 = [-]) *or*
   - 2.6. (M0300G1 = [-]).

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Measure Specifications Continued

3. Assessments with target dates before 10/01/2023.

Covariates

Covariates used to risk-adjust this measure include:

1. Impaired Functional Mobility: Lying to Sitting on Side of Bed on target assessment.[27]
   - 1.1. Covariate = [1] if GG0170C = [01, 02, 07, 09, 10, 88].
   - 1.2. Covariate = [0] if GG0170C = [03, 04, 05, 06, -].
2. Bowel Incontinence on target assessment.
   - 2.1. Covariate = [1] if H0400 = [1, 2, 3].
   - 2.2. Covariate = [0] if H0400 = [0, 9, -].
3. Diabetes Mellitus, Peripheral Vascular Disease or Peripheral Arterial Disease on target assessment.
   - 1.1 Covariate = [1] if I0900 = [1] or I2900 = [1], else covariate = [0].
2. Indicator of low body mass index based on height (K0200A) and weight (K0200B) on target assessment.
   - 2.1 Covariate = [1] if BMI >= [12.0] *and* BMI<= [19.0].
   - 2.2 Covariate = [0] if [0] < BMI < [12.0] *or* BMI > [19.0].
   - 2.3 If Covariate has not been set to [1] or [0] based on logic in 4.1 and 4.2, then Covariate = [0].
3. Malnutrition or at risk of malnutrition on target assessment.
   - 3.1 Covariate = [1] if I5600 = [1], else covariate = [0].
4. Dehydrated on target assessment.
   - 4.1 Covariate = [1] if J1550C= [1], else covariate = [0].
5. Infections: Septicemia, Pneumonia, Urinary Tract Infection or Multidrug-Resistant Organism on target assessment.
   - 5.1 Covariate = [1] if I2100 = [1] *or* I2000 = [1] *or* I2300 = [1] *or* I1700 = [1], else covariate = [0].
6. Moisture Associated Skin Damage on target assessment.
   - 6.1 Covariate = [1] if M1040H = [1], else covariate = [0].
7. Hospice Care on target assessment.
   - 7.1 Covariate = [1] if O0110K1b = [1], else covariate = [0].

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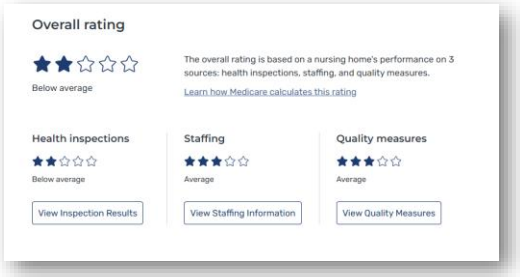
Report Version Number: 3.0.3

Note: Dashes represent a value that could not be computed
Note: S = short stay, L = long stay
Note: C = complete; data available for all days selected, I = incomplete; data not available for all days selected
Note: * is an indicator used to identify that the measure is flagged
Note: For the Improvement in Function (S) Measure, a single * indicates a Percentile of 25 or less (higher Percentile values are better)

Measure Description	CMS ID	Data	Num	Denom	Facility Observed Percent	Facility Adjusted Percent	Comparison Group State Average	Comparison Group National Average	Comparison Group National Percentile
Hi-risk/Unstageable Pres Ulcer (L)	N015.03	C	0	16	0.0%	0.0%	0.0%	0.0%	0
Phys restraints (L)	N027.02	C	0	53	0.0%	0.0%	0.0%	0.0%	0
Falls (L)	N032.02	C	0	53	0.0%	0.0%	0.0%	0.0%	0
Falls w/Maj Injury (L)	N013.02	C	0	53	0.0%	0.0%	0.0%	0.0%	0
Antipsych Med (S)	N011.02	C	0	0	-	-	-	-	-
Antipsych Med (L)	N031.03	C	53	53	100.0%	100.0%	100.0%	100.0%	100 *
Antianxiety/Hypnotic Prev (L)	N033.02	C	53	53	100.0%	100.0%	100.0%	100.0%	100 *
Antianxiety/Hypnotic % (L)	N036.02	C	53	53	100.0%	100.0%	100.0%	100.0%	100 *
Behav Sx affect Others (L)	N034.02	C	0	53	0.0%	0.0%	0.0%	0.0%	0
Depress Sx (L)	N030.02	C	53	53	100.0%	100.0%	100.0%	100.0%	100 *
UTI (L)	N024.02	C	0	16	0.0%	0.0%	0.0%	0.0%	0
Cath Insert/Left Bladder (L)	N026.03	C	0	16	0.0%	-	-	-	-
Lo-Risk Lose B/B Con (L)	N025.02	C	0	16	0.0%	0.0%	0.0%	0.0%	0
Excess Wt Loss (L)	N029.02	C	16	16	100.0%	100.0%	100.0%	100.0%	100 *
Incr ADL Help (L)	N028.02	C	0	0	-	-	-	-	-
Move Indep Worsens (L)	N035.03	C	0	0	-	-	-	-	-
Improvement in Function (S)	N037.03	C	0	0	-	-	-	-	-



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Strive for Excellence

- On-boarding
- Education – Nursing Assistants
- Systematic assessment process
- Utilization of risk assessment
- Consistent communication on the incidence of pressure injuries
- Micro-Climate and MASD
- Wound assessment and evaluation

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Regulatory Resource

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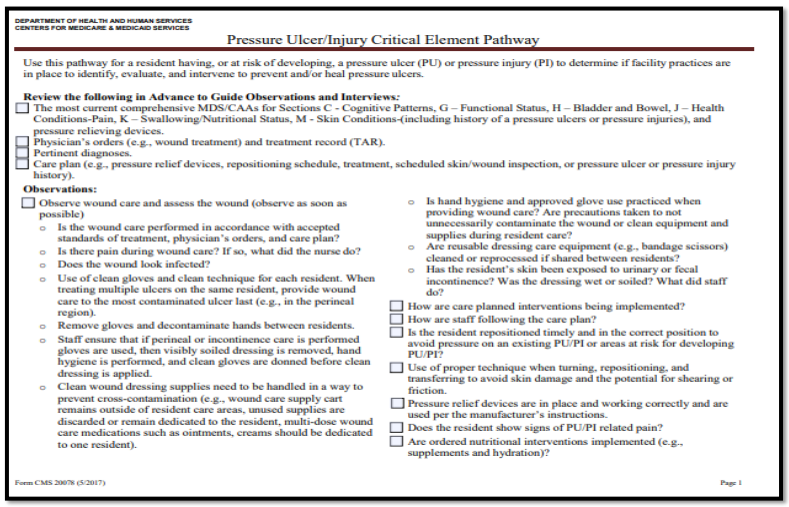
CE Pathway Pressure Ulcer



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Pressure Ulcer/Injury Critical Element Pathway

Use this pathway for a resident having, or at risk of developing, a pressure ulcer (PU) or pressure injury (PI) to determine if facility practices are in place to identify, evaluate, and intervene to prevent and/or heal pressure ulcers.

Review the following in Advance to Guide Observations and Interviews:

- ☐ The most current comprehensive MDS/CAAs for Sections C - Cognitive Patterns, G – Functional Status, H – Bladder and Bowel, J – Health Conditions-Pain, K – Swallowing/Nutritional Status, M - Skin Conditions-(including history of a pressure ulcers or pressure injuries), and pressure relieving devices.
- ☐ Physician's orders (e.g., wound treatment) and treatment record (TAR).
- ☐ Pertinent diagnoses.
- ☐ Care plan (e.g., pressure relief devices, repositioning schedule, treatment, scheduled skin/wound inspection, or pressure ulcer or pressure injury history).

Observations:

- ☐ Observe wound care and assess the wound (observe as soon as possible)
  - Is the wound care performed in accordance with accepted standards of treatment, physician's orders, and care plan?
  - Is there pain during wound care? If so, what did the nurse do?
  - Does the wound look infected?
  - Use of clean gloves and clean technique for each resident. When treating multiple ulcers on the same resident, provide wound care to the most contaminated ulcer last (e.g., in the perineal region).
  - Remove gloves and decontaminate hands between residents.
  - Staff ensure that if perineal or incontinence care is performed gloves are used, then visibly soiled dressing is removed, hand hygiene is performed, and clean gloves are donned before clean dressing is applied.
  - Clean wound dressing supplies need to be handled in a way to prevent cross-contamination (e.g., wound care supply cart remains outside of resident care areas, unused supplies are discarded or remain dedicated to the resident, multi-dose wound care medications such as ointments, creams should be dedicated to one resident).
  - Is hand hygiene and approved glove use practiced when providing wound care? Are precautions taken to not unnecessarily contaminate the wound or clean equipment and supplies during resident care?
  - Are reusable dressing care equipment (e.g., bandage scissors) cleaned or reprocessed if shared between residents?
  - Has the resident's skin been exposed to urinary or fecal incontinence? Was the dressing wet or soiled? What did staff do?
- ☐ How are care planned interventions being implemented?
- ☐ How are staff following the care plan?
- ☐ Is the resident repositioned timely and in the correct position to avoid pressure on an existing PU/PI or areas at risk for developing PU/PI?
- ☐ Use of proper technique when turning, repositioning, and transferring to avoid skin damage and the potential for shearing or friction.
- ☐ Pressure relief devices are in place and working correctly and are used per the manufacturer's instructions.
- ☐ Does the resident show signs of PU/PI related pain?
- ☐ Are ordered nutritional interventions implemented (e.g., supplements and hydration)?

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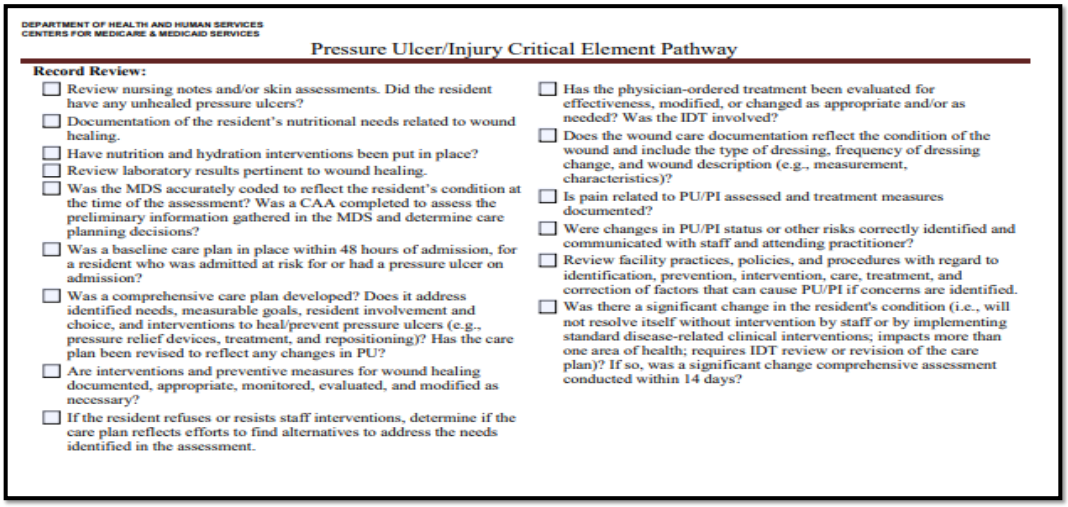
CE Pathway Pressure Ulcer



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Pressure Ulcer/Injury Critical Element Pathway

Record Review:

- ☐ Review nursing notes and/or skin assessments. Did the resident have any unhealed pressure ulcers?
- ☐ Documentation of the resident's nutritional needs related to wound healing.
- ☐ Have nutrition and hydration interventions been put in place?
- ☐ Review laboratory results pertinent to wound healing.
- ☐ Was the MDS accurately coded to reflect the resident's condition at the time of the assessment? Was a CAA completed to assess the preliminary information gathered in the MDS and determine care planning decisions?
- ☐ Was a baseline care plan in place within 48 hours of admission, for a resident who was admitted at risk for or had a pressure ulcer on admission?
- ☐ Was a comprehensive care plan developed? Does it address identified needs, measurable goals, resident involvement and choice, and interventions to heal/prevent pressure ulcers (e.g., pressure relief devices, treatment, and repositioning)? Has the care plan been revised to reflect any changes in PU?
- ☐ Are interventions and preventive measures for wound healing documented, appropriate, monitored, evaluated, and modified as necessary?
- ☐ If the resident refuses or resists staff interventions, determine if the care plan reflects efforts to find alternatives to address the needs identified in the assessment.
- ☐ Has the physician-ordered treatment been evaluated for effectiveness, modified, or changed as appropriate and/or as needed? Was the IDT involved?
- ☐ Does the wound care documentation reflect the condition of the wound and include the type of dressing, frequency of dressing change, and wound description (e.g., measurement, characteristics)?
- ☐ Is pain related to PU/PI assessed and treatment measures documented?
- ☐ Were changes in PU/PI status or other risks correctly identified and communicated with staff and attending practitioner?
- ☐ Review facility practices, policies, and procedures with regard to identification, prevention, intervention, care, treatment, and correction of factors that can cause PU/PI if concerns are identified.
- ☐ Was there a significant change in the resident's condition (i.e., will not resolve itself without intervention by staff or by implementing standard disease-related clinical interventions; impacts more than one area of health; requires IDT review or revision of the care plan)? If so, was a significant change comprehensive assessment conducted within 14 days?

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Regulation

- **Comprehensive Risk Assessment**
  - Upon Admission
  - Weekly for the first four weeks after admission
  - Change of condition
  - Quarterly and annually with the MDS
- **Skin Inspection**
  - Upon Admission – Imperative they capture wounds within the first 24 hours
  - Daily with cares by the nursing assistant
  - Weekly by the licensed staff
  - Upon a PLANNED Discharge

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Wound Care is Expensive!

- **The dollars add UP….**
  - Beds & wheelchair cushions
  - Heel & positioning equipment
  - Topical management
  - Incontinence
  - Nutrition supplements
  - Interdisciplinary Team - Staff time

Not to Mention:

- Regulatory Citations
- Litigation
- Insurance Coverage
- Staff Time

References and Resources

- State Operations Manual (SOM) Appendix PP and CMS Resources https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Nursing-Homes.html
- National Pressure Ulcer Advisory Panel and European Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: Clinical practice guideline. Washington DC: National Pressure Ulcer Advisory Panel; 2019

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- CMS: State Operations Manual, Appendix PP - Guidance to Surveyors for Long Term Care Facilities https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf

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