Managing Wounds in Assisted Living

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Objectives

- Review types of wounds seen in assisted living facilities
- Describe the risk factors for development of pressure ulcers
- Identify appropriate goals and treatments for pressure ulcers
- Identify the difference between palliative and aggressive wound care
- Describe how hospice can help in wound management

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Part One – Identifying Wounds

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Skin: The Largest Organ

- Skin is the body's largest organ. It is part of the integumentary system which is the largest organ system in the body.
- It may affect and be affected by other body processes and organs
- It may reflect the overall function of the body
  - Pale skin may indicate anemia
  - Yellow skin (jaundice) indicates liver failure
  - Thinning skin can indicate sun damage, aging process and long term corticosteroids
  - Delayed wound healing can indicate malnutrition and uncontrolled diabetes

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Types of Wounds

- Arterial
- Venous
- Diabetic
- Fungating
- Pressure

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Arterial Wounds

- Also referred to as ischemic ulcers
  - Lack of sufficient blood flow to the affected tissues
  - Seen typically on the lower legs and feet
  - Shiny skin, Hairless extremities
  - Absent/diminished pulses

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Venous Wounds

- Won't heal without compression and elevation
  - Can't use just diuretics!
- Hyper pigmented skin (hemosiderin staining)
- Edema
- Commonly in the gaiter area of the lower extremit

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Diabetic Ulcers

- Commonly associated with callous and need paring
- Little to no feeling
- Caused by two main factors:
  - Neuropathy
  - Arterial disease

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Fungating (Ulcerating) Lesions

- Ulcerated cancerous growths that have broken through the skin's surface
- Cauliflower-like nodules or crater-like lesions
- Often associated with odor, pain, bleeding and exudate

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Pressure Ulcer/Pressure Injury

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Pressure Ulcer/Pressure injury

- Localized damage to skin when prolonged pressure is applied to the body
- Over bony prominences or related to medical (foley catheters, nasal cannula) or other devices
- Skin damage may be affected by:
  - Skin temperature
  - Skin moisture (incontinence)
  - Nutrition
  - Perfusion
  - Co-morbidities
  - Condition of skin (friction or shear)

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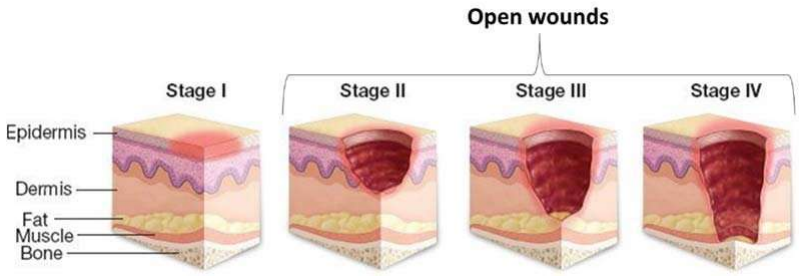

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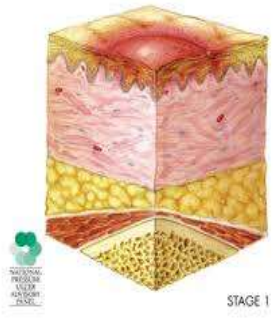
Stage 1



- Intact skin with non-blanchable redness of a localized area
- Usually over a bony prominence
- Darly pigmented skin may not have visible blanching; its color may differ from surrounding area

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Stage 1

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Stage 1

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Stage 1

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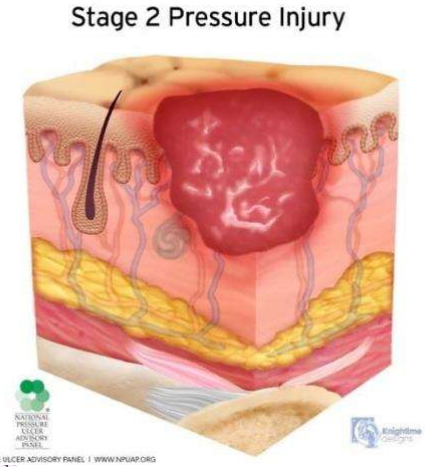
Stage 2



- Partial-thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed
- May also present as an intact or open/ruptured serum-filled blister

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Stage 2

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Stage 2 Blister

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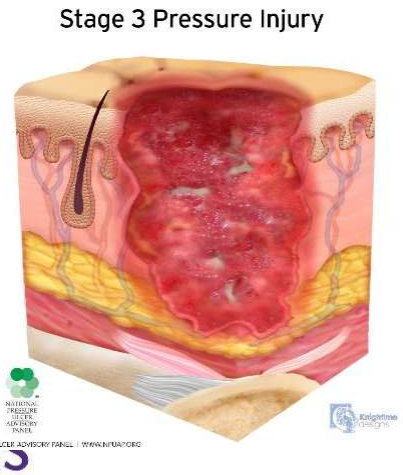
Stage 3



- 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

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Stage 3

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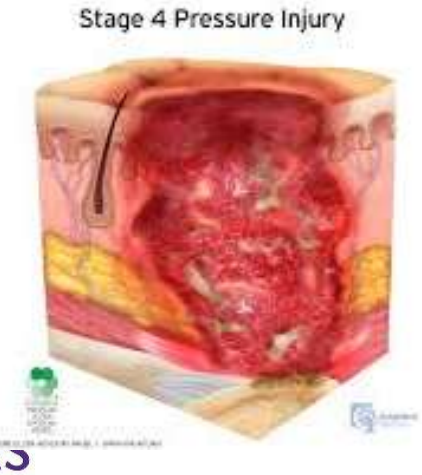
Stage 4



- Depth varies by anatomical location
- Extends into muscle and/or supporting structures (fascia, tendon or joint capsule)
- Exposed bone/tendon is visible or directly palpable

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Stage 4

Figure 7. Category 4: full thickness tissue loss with bone, muscle and/or tendon exposed

NHS Improvement Pressure Ulcer Categorisation Group (2019) Pressure Ulcer Categorisation. Available from http://nhs.stopthepressure.co.uk

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2016 National Pressure Ulcer Advisory Panel

- Addition of two categories of wounds
  - Unstageable Wound
  - Deep tissue injury wound
- Addition of the word injury to the classifications
  - Now categorized as Pressure ulcer/Pressure Injury

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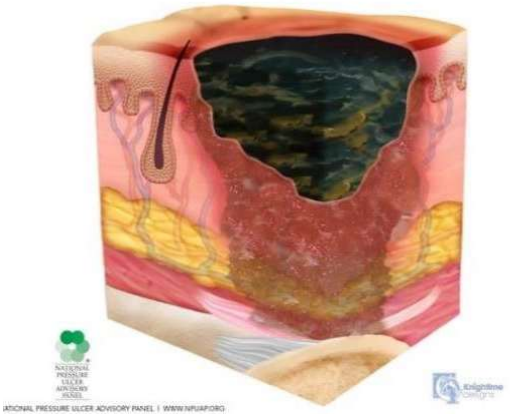
Unstageable Wound

- Full staging not identifiable due to be covered by eschar and or slough
- Cannot visualize the depth of the wound

Unstageable Pressure Injury - Dark Eschar



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Unstageable Wound

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Unstageable Wound

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Unstageable Wound

- Stable eschar should only be removed after careful clinical consideration and consultation with an advanced level provider
- If slough or eschar is removed, a stage 3 or stage 4 pressure ulcer will be revealed

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Deep Tissue Injuries

Deep Tissue Pressure Injury

- Purple or maroon localized area of discolored intact skin due to damage of underlying soft tissue from pressure
- The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue
- Commonly seen on heels
- May evolve rapidly into a wound or resolve without tissue loss if pressure is removed

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Deep Tissue Injuries

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Prevention of Pressure Injury

- Use effective risk assessment tools (ie Braden risk assessment tool) which evaluates 6 risk factors:
  - Sensory perception
  - Moisture
  - Activity
  - Mobility
  - Nutrition
  - Friction & shear
- Establish goals of care
  - Is pressure injury unavoidable?

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Avoidable Vs Unavoidable

- CMS (Centers for Medicare and Medicaid Services) maintains not all pressure ulcers are preventable
- Unavoidability means –
  - A pressure ulcer developed even though facility had evaluated resident's clinical condition and pressure ulcer risk factors
  - Facility defined and implemented interventions consistent with resident needs, goals
  - Facility recognized standards of practice; monitored and evaluated impact of interventions and revised approaches as appropriate

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Additional Risk Factors for Pressure Injury

- Co-morbid conditions
- Medications (lethargy, anorexia, confusion)
- Impaired diffuse or localized blood flow
- Resident refusal
- Cognitive impairment
- Skin exposure to urine and feces
- Presence of previously healed pressure ulcer

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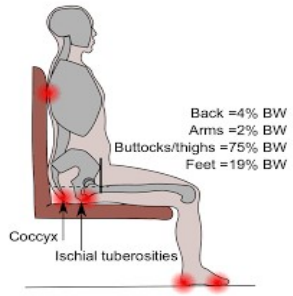
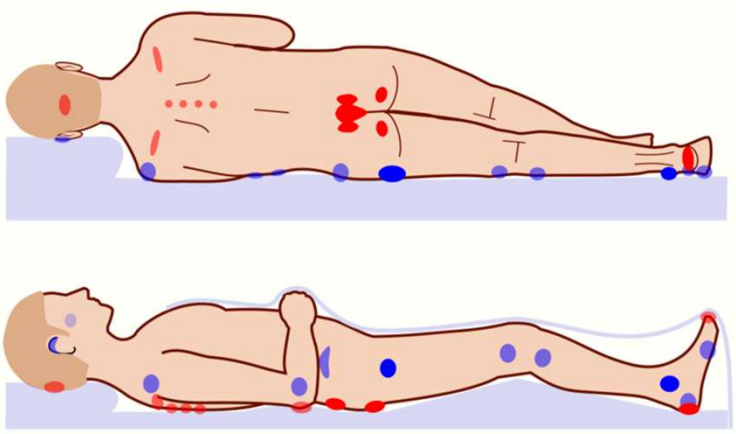
Pressure - Positioning





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Redistribution of Pressure

- Is critical for residents who are immobile or dependent upon staff for repositioning
- Provide appropriate, pressure-redistributing , support surfaces
  - Wedges, pillows, heel supports
  - Pressure alternating mattresses
    - should not replace turning schedules in patients with poor nutrition, multiple co-morbidities or existing pressure injuries
- Limit time without pressure relief
  - Use wheelchairs to transport residents and not for extended sitting due to severely limiting repositioning options

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Redistribution of Pressure

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Part Two – Managing Wounds

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Wound Care Principles

- Overall strategy and scope of treatment plan depends on prognosis, condition and potential for wound healing
- The above determines if the wound management goals will be more aggressive with goal of wound closure or more palliative where wound closure may not be expected
  - Although many wounds achieve closure under palliative/hospice care!

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"Healability"

- Healable – With adequate blood supply the wound can be healed as long as the underlying problem is mitigated
- Maintenance – Wound has healing potential, but also patient or health system barriers compromise healing, including patient non-adherence to treatment plan or healthcare resource limitations
- Non-healable – Including palliative wounds, cannot heal because of irreversible causes or associated illnesses including critical ischemia, malnutrition or no-treatable malignancy

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Wound Management Goals - Aggressive

- **Aggressive Wound Care**
  - Wound closure is expected
  - Sharp debridement is standard of care
  - Use of advanced wound care products and technology that enhance tissue growth
    - Wound vacs, Growth Factor Therapy, enzymatic debridement
  - Care may be provided through wound clinics, home health agencies and wound care providers

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Wound Management Goals - Palliative

- **Palliative Wound Care**
- Wound closure may not be expected due to irreversible wound factors or patient factors
- Purpose is symptom management and improving/maintaining quality of life consistent with patient wishes
- It is not expected to include advanced wound care technology directed to wound closure
- Sharp debridement is used for specific reasons
- Care may be provided by wound care providers (PCPs) and hospice agencies

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Palliative Wound Care Goals

- Maintain current wound status, improve, if possible, within the boundaries of reason
- Treat edema
- Relieve pressure
- Optimize wound bed moisture balance/manage exudate
- Control odor
- Relieve Pain
- Address nutritional status
- Prevent deterioration of the wound
- Prevent development of new wounds

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Debridement

- Removal of nonviable tissue to reduce odor, infection or pain
- Removal of nonviable tissue to promote healing or prevent further breakdown of tissues

- Types of debridement
  - Surgical *
  - Autolytic *
  - Enzymatic
  - Mechanical (wet to dry, whirlpools)
  - Biologic (maggots)

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Surgical Debridement

- Surgical – Gold standard
  - Premedicate as indicated
  - Avoid debridement for:
    - Wounds on heel covered with dry eschar
    - Arterial ulcers and diabetic ulcers with dry eschar or gangrene
    - Wounds with insufficient vascular supply for healing

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Autolytic Debridement

- Autolytic
  - Slow, painless
  - Uses the body's own enzymes to remove dead (necrotic tissue)
    - Wound is covered in a moist dressing, dressing traps moisture creating an acidic environment which activates the body's enzymes
    - Hydrogel or hydrocolloid dressings
    - Calcium Alginate or Silver Alginate (Calcium Alginate infused with Silver ions adding an antibacterial property

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Enzymatic Debridement

- Enzymatic
  - Enzyme (Collagenase) to remove necrotic tissue
    - Not used as much due to high cost $$$
    - 30g tube costs at least $319

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Protect Surrounding Skin

- When using products that help debride unhealthy skin
  - Try to avoid healthy granulation tissue and surrounding healthy skin
  - Most products come in sheets or narrow rolls to be cut to size
    - Use in single layer only
      - *Added layers causes bulk and areas of pressure
      - *Try to keep product in place for 2-3 days

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Secondary Dressings

- Use a dressing that will maintain a moist wound-healing environment while managing exudate and preventing injury (maceration) to the surrounding skin
  - Exception – when trying to maintain dry eschar on heels
- Select a dressing that stays in place, minimizes shear and friction and does not cause additional tissue injury

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Managing Odor Control

- Many pressure wounds with slough or necrotic tissue have odor
  - Odor control measures
    - Sharp debridement
    - Crushed Metronidazole (flagyl)
    - Room Deodorizers (coffee grounds, Oil of Wintergreen)
    - Metrogel (more expensive then crushed tablet)
- Fungating lesions due to cancer
  - Unable to do sharp debridement in most cases due to friability of tissue and bleeding

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Pressure Ulcer Infection

- Findings such as an elevated white blood cell count, bacteremia, sepsis or fever may signal a pressure ulcer related infection
- The treatment of an infection will depend on the type of infection present
- IF wound culture is warranted - cultures only from needle aspiration or tissue biopsy are considered accurate and standard of care
  - Pus, slough or necrotic tissue should not be cultured with a swab

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Kennedy Terminal Ulcer

- Appear suddenly and within hours
- Usually appear on the sacrum and coccyx
- Pear, butterfly or horseshoe shaped
- 55.7% of patients die within 6 weeks

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Dry Necrotic Wounds on Heels

- In patients with poor vascular status – “let sleeping dogs lie”
- Keep area dry and intact
  - Paint area with Povidone iodine swabs

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How to Describe a Healed Pressure Wound

- Pressure ulcers greater than stage 2 do not heal is a reverse sequence
  - The body does not replace the types and layers of tissue (fascia, muscle, fat)
  - For example- A stage 4 ulcer will not reverse to a stage 3
    - Muscle lost will not reform in the healing process, new scar tissue will be present
    - If this wound closes over it will now be a healed stage 4 pressure wound
  - For example- A stage 3 ulcer will not reverse to a stage 2
    - Not all the subcutaneous tissue will reform as there will also be considerable scar tissue
    - If this wound closes over it will now be a healed stage 3 pressure wound

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Hospice and Wound Care

- Consider partnering with Hospice to help manage wounds that are not improving due patient's poor functional status
  - Goal of hospice is to promote quality of life focusing on symptoms
    - Good wound care can contribute to comfort, even in final stages of life
    - Poor wound care can be devastating to resident's death experience

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Case Study

- WD was admitted to a nursing home for end stage heart failure after being admitted to the hospital with sepsis. She had poor functional status since suffering an ankle fracture six moths prior to admission to nursing home. She was only able to move from bed to recliner via hoyer lift.
- WD did not progress well with physical therapy and was discharged from skilled services. She was also very noncompliant regarding a turning schedule and developed a large unstageable pressure injury to her coccyx. She was admitted to hospice.
- She eventually moved home with 24 hour care givers but continued to lie only on her back or her recliner despite hospice providing wedge cushions, air mattress and education to caregivers regarding a turning schedule.
  - As a result, the wound continued to worsen with significant drainage and odor

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Before and After Surgical Debridement of Unstageable Wound

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Case Study (Cont)

- Goals of care discussion regarding wound management and prognosis of wound
  - Surgical debridement
    - Surgical debridement to remove necrotic eschar to manage exudate and odor
  - Autolytic debridement
    - Calcium Alginate to areas of slough three days a week
  - Odor management
    - Crushed tablets of metronidazole to wound base three days a week

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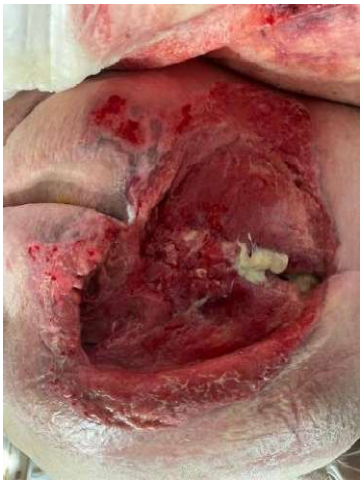
3 Weeks later – Stage 4 ulcer



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In Review, We

- Reviewed types of wounds seen in assisted living facilities
- Described the risk factors for development of pressure ulcers
- Identified appropriate goals and treatments for pressure ulcers
- Identified the difference between palliative and aggressive wound care
- Described how hospice can help in wound management

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In Review -

- What contributes to pressure injuries?

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Questions?

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