Pressure Injury/Ulcer

Definition of Pressure Injury

- Localized damage to the skin and/or underlying soft tissue, usually over a bony prominence or related to a medical or other device.
- A pressure injury will present as intact skin and may be painful.
- A pressure ulcer will present as an open ulcer, the appearance of which will vary depending on the stage and may be painful.
- The injury occurs because of intense and/or prolonged pressure or pressure in combination with shear.
- Soft tissue damage related to pressure and shear may also be affected by skin temperature and moisture, nutrition, perfusion, co-morbidities and condition of the soft tissue.

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Determine Etiology

- Areas of prolonged pressure – sitting in chair, head of bed elevated, elbows resting on wheelchair, long fingernails in contracted hand, heels resting on bed for extended periods, ill fitting shoes, etc.
- Medical devices – braces, splints, anti-contracture devices in hands, nasal cannulas
- Bony prominences – heels, sacrum, elbows, thoracic region due to kyphosis, ankles, ischial tuberosities (sit bones)
- Heel wound on ambulatory patient could be diabetic vs. pressure
- Palpate areas for bony prominences to assist in determining etiology
- Shearing forces? Patient requires assistance with bed mobility or transfers?

Pressure Injury (PI) Stages

Stage 1 Pressure Injury: Non-blanchable erythema of intact skin with a localized area of non-blanchable erythema (redness). In darker skin tones, the PI may appear with persistent red, blue, or purple hues. The presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes. Color changes of intact skin may also indicate a deep tissue PI.

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Pressure Injury (PI) Stages (cont.)

Stage 2 Pressure Ulcer: Partial-thickness loss of skin with exposed dermis, presenting as a shallow open ulcer. The wound bed is viable, pink or red, moist, and may also present as an intact or open/ruptured blister. Adipose (fat) is not visible and deeper tissues are not visible. Granulation tissue, slough and eschar are not present.

This stage should not be used to describe moisture-associated skin damage including incontinence-associated dermatitis, intertriginous dermatitis (inflammation of skin folds), medical adhesive-related skin injury, or traumatic wounds (skin tears, burns, abrasions).

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Pressure Injury Stages (cont.)

Stage 3 Pressure Ulcer: Full-thickness loss of skin in which subcutaneous fat may be visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible but do not obscure the depth of tissue loss.

The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage and/or bone are not exposed. If slough or eschar obscures the wound bed, it is an unstageable PU/PI.

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Pressure Injury Stages (cont.)

Stage 4 Pressure Ulcer: Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible on some parts of the wound bed. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location.

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Pressure Injury Stages Cont.

Unstageable Pressure Ulcer: Obscured full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because the wound bed is obscured by slough or eschar. If the slough or eschar is removed, a Stage 3 or Stage 4 pressure ulcer will be revealed.

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Pressure Injury Stages Cont.

Deep Tissue Pressure Injury (DTPI): Intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration due to damage of underlying soft tissue. This area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue. These changes often precede skin color changes and discoloration may appear differently in darkly pigmented skin. This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface. The wound may evolve rapidly to reveal the actual extent of tissue injury or may resolve without tissue loss.

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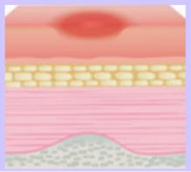
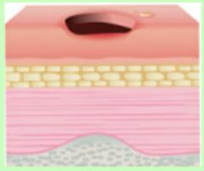
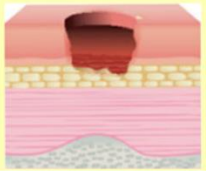
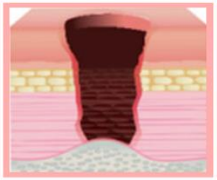
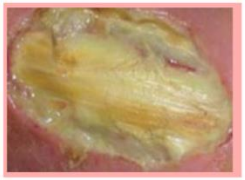
STAGES OF PRESSURE ULCER

WWW.OPENMED.CO.IN

STAGE 1	Non Blanching Erythema, With Intact Epidermis		
STAGE 2	Partial Thickness Ulcer involving Epidermis & Dermis WWW.OPENMED.CO.IN		
STAGE 3	Full Thickness Ulcer extending through Dermis in to Subcutaneous Tissue.		
STAGE 4	Deep Tissue Destruction extending through Fascia & may involve muscle, bone & tendons.		

Source: https://www.openmed.co.in/2022/08/stages-of-pressure-ulcer.html

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Assessment

- Assess surrounding skin and tissue for induration, redness, maceration, and changes in skin temperature.
- Inspect old dressing for exudate/drainage – color, amount, consistency, odor.
- Measure wound utilizing a standard method of measurement consistent with facility policy – digital, wound tracing, or Ruler Method.
    - Ruler Method is most used in long-term care facilities.

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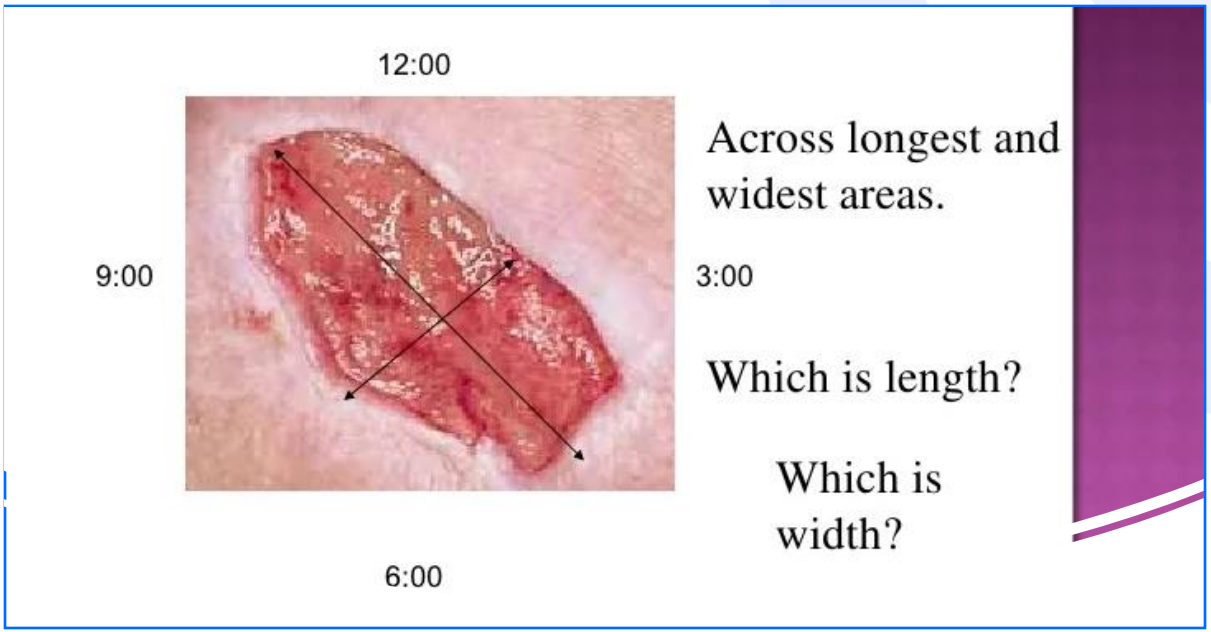
Assessment (cont.)

- Inspect wound bed.
  - Slough/eschar/granulation – only visible in stage 3 or 4
  - Underlying structures – adipose, fascia, muscle, tendon, or bone
- Always document pain assessment with wound assessment. If patient has pain with wound, ensure pain medication is given prior to dressing change/wound assessment.

Common Ruler Method of Measurement

- Head-to-toe axis
- Measure and document length first, longest area of wound
- Measure perpendicular to length at widest area of wound to obtain width



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Source: Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)

Depth

- Measure depth using a clean, individually packaged cotton tip applicator.
- Do not utilize blunt end of applicator as tissue at wound can be very fragile.
- Depth is measured at the deepest part of the wound visible – lightly tap cotton tip applicator along wound bed to locate deepest area.

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Depth (cont.)

- Document structures visible.
- If bone is visible/reached with applicator – white/silvery in appearance and very hard when tapped with applicator – like “knocking”.
- Depth is measured from the wound entrance to tip of applicator where it touches base of wound.

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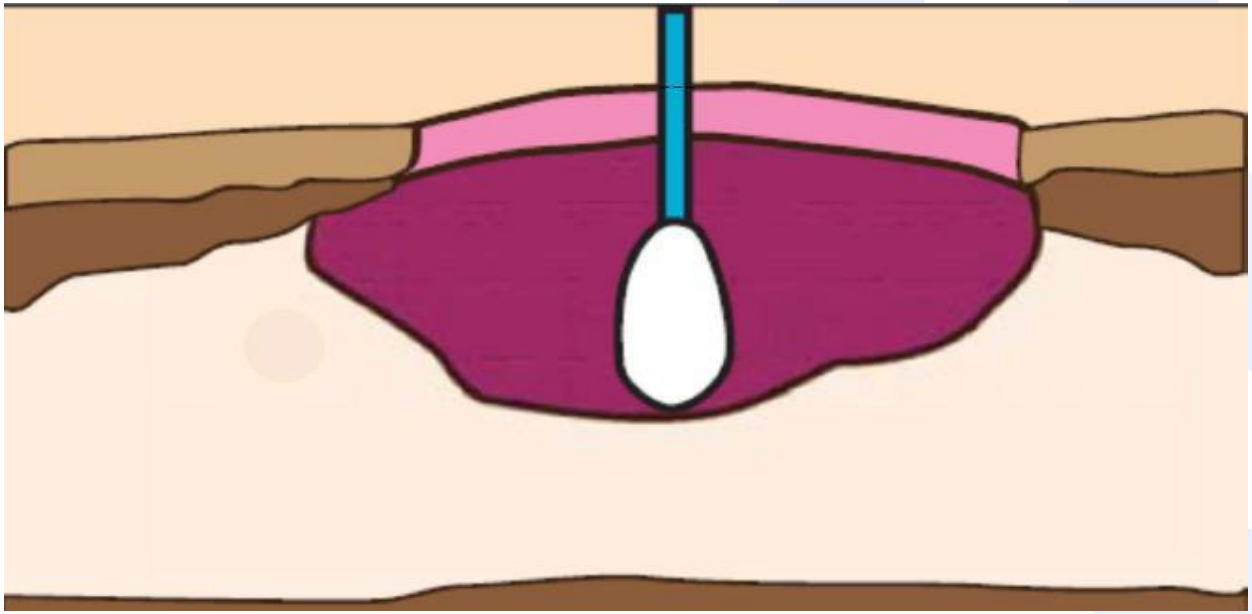
Measuring Depth



Source: Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)

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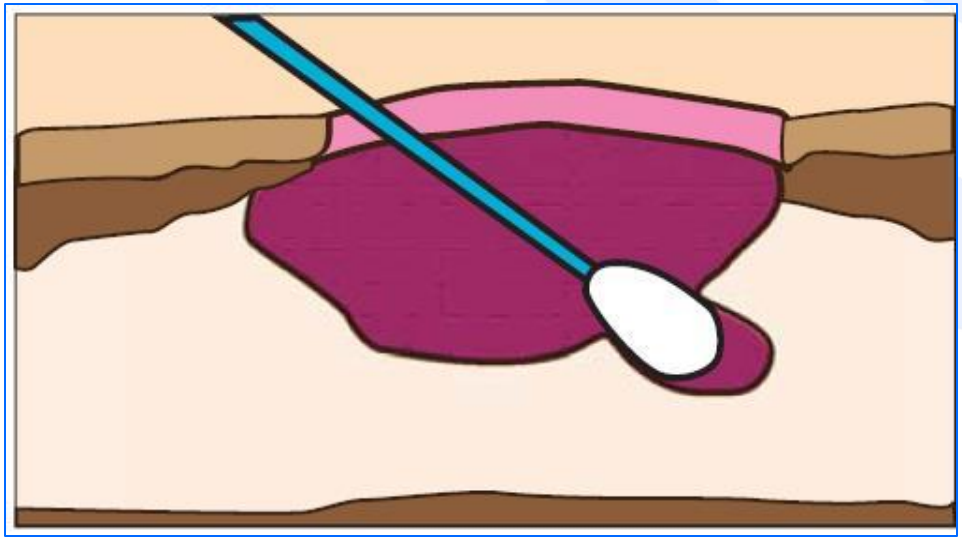
Sinus Tract or Tunnel

A tunnel is a passageway of tissue destruction under the skin surface that has an opening at the skin level from the edge of the wound. The depth is measured separately from the overall depth of the wound. Location is documented using the clock method. Probe gently with cotton tipped applicator, do not force into tunnel causing additional damage.



Source: Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)

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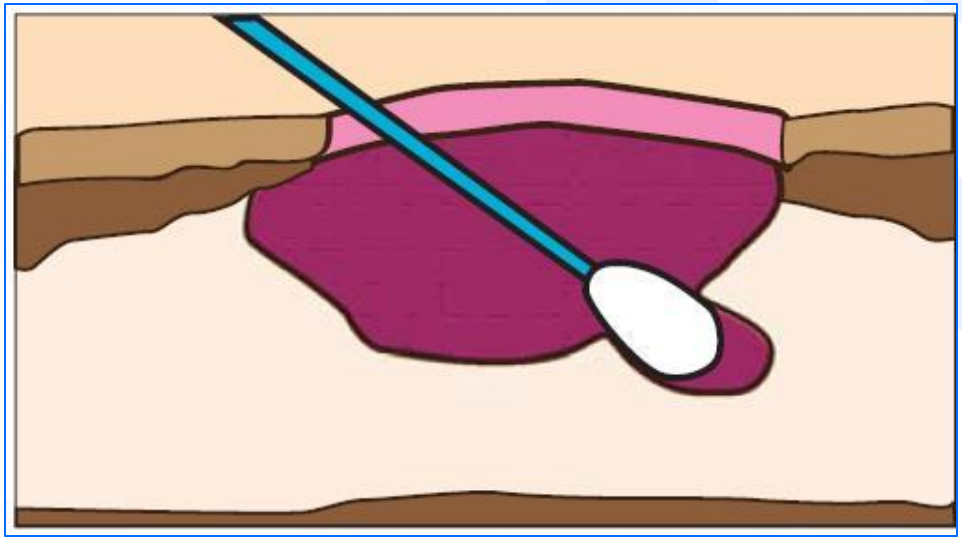
Sinus Tract or Tunnel (cont.)

A sinus tract is a cavity or channel underlying a wound that involves an area larger than the visible surface of the wound. The depth is measured separately from the overall depth of the wound. Location is documented using the clock method. Ex. Sinus tract noted at 1 o'clock depth of 2cm.



Source: Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)

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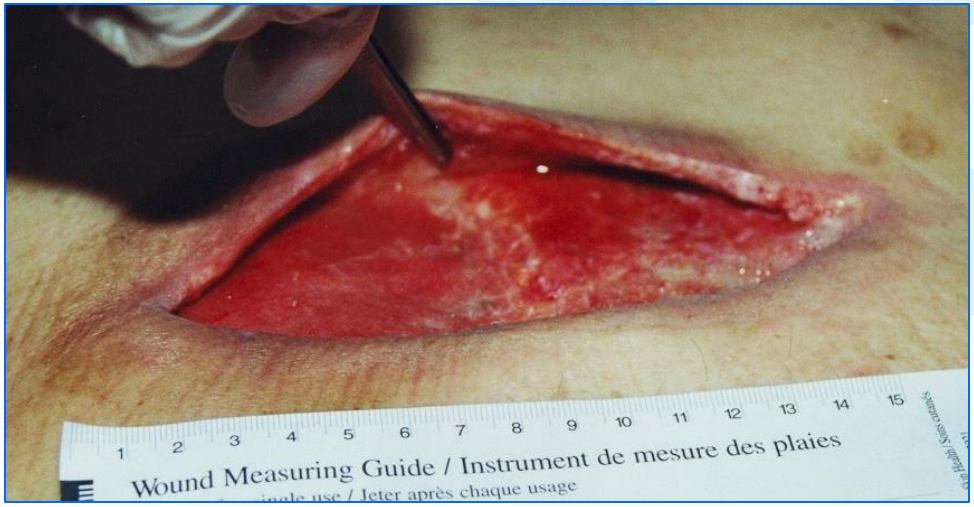
Undermining

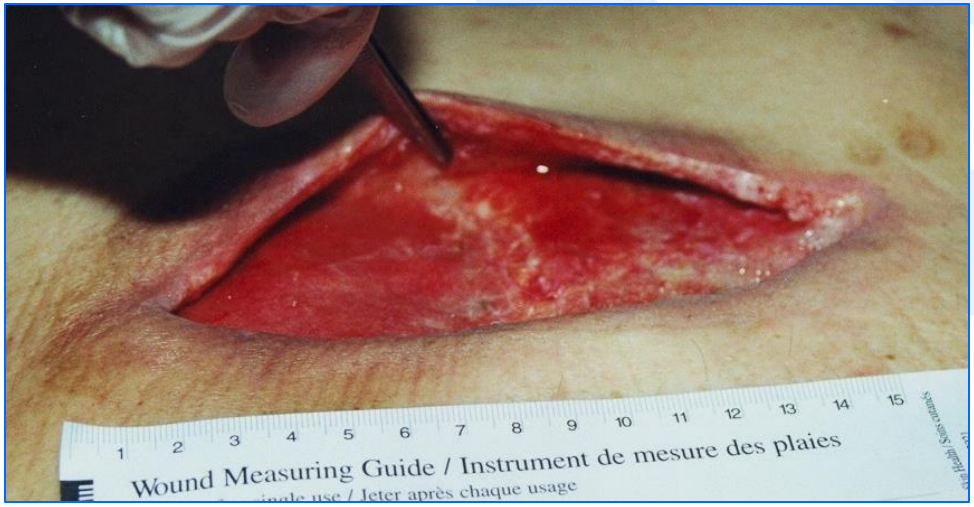
Undermining is the destruction of tissue or ulceration extending under the skin edges (margins) so that the pressure ulcer is larger at its base than at the skin surface. The wound edges are not attached to the wound base, and the edges lift.



Source: [Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)]

Undermining (cont.)

Undermining often develops from shearing forces and is differentiated from tunneling by the larger extent of the wound edge involved and the absence of a channel or tract extending from the pressure ulcer under the adjacent intact skin. The depth is measured separately from the overall depth of the wound. Location is documented using the clock method. Ex: Undermining from 12 o'clock to 3 o'clock with a depth of 1.5 cm



Source: Wound Measurement, Assessment, and Documentation 101 - Swift (swiftmedical.com)

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Kennedy Terminal Ulcer (KTU)

As we age, our bodies become more subject to frailty, illness, weakness, and morbidity. Our skin is an organ, and similar to other organs – heart, liver, kidneys – we can't dispute the possibility of its failure.

The facility is responsible for accurately assessing and classifying an ulcer as a KTU or other type of PU/PI and demonstrate that appropriate preventive measures were in place to prevent non-KTU pressure ulcers.

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Kennedy Terminal Ulcer (KTU) (cont.)

KTUs have certain characteristics which differentiate them from pressure ulcers such as the following:

- KTUs appear suddenly and within hours;
- Usually appear on the sacrum and coccyx but can appear on the heels, posterior calf muscles, arms and elbows;
- Edges are usually irregular and are red, yellow, and black as the ulcer progresses, often described as pear, butterfly or horseshoe shaped; and
- Often appear as an abrasion, blister, or darkened area and may develop rapidly to a Stage 2, Stage 3, or Stage 4 injury.

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In Summary

This presentation was intended to provide a summary of pressure injury assessment and staging in long-term care.

Utilize CMS Care Pathways in the development of your facility's wound management policy and program. Always refer to your facility's policy and procedures.

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Thank You!

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