

Wound Types, Wound Assessment, and Wound Treatment

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Wound Care Order Components

- Who is to perform the wound care order? (Skilled Nurse, Patient, Caregiver, Spouse)
- Dressing change frequency
- Cleansing agent (Normal Saline, Wound Cleanser, soap and water)
- Peri-wound skin protection (Skin Prep, Barrier Cream)
- Dead space filler (dressing used to fill up to skin level)
- Secondary dressing (Foam border dressing, etc.)
- Securing the dressing (tape, Coban)

Wound Assessment

- All wounds should be measured at least once a week, preferably about the same time each week
- All wound measurements should include a length (head-to-toe), width (side-to-side), and depth measurement
- Use your descriptors! Well approximated? Staples/sutures present? Healing by primary or secondary intention? Not healing?
- Always record the color and amount of drainage from each wound
- Use the comment boxes to include additional documentation related to the wound/wound care

Wound Assessment

- Describe tunnels or undermining location with each assessment
- Use clock method to describe location of tunnels or undermining. For example: Tunnel located at 3 o'clock measures 7.2cm OR undermining of 2.5 cm noted from 2 – 6 o'clock

Terminology

- Granulation Tissue: red, healthy, grainy appearing tissue which resembles hamburger (Not all red tissue is healthy tissue!)
- Nonviable Tissue: includes slough and eschar. This tissue is dead tissue
- Slough: yellow or tan colored tissue
- Eschar: black/brown and leather-like, dry
 - The result of tissue necrosis and death
 - Requires debridement
- A scab IS NOT eschar! Scabs are a mix of dried blood, exudate, and skin cells. Scabs are nature's bandage and usually allow for epithelialization to occur underneath.
- Undermining: located directly under the skin via wound edge, due to tissue destruction under wound borders (usually indicates a shearing injury)
- Tunneling: a channel that extends down through the wound bed into subcutaneous tissue

Wound Types

- Check MD, hospital, nursing home, ALF documentation
- Look for any recent testing and request results for your files

Skin Tears

- Try to roll back the flap if possible using cotton-tipped applicators
- Use of proper contact layers
- Draw an arrow on the outside of the dressing to show which direction to remove the dressing in order to prevent flap disruption.

- Contact layers work great to reduce further tissue damage. Contact layers can be left in place for up to one week while the secondary dressing change be changed as indicated by the amount of drainage.

Venous Vs. Arterial Ulcers

- These ulcers must be diagnosed by an MD through testing or documented medical diagnosis
- Venous ulcers require frequent elevation, graduated compression, and calf muscle exercises to aide in wound healing.
- Arterial ulcers are often misdiagnosed as venous stasis ulcers. If the patient complains of pain with ambulation, when sitting or when lying flat (at night, in bed), this is your cue that they may have an arterial component. Arterial ulcers are generally more painful than venous ulcers.
- If you suspect an arterial component, call the primary MD and request for them to schedule patient for an ABI.
- Compression is contraindicated with arterial ulcers so it is best to know their ABI before you apply compression.
- Check for pedal pulses with all lower extremity wounds (posterior tibial and dorsalis pedis) and include this in your documentation.
- If unable to palpate pulses, use a doppler.

Venous Ulcers

- Hemosiderin Staining and varicose veins commonly seen on lower extremities
- Irregular wound edges
- Usually not as painful as arterial ulcers
- Drainage
- Elevation
- Compression is essential!
- Commonly seen around the medial and lateral malleolus
- Extremity is warm and pulses are present



Arterial Ulcers

- Painful
- Punched out appearance, typically more uniform in shape with more depth
- Extremity is usually cold, absent pulses, elevational pallor, dependent rubra, dry skin, hair loss, nail fissures
- Pain with claudication, elevation/nocturnal pain, rest pain
- Common sites include toe joints/tips of toes, heels, directly over the malleolus, and the anterior shin
- Commonly caused by atherosclerosis



Diabetic Neuropathic Ulcers

- Monofilament testing. How to perform, how to document.
- 3 Types of sensation loss: sensory (pain, numbness, tingling, hot/cold sensation), motor (muscle weakness, Charcot Joint), and autonomic (dry feet)
- Biofilm issues and treatment
- Diabetic shoes & Medicare
- Common sites include toe joints, under metatarsal heads (pad of the foot), heels, inner side of the 1st metatarsal head, and the malleolus.

Pressure Ulcers

- NPUAP Definitions
- Most important aspect of healing is related to off-loading/pressure relief
- Provide teaching and reinforcement at every visit
- Pressure relief cushion on seating surface
- Ask where they are sleeping? Assess sleep surface
- Use of small pillows to aide in redistribution
- Use of barrier creams with incontinent clients
- Sacral dressings.

Surgical Wounds

- Primary intention: approximated surgical incisions resulting in minimal scarring
- Secondary intention: left open and allowed to granulate then epithelialize.
- -usually result in scar formation
- Tertiary intention: delayed wound closure
- Well approximated: wound edges pulled together and the wound appears closed. Edges have epithelialized.

NPWT

- Write complete, detailed orders
- Document how many pieces of each foam type were used by writing on outer dressing and in your visit documentation
- Use with highly exudating wounds

- Consider using on chronic, non-healing diabetic ulcers
- -May need to use a lower pressure setting

Wound Care Management Guidelines

1. Prevent and manage infection: Use infection control precautions, cleanse wounds well, have MD debride as indicated,.
2. Maintain appropriate level of moisture
3. Eliminate dead space
4. Protect the periwound skin with use of skin barriers. Ensure your dressing is changed frequently enough to eliminate pooling of exudate on periwound skin.

Dressing Selection

- Factors to consider: drainage, caregiver, infection, circulation, pain, peri-wound skin condition, amount of exudate, tunneling/undermining, depth, wound location
- Benefits of developing a wound care formulary
- **Antimicrobial Dressings:** include silver, topical ointments, honey, cadexomer iodine products.
 - Great for critically colonized or infected wounds
- **Calcium Alginates:** Great for moderate to highly exudating wounds
 - -Converts to a gel and provides a moist wound healing environment.
 - -Also has hemostatic properties
 - -Frequency of change depends on exudate volume and secondary dressing
 - -Loosely pack in wound base to fill the dead space

Dressing Selection

- **Collagen Based Dressings:** Great for chronic wounds that may be stalled in the inflammatory phase.
 - -Not for use on infected wounds
 - -Bioresorbable
 - -Cost
- **Composite Dressings:** combine 2 or more different components into one dressing.
 - -excellent for caregivers, reduces teaching/anxiety
 - -consider cost of separate products vs. composite dressing to evaluate for savings
- **Contact Layers:** nonadherent woven or perforated sheets which protect the wound bed from trauma.
 - -Require a secondary dressing for absorption
 - -Can stay on the wound for up to 1 week
 - -Excellent for skin tears
 - -Not for use on dry wounds, wounds with thick exudate or wounds with undermining or tunneling present

Dressing Selection

- **Foam and Foam Border Dressings:** contain small cells capable of pulling the wound exudate away from the wound bed
 - -Various forms including adhesive and non-adhesive
 - -Foam dressings should cover about 1 inch (2.5cm) of the periwound skin
 - -Change up to 3x/week
 - -Excellent for Stage 2-3 pressure ulcers to aide in reducing skin shearing
- **Hydrocolloid Dressings:** conformable and flexible
 - -Hydrocolloid dressing with adhesive border helps to prevent shear and friction from loosening the edges of the dressing and extends wear time.
- **Hydrogel Dressings:** excellent replacement of wet-to-dry dressing and only needs changed daily to 3x/week.
 - -Peri-wound skin must be protected to prevent maceration

Dressing Selection

- **Transparent Films:** great for reducing friction, helps to maintain a moist wound healing environment.
- -can be used on small skin tears, promotes autolysis

Patient Focused Teaching

- At Risk Braden Scores
- Compression – consider compliance vs. recommended compression
- Elevation
- Ambulation and importance of physical activity
- Exercises and proper teaching with Unna Boots
- PT referrals when necessary i.e. calf muscle or ankle issues
- Protein Needs for Wound Healing
- Infection Prevention
- Diabetics: foot checks, proper shoes, refer to diabetic educators with MD approval if blood sugars aren't under control.
