PURPOSE:
To manage a draining wound by protecting the surrounding skin from maceration; to allow accurate measurement of drainage; to protect the wound from trauma; and to limit the spread of contamination.

CONSIDERATIONS:
1. There are two major methods for managing a draining wound:
   a. Dressing.
   b. Pouching.
   (See Integumentary - Application of Wound Dressing.)
2. Pouching is the better choice when skin integrity is compromised by caustic or copious drainage.
   [Note: Rule of thumb - if wound drains more than 50 mL output in 24 hours, a pouching procedure should be considered.]
3. Wound pouching provides accurate measurement of drainage, eliminates the need for frequent dressing changes, limits the spread of contamination and improves the patient’s comfort.
4. Irrigation of the wound and pouch usually accompanies the pouching procedure. Collection pouches are available that are especially designed for wound care management.

EQUIPMENT:
Impervious trash bag
Instruments, e.g., forceps, scissors
Protective bed pad
Gloves
Apron or gown (optional)
Protective eye wear (optional)
Collection pouch (with access port, if irrigation ordered)
Skin protectant
Sterile gauze pads
Waterproof or micropore tape
Graduated, collection container -optional

IF IRRIGATION ORDERED
Clean basin
Prescribed irrigant such as sterile normal saline
Sterile, soft-rubber catheter
50-60 mL piston syringe
Container

PROCEDURE:
1. Adhere to Standard Precautions.
2. Review the physician’s orders.
3. Explain procedure to patient.
4. Prepare materials and equipment for wound care, including opening impervious trash bag and establishing the aseptic field.
5. Empty the collection pouch by inserting the bottom half of the pouch into a graduated, collection container and open the drainage port. Observe the color, consistency, odor and amount of fluid. Wipe the bottom of the pouch and the drainage port with an alcohol wipe or a moistened gauze sponge to remove any spillage that could irritate the patient's skin or cause an odor. Close the access port.
6. Observe for:
   a. Wound size, including length, width and depth.
   b. Drainage characteristics, including type, amount, color and odor.
   c. Wound bed tissue type/color, including necrotic, slough, eschar, granulating, clean, non-granulating and epithelial.
   d. Evidence of wound healing or deterioration.
   e. Symptoms of infection, including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining or sinus tract that may require packing.
7. Observe the collection pouch for leakage or nonadhesion of the pouch, including undermining of the seal, or malfunction of pouch. Change pouch every 5 to 7 days or more frequently if seal is broken. Unnecessary change may contribute to skin irritation.
8. Changing the pouch:
   a. Don clean gloves and remove leaking pouch using the push-pull method to avoid trauma to skin. Hold skin taut and gently remove facing from skin by pushing skin away from facing. Discard pouch and save the clip.
   b. Clean periwound with soap and water, rinse and dry thoroughly. Cleanse wound and/or irrigate the wound as ordered. (See Integumentary - Wound Irrigation.)
   c. Remove gloves and discard in appropriate container. Decontaminate hands and don clean gloves. Measure the wound and pattern an opening 1/8 inch (0.3 cm) larger in the collection pouch's facing or face plate if collection pouch has a skin protectant incorporated in the faceplate.
   d. If pouch does not have wafer barrier/skin protectant, apply wafer barrier skin protectant as needed.
   e. Apply paste around fistula; fill in uneven surfaces with paste or skin barrier strips. Use a damp finger or tongue blade to apply paste.
   f. Make sure the drainage port at the bottom of the pouch is securely closed. Gently press the contoured pouch opening around the wound, beginning at the wound's lower edge to catch any drainage. Picture frame taping may be advisable to achieve more pouching security. Apply strips of tape to cover each of the four sides of the facing.
9. Wound irrigation of non-visible tract (if ordered):
   a. Wound can be irrigated with the collection pouch in place, if the pouch used has a drainage port or folding drainage system, e.g., Hollister®. Pour the prescribed irrigating solution into a container.
   b. Fill the syringe with the irrigating solution and connect the rubber catheter to the syringe.
   c. Using one hand, open the end of the collection pouch to allow introducing the catheter without contamination. Introduce the catheter through the collection pouch and gently insert the catheter into the wound until you feel resistance. Avoid forcing the catheter into the wound, which could cause tissue damage, bleeding or perforation of underlying structure.
   d. Gently instill a slow, steady stream of irrigating solution making sure the solution reaches all areas of the wound. Plan the solution to flow from the clean areas of the wound to the dirty areas to prevent contamination of clean tissue by wound exudate.
   e. Pinch the catheter closed while withdrawing the syringe. Refill the syringe, reconnect it to the catheter, and repeat the irrigation until prescribed amount of solution has been instilled or the solution returned is clear. Document the amount of solution used.
   f. Remove catheter and syringe. Close drainage port and wipe with gauze pad.

10. Discard soiled supplies in appropriate containers.

11. Position the patient to allow further wound drainage and make sure the patient is comfortable.

12. Evaluate the patient for needed change in medical treatment plan.

AFTER CARE:

1. Document in patient's record:
   a. Procedure.
   b. Patient's response to procedure.
   c. Temperature and vital signs per agency policy.
   d. Wound observations noted in No. 6 of procedure.
   e. Response of the wound to the prescribed treatment.

2. Instruct patient/caregiver in care of the wound, including:
   a. Report any changes in pain, drainage, temperature or other signs and symptoms of infection.
   b. Procedure to utilize if pouch dressing leaks or malfunctions.
   c. Diet to promote healing.
   d. Medications/disease processes that may be impeding healing.
   e. Activities permitted.

REFERENCES:


Integumentary – Application and Use of Montgomery Straps

SECTION: 4.02

Strength of Evidence Level: 3

PURPOSE:
To facilitate a dressing change of a draining wound without removing and reapplying tape.

CONSIDERATIONS:
1. Montgomery straps should be considered for the patient needing frequent dressing changes and/or whose skin is irritated by tape removal.
2. Montgomery straps are commercially available and made of hyporeactive tape with a permeable cloth backing.
3. Montgomery straps may be made out of adhesive tape for the non-sensitive skin patient.

EQUIPMENT:
- Montgomery straps or adhesive tape
- Skin protectant, semi-permeable, membrane dressing
- Gauze strips or cotton twill tape
- Soap and water
- Small safety pins and large rubber bands (optional)
- Gloves

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain the procedure to patient.
3. Observe the wound and estimate the amount and size of Montgomery straps needed.
4. To make Montgomery straps:
   a. Cut 4 to 6 strips of 2 to 3 inch wide tape for sufficient length to allow the tape to extend about 6 inches beyond the wound on each side. The length of the tape depends on the patient's size as well as the type and amount of dressing.
   b. Fold one end of each strip 2 to 3 inches over on itself with the sticky side in.
   c. Fold each end again in half and cut out a small semicircle. When using 3-inch tape, cut 2 small semicircles on each end.
5. Follow dressing orders.
6. To apply Montgomery straps:
   a. Cleanse the patient's skin to prevent irritation. After the skin dries, apply a skin protectant to the skin where tape will adhere. Allow protectant to dry.
   b. Apply semi-permeable, membrane dressing to the skin where Montgomery straps will adhere.
   c. Apply Montgomery straps with the hole ends opposing on opposite sides of the dressing. Thread holes with gauze strips or cotton tape, bring the opposing straps together, and tie. Instead of using tied strips to fasten straps, place safety pins through the holes on each side and hook a rubber band into the opposing side. The rubber band allows a slight give with body movement. The dressing is easily changed by unsnapping the safety pins on one side.
7. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in the patient's record:
   a. Patient's response to procedure.
   b. Condition of skin.
2. Plan visits to replace Montgomery straps whenever they become soiled or skin becomes irritated, usually every 5 to 7 days.
3. Observe the skin for any signs of skin irritation or maceration.
4. If skin maceration occurs, replace new straps about 1 inch away from any irritation. May use hydrocolloid wafer dressing, e.g., Duoderm® or Restore® under straps, if skin is denuded or irritated.

REFERENCES:
Purposes:

To close a small wound or to support an existing suture line either when stitches are in place or after stitches have been removed.

Considerations:
1. Butterfly strips may be used in place of stitches when the wound is small and the skin area to be closed is not subject to a lot of movement or tension.
2. For primary skin closure, allow strips to remain 3 to 5 days on the head and neck, 5 to 7 days on the chest and abdomen, and 7 to 10 days on an extremity.
3. Butterfly strips are available commercially or may be fashioned out of paper or adhesive tape.

Equipment:
Gloves
Butterfly strips (available commercially or can be made from tape)
Skin protectant (optional)
Antiseptic wipes and/or solution (optional)
Cotton applicators
Tape
Scissors

Procedure:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. If butterfly strips are to be applied after suture removal. (See Integumentary – Removal of Suture or Removal of Staple or Clip before proceeding.)
4. To make butterfly strip: Fold one 3 inch strip of 1/2 inch wide adhesive tape back on itself and cut off the corners evenly at the folded end to form broad nicks. Paper tapes may be used in a 3 inch strip, 1/4 of an inch wide with nicking.
5. Thoroughly cleanse skin with antiseptic wipes and/or solution using cotton applicators.
6. Apply skin protectant, as needed, closely along the wound's edges and to a width that will be approximately as wide as the length of the butterfly strips. Allow to air dry.
7. Apply strips across the wound being careful to approximate wound edges. Space strips evenly.
8. Allow strips to remain in place as recommended or until support is no longer afforded. Strips may be applied or reinforced, if necessary. If needed, apply a dry dressing and secure with tape.
9. Discard soiled supplies in appropriate containers.

After Care:
1. Document in patient's record:
   a. Patient's response to the procedure.
   b. Wound appearance.
   c. Response of the wound to the procedure.
2. Instruct patient/caregiver to:
   a. Keep area dry.
   b. Seek care to reapply strips at designated intervals, or sooner, if strips are loose.
   c. Report signs or symptoms of infection including pain, redness, swelling or discharge.

References:
**INTEGUMENTARY – APPLICATION OF GELATIN COMPRESSION BOOT (UNNA BOOT)**

**SECTION: 4.04**

**Strength of Evidence Level: 2**

**PURPOSE:**
To promote healing of conditions such as venous stasis ulcers or stasis dermatitis by exerting even pressure on the veins of the affected extremity while protecting it from additional trauma.

**CONSIDERATIONS:**
1. An Unna Boot is a non-elastic zinc paste compression bandage made of weave cloth impregnated with a paste containing 10% zinc. The Unna Boot is designed to augment the calf-muscle pump to reduce venous hypertension and is primarily indicated for patients who are ambulating and less effective for patients who are sedentary.
2. Although the boot is most commonly applied to the leg and foot, Unna paste may be applied to any extremity and wrapped with lightweight gauze.
3. DO NOT wrap bandage using reverse turns, since these areas may exert excessive pressure as the cast hardens.
4. Assess lower extremity pulses.
5. The Unna Boot is **contraindicated** if the patient is allergic to any of the ingredients in the paste, i.e., gelatin, zinc oxide or glycerin.
6. The Unna Boot is contraindicated in the presence of unstable heart failure, thrombus and/or arterial insufficiency and poor quality/absent pedal pulses.

**EQUIPMENT:**
- Gloves
- Soap and water
- Commercially prepared gauze bandage saturated with Unna paste (pink boot will harden, white boot will not harden)
- Bandage scissors
- Elastic bandage or self adhesive elastic roll (Coban™) to apply over commercially prepared bandage

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Explain the procedure to the patient.
3. Assemble the necessary equipment at the bedside.
4. Don clean gloves and cleanse the affected extremity gently, removing any dirt or other material that may cause a pressure point after the boot is applied. Prepare the skin and ulcer as prescribed by the physician.
5. Place patient in supine position with affected leg elevated; position the patient's leg and foot at a 90-degree angle.
6. Using a commercial Unna Boot bandage, apply prepared gauze. Begin to apply bandage at base of toes; wrap twice around toes without using tension. Ensure the bandage covers the heel. Continue wrapping upward using a circular technique, overlapping the layers by 50% with each turn.
7. Continue wrapping the patient's leg up to the popliteal space. While applying the wrapping, mold the bandage with the free hand to make it smooth and even. To accommodate the contour of the leg, it may be necessary to “dart/pleat,” or reverse fold the bandage layer, or cut the bandage layer off and start a new turn. Assess if wrap is too tight by inserting one finger between wrap and patient's skin/popliteal space. Wrap toes to knee with second layer.
8. Cover the Unna Boot with ace wrap or self adhesive elastic roll (Coban™) in a similar fashion utilizing circular wrap with 50% overlap and 50% tension. Begin by anchoring wrap at base of toes.
9. Instruct the patient to remain in bed with his leg positioned and elevated on a pillow until the gauze dries (approximately 30 minutes – for pink boot only).
10. Observe the patient's toes for signs of circulatory impairment including cyanosis, coolness, pain and numbness. Development of any of these problems indicates that the bandage has been wrapped too tightly. If the bandage is too tight, it must be immediately removed. Reapply the boot after consulting with the patient's physician.
11. Schedule a return visit to change the boot weekly, or as ordered, and to assess the underlying skin and healing ulcers. Remove the boot by cutting the dressing with the bandage scissors.
12. Discard soiled supplies in appropriate containers.

**AFTER CARE:**
1. Document in patient's record:
   a. Patient's response to procedure.
   b. Temperature and vital signs per agency policy.
   c. Wound appearance, including size and drainage.
   d. Response of the wound to the prescribed treatment.
2. Instruct the patient/caregiver in care of the Unna Boot and precautions, including:
   a. Signs and symptoms of circulatory impairment and plan for removal if necessary.
   b. Keeping the Unna Boot dry with particular care while bathing (no showers or tub baths).
   c. That the boot will stiffen but will not be as hard as a cast, therefore, the patient must carefully walk on it and handle it to avoid damaging the boot (pink boot).
   d. The frequency of the prescribed dressing change and reassessment of the underlying skin and ulcer.
   e. Diet to promote healing.
   f. May wear cast shoe for ambulation.
   g. Avoid constricting shoe or sock.
REFERENCES:


**Integumentary – Application of Multilayer Compression Bandage System**

**SECTION: 4.05**

**Strength of Evidence Level: 2**

**PURPOSE:**
To provide management and treatment of venous leg ulcers and associated conditions; to provide effective compression; to reduce nursing time required for the treatment of venous leg ulcers; to maintain and control wound exudates; and to provide padded protection for bony prominences.

**CONSIDERATIONS:**
1. Performed by trained clinician.
2. Wounds are measured weekly or after each dressing change.
3. Contraindications: Unstable heart failure, decreased arterial flow, active wound infection, and/or cellulitis.
4. If the patient is obese and the lower extremity is very large, it may be necessary to apply an additional bandage to accommodate the increased leg size [for example, 1 and 1/2 (one and one-half) bandage]. Wrapping techniques to achieve therapeutic pressures vary with each patient and his or her unique leg shape.
5. Since there are numerous multilayer compression systems available from various manufacturers, each should be used as directed by the manufacturer.

**EQUIPMENT:**
- Gloves (sterile, nonsterile)
- Clean or sterile scissors
- Measuring device
- Multilayer Compression System bandage (high compression bandage with or without absorbent padding)
- Absorbent dressing as ordered
- Wound cleansing supplies
- Irrigation solution and supplies, if ordered by physician
- Bag for soiled dressing or dirty equipment

**PROCEDURE:**
1. Verify physician orders.
2. Explain procedure to patient.
3. Open contents of dressing system and supplies, maintaining clean techniques.
5. Carefully remove and discard bandage and dressing.
6. Measure ankle circumference to confirm that, when padded, ankle circumference is greater than 18 cm.
7. Measure wound.
8. Clean wounds with wound cleanser or irrigate, if ordered.
9. Dry the surrounding skin and assess the wound and limb circumference.
10. Remove gloves, decontaminate hands and apply new gloves.
11. Apply dressing as ordered.

**Four Layer Compression Bandage System:**
1. With the foot flexed in a 90 degree angle, apply layer No. 1, absorbent padding (if needed) starting at the center of the ball of the foot with lower edge of padding at base of toes. Wrap padding without tension around the heel and ankle and continue to wrap in spiral fashion with 50 percent overlap up to popliteal space. Cut off excess padding and secure with tape.
2. Apply Layer No. 2, conformable bandage utilizing same technique as layer No. 1.
3. Apply layer No. 3, long stretch compression bandage utilizing 50 percent overlap, and 50 percent stretch and figure 8 wrap technique up to popliteal space.
4. Apply layer No. 4, self adhesive elastic roll utilizing spiral wrap with 50 percent overlap and 50 percent stretch up to popliteal space.

**Three Layered Compression Bandage System:**
Follow Steps 1-11 as listed above.

**Two Layer Compression Bandage System:**
Follow Steps 1-11 as listed above.

**AFTER CARE:**
1. Document in patient's record:
   a. Patient's response to procedure.
   b. Temperature and vital signs.
   c. Appearance of the skin and lesions.
   d. Instructions given to patient/caregiver.
2. Instruct patient and/or family how to assess circulatory status in extremity, i.e., color changes, loss of feeling in extremity and swelling due to circulatory compromise.
3. Instruct patient and/or family how to properly remove bandage in case of circulatory compromise.
4. Explain to patient that bandage is to remain for 5 to 7 days and to avoid getting bandage wet.
5. Instruct patient and/or family to notify nurse or physician for circulatory compromise, discomfort, leakage of exudates, or clinical signs of infection.

REFERENCES:


Integumentary – Application of Negative Pressure Wound Therapy Dressing

Strength of Evidence Level: 3

SECTION: 4.06

PURPOSE:
To provide guidelines for use of Negative Pressure Wound Therapy (NPWT).

CONSIDERATIONS:
1. NPWT uses controlled negative pressure to assist and accelerate wound healing by evacuating wound fluids, stimulating granulation tissue formation, reducing bacterial burden and maintaining moist wound environment.
2. In order for NPWT to be effective, the patient must have the overall physiologic capacity to heal. The normal albumin range is 3.5 g/dl-5.5 g/dl. A recent albumin level is recommended. Nutritional intervention should be initiated for albumin levels below 3.5 g/dl as a low albumin impairs wound healing.
3. NPWT treatment can be used on acute and chronic wounds to include stage III, stage IV pressure ulcers, vascular and neuropathic ulcers. It can also be used for treatment of dehisced surgical wounds, full thickness and partial thickness wounds, burns, skin grafts, muscle flaps and explored fistulas.
4. Precautions should be taken for patients with active bleeding, anticoagulants and difficult wound hemostasis.
5. NPWT may be used when vital organs are exposed. However, special precautions such as the placement of petroleum based or silicone non-adherent mesh products over the organs to protect underlying tissue.
6. Physician orders are required for the dressing change regimen and should include the type of NPWT dressing desired, the frequency of dressing changes, the target pressure for therapy, and the subsequent cycle (continuous/intermittent).
7. The periwound site, which is visible around the dressing, must be monitored for changes in character such as erythema or warmth every visit by the caregiver. Patient instructed in daily monitoring for s/s to notify nurse or physician.
8. NPWT is contraindicated in wounds that contain nonviable necrotic tissue, untreated osteomyelitis and malignancy in the wound.
9. NPWT is also contraindicated when treatment would place the dressing material directly over arteries and veins that are exposed in the wound.
10. NPWT is also contraindicated for non-enteric and unexposed fistulas.
11. Since there are many different NPWT systems available on the market, it is important to follow manufacture’s recommendations when applying the NPWT dressing.
12. NPWT dressing change frequency is generally every 48 hours or 3 times a week; however, you should follow the manufacturer’s recommendation/physician orders for dressing change.

EQUIPMENT:
The NPWT pump
Appropriate canister and tubing
Sponge dressing, antimicrobial gauze dressing, or cellulose dressing (dependent on the NPWT system)
Skin barrier prep
Transparent drape
Normal Saline or wound cleanser
Non-sterile 4x4 gauze
Non-sterile transparent dressing (if necessary)
Non-adherent petroleum-based gauze or silicone contact layer.
Personal protective equipment (PPE) as needed

PROCEDURE:
1. Adhere to Standard Precautions.
2. Identify the patient with name and address.
3. Explain procedure to patient.
4. Verify the physician’s orders.
5. Position and drape the patient for privacy.
6. Apply appropriate PPE.
7. Perform hand hygiene.
8. Don non-sterile gloves.
9. Insert wound drainage canister into the pump or attach the canister to the pump as per manufacturer’s directions. Use care not to contaminate the distal end.
10. Cleanse wound per orders.
11. Apply skin sealant to adjacent intact skin (optional) or drape periwound area.
12. Cut dressing to fit wound. Avoid cutting the dressing material directly over the wound bed as this may result in particles being inadvertently left in wound bed.
13. If dressing material consistently adheres to the wound bed, consider applying white foam or oil emulsion gauze under the dressing to protect wound bed (optional).
14. Cut packing pieces from dressing to fill only shallow undermined space (so they are retrievable). Dressing/packing material should loosely fill wound cavity. Avoid tightly packing the wound cavity.
15. Cut prepackaged transparent film drape dressing to conform to body contours; allow for liberal amount of intact periwound skin for dressing to adhere to.
16. While holding dressing material (foam/gauze/cellulose) in place in wound, apply transparent drape over wound as wrinkle free as possible.
17. Remove top plastic liner and perforated edges from transparent film dressing.
18. Cut a 2 cm hole in the drape, large enough to allow fluid to pass through the dressing. Apply the suction tubing as per manufacturer’s instructions.
Integumentary – Application of Negative Pressure Wound Therapy Dressing

SECTION: 4.06

Strength of Evidence Level: 3

19. If needed, place thin hydrocolloid, gauze or other types of dressing between tube and the skin interface to prevent pressure damage from the tube. Position tube away from bony structures or creases in the tissue.

20. Connect distal end of tube to canister.


22. Turn pump on at desired settings. Transparent dressing should visibly contract down over wound if an airtight seal has been achieved.

Acute/Chronic Enteric Fistula Management

General Guidelines:

1. See recommended manufacturer’s guidelines for NPWT therapy and acute enteric fistula.

2. Cover the mouth of the fistula with several layers of petroleum-based gauze.

3. Aggressively irrigate and clean the abdominal wound as directed by physician.

4. Remove layers of petroleum-based gauze from the mouth of the fistula.

5. Cover all areas of exposed bowel or other organs with a silicone or a petroleum-based or fine meshed non-adherent dressing.

6. Cut and apply a strip of foam or drain tubing material (dependent on manufacturer) directly over wide meshed non-adherent dressing on the mouth of the fistula. The foam or tubing should extend 1-2 cm beyond the mouth of the fistula.

7. If needed, attach drain tubing to appropriate canister/drainage bag.

8. Clamp the tubing at the dressing site and disconnect the tubing using care not to spill any of the fluid in the tubing. Holding the tube above the level of the pump allows for any residual fluid in the tube to flow into the canister.

9. Turn off the pump.

10. Once the dressing has relaxed, gently stretch the transparent occlusive drape horizontally and slowly pull from skin. DO NOT PEEL. Gently remove foam from wound.

11. If dressing material adheres to the wound bed, apply normal saline into the wound dressing and let it set for 15 to 30 minutes before gently removing.

12. If dressing material consistently adheres to the wound bed, consider applying non-adherent contact layer under the dressing to protect wound bed.

13. Discard the dressing material, transparent occlusive tape, tubing and gloves as per standard precautions.

REFERENCES:


http://www.ahrq.gov/Clinic/ta/negpresswtd/nptw02.htm


http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm190658.htm

Integumentary – Application of Negative Pressure Wound Therapy Dressing

Strength of Evidence Level: 3


PURPOSE:
To identify function, description, indications, advantages/disadvantages, and usage of this specialized dressing.

CONSIDERATIONS:
1. There are several transparent, semipermeable membrane adhesive dressings on the market.
2. This type of dressing may be used for prophylaxis on high-risk intact skin, partial thickness, superficial wounds with minimal or no exudates, and eschar covered wounds when autolysis is indicated.
3. The advantages for this type of dressing are:
   a. The dressing reduces the need for frequent changes and, in many instances, may remain in place until the wound is completely healed.
   b. The wound can be inspected through the transparent dressing.
   c. The dressing retains the serous exudate, keeps the wound moist and hastens healing.
   d. The dressing does not adhere to the wound's surface.
   e. The dressing may be applied over a joint without reducing mobility.
   f. Bathing and showering are permitted without removing the dressing.
   g. The dressing affords pain relief.
   h. The dressing may be used on bony prominences and other areas, prophylactically, to prevent skin breakdown.
   i. If dressing to be used to facilitate autolysis in an eschar-covered wound, it must be monitored closely and possibly changed more frequently.
4. The disadvantages of this dressing are:
   a. **Contraindicated** for infected wounds or arterial wounds that require frequent monitoring.
   b. **Not** recommended for wounds with moderate to heavy drainage.
   c. **Not** recommended for third-degree burns.
   d. **Not** recommended for use on fragile skin.
   e. May be difficult to apply and handle.
   f. May dislodge from high-function areas.
   g. Requires a margin of intact skin to adhere.
5. This dressing may be used as a secondary dressing with exuding wounds.

EQUIPMENT:
- Gloves
- Skin protectant (optional)
- Transparent film
- Hypoallergenic tape (optional)
- Scissors
- Impervious trash bag
- Normal saline

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Assemble necessary equipment at the bedside.
4. Thoroughly cleanse area and clip the hair (optional) within 2 inches (5 cm) of the site. Apply skin protectant wipe, if desired, and allow to dry.
5. Measure the burn/wound and choose the correct dressing size. Apply the transparent film, leaving 4-5 cm overlap from the wound margin to the surrounding skin to insure total coverage. **DO NOT** stretch the dressing, because a stretched dressing restricts mobility and may cause discomfort.
6. Follow manufacturers’ guidelines for use and application of dressing.
7. As you apply the dressing, explain its advantages to the patient and explain why the patient should not remove it.
8. To apply the dressing on a contoured area of the body, the dressing can be overlapped up to 3 times and still remain semi-permeable.
9. Care should be exercised when applying the semi-permeable dressing on the coccyx or perineal area as feces or urine can contaminate the wound. The dressing can, even if properly applied, become loosened and subsequently become contaminated.
10. If fluid accumulates under dressing, consider using absorptive dressing (e.g. Alginate) under film to allow dressing to remain in place longer.
11. Replace dressing when it leaks or every 3 to 7 days.
12. Remove dressing by gently lifting corner of dressing and stretch the dressing away from the center of the wound, partially lifting it. Peel the dressing back until you feel resistance; repeatedly stretch and peel the dressing as necessary until it is removed.
13. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Patient's response to the procedure.
   b. Temperature and vital signs per agency policy.
   c. Wound appearance including size, drainage and odor.
   d. Response of the wound to the prescribed regimen.
2. Instruct patient/caregiver in wound care, including:
   a. Reporting signs or symptoms of infection including pain, change in color, amount or character of drainage or elevated temperature.
   b. Exercising caution to not remove or disturb dressing.
   c. Leaking of dressing.
   d. Diet to promote healing.
   e. Dressing on an open wound will produce thick, sometimes foul-smelling drainage and this is not necessarily a sign of infection.
REFERENCES:


**PURPOSE:**
To maintain physiologic integrity of the wound by keeping the wound bed moist and normothermic, and the surrounding skin dry.

**CONSIDERATIONS:**
1. Use of a dressing that will keep the wound surface continuously moist. Wet-to-moist dressings should be used only for a short duration as this type of dressing requires frequent changes (3 or more per day) to maintain a moist wound bed.
2. Wet-to-Dry-Dressings are typically intended for the debridement of necrotic tissue from the wound bed. This type of dressing is no longer routinely recommended as it is non-selective and dressing removal can be painful and injure the wound bed.
3. The following criteria should be considered when selecting a dressing:
   a. Wound-related factors, such as etiology, severity, environment and depth, anatomic location, volume of exudate and the risk or presence of infection.
   b. Patient-related factors, such as vascular, nutritional, and medical status; odor-control requirements; comfort and preferences; and cost-versus-benefit ratio.
   c. Dressing-related factors, such as availability, durability, adaptability and uses.
4. Dressing changes may be painful. Pain medication may be necessary 30 minutes before each dressing change.
5. A dressing is not indicated when skin integrity is compromised by caustic or excessive drainage. Pouching may be indicated to protect the skin when the draining is copious or excoriating.
6. Follow manufacturer’s guidelines regarding length of time dressing may be left on wound. Always reapply if leaking exudate or loosening of dressing occurs.
7. Certain wounds may require sterile technique. Use appropriate sterile supplies.

**EQUIPMENT:**
- Sterilized instrument pack (optional)
- Dressings (as needed)
- Hypoallergenic tape
- Gloves
- Skin protectant
- Basin (optional)
- Cleansing solution, normal saline or other
- Protective bed pad
- Scissors
- Personal protective equipment (as needed): apron/gown, eyewear
- Impervious trash bag
- Montgomery straps (optional)
- Sterile Cotton tipped applicator

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Review physician’s orders.
3. Explain procedure to patient/caregiver.
4. Establish a clean field (sterile, if necessary) with all the supplies and equipment that will be necessary.
5. Remove tape by pushing skin from tape. Remove soiled dressing. Discard dressing and gloves in appropriate containers. Decontaminate hands and don clean gloves.
6. Observe for:
   a. Wound size including length, width and depth. Document weekly and when needed.
   b. Wound bed tissue type/color including necrotic, slough, eschar, granulating, clean, non-granulating and epithelial.
   c. Evidence of wound healing or deterioration.
   d. Drainage characteristics including type, amount, color and odor.
   e. Symptoms of infection including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining or sinus tract that may require packing.
8. Cleanse wound with normal saline or wound cleanser per wound care orders. (See Integumentary- Wound Cleansing.)
9. Dress wound with appropriate dressings following manufacturer’s guidelines and physician orders.
10. If the dressing’s edges need to be secured with tape, apply a skin sealant to the intact skin around the wound and allow to dry (optional). Secure the dressing to the skin with hypoallergenic tape.
11. For frequent dressing changes, Montgomery straps or a hydrocolloid dressing may be used to prevent trauma to the periwound skin.
12. Write date of application and initials of applier directly on the dressing (optional).
13. To apply wet-to-moist dressings follow these steps:
   a. Moisten the gauze with solution, such as normal saline, and wring it out until it is slightly moist.
   b. Fluff the gauze completely and place it over the wound bed.
   c. Cover the wound with gauze and a semi-occlusive dressing. Allow enough layers of gauze to absorb drainage until the next dressing change. Secure dressing with tape.
   d. Moisten dressing for removal.
14. To apply a wet-to-dry dressing follow these steps:
   a. Moisten the gauze with solution, such as normal saline, and wring it out until it is slightly moist.
   b. Fluff the gauze completely and place it over the wound bed.
c. Cover the wound with dry gauze, allowing enough layers to absorb drainage until the next dressing change. Secure dressing with tape.
d. Remove the dressing when it is almost dry.

15. Discard soiled supplies in appropriate containers.
16. Clean reusable supplies before leaving the home, according to agency policy.

AFTER CARE:
1. Document in patient’s record:
   a. Procedure and type of dressing used.
   b. Patient’s response to procedure.
   c. Temperature and vital signs.
   d. Wound observations noted in No. 6, under procedure.
   e. Response of the wound to the prescribed treatment.
2. Instruct patient/caregiver in care of the wound including:
   a. Reporting any changes in pain, drainage, temperature or other signs and symptoms of infection.
   b. Techniques to change or reinforce dressings. It is not routine to teach lay people to pack wounds.
   c. Diet to promote healing.
   d. Medications/disease processes that may be impeding healing.
   e. Activities permitted.

REFERENCES:


Ovington, L. (2002). Hanging wet – to - dry dressings out to dry. Advances in Skin and Wound Care. 15:2 P. 79-84

Updated 10/2013
**PURPOSE:**
To provide guidelines for conservative sharp debridement of wounds with necrotic tissue.

**CONSIDERATIONS:**

1. Conservative sharp wound debridement is the safe removal of loose, avascular tissue using surgical instruments (e.g., scissors, scalpel, forceps) without inflicting pain or precipitating bleeding.
2. Registered Physical Therapists and RNs who have been trained and possess the appropriate credentials may implement this procedure according to specific state practice acts.
3. Instrumental debridement is performed as a sterile procedure.
4. Contraindications to debridement include:
   a. Clotting disorder (e.g., thrombocytopenia, long term use of anticoagulants).
   b. Cellulitis involving tissue around wound.
   c. Sepsis.
   d. Lower-extremity ulcer caused by or complicated by ischemia.
   e. Densely adherent (dry, stable) eschar.

5. Debridement should not be done when densely adherent necrotic tissue is present and interface between viable and nonviable tissue cannot be clearly identified.
6. A physician’s order specifically for debridement must be obtained prior to the treatment.
7. Conservative sharp debridement may be uncomfortable for the patient. Consider pain management interventions prior to initiating procedure.
8. Wounds may be debrided as often as necessary.
9. Debridement should be discontinued when:
   a. The wound has 100% bed of granulation tissue and no signs or symptoms of infection.
   b. No increase in granulation tissue from one weekly evaluation to the next evaluation.
   c. The wound no longer has a viable interface between necrotic and viable or living tissue.

**EQUIPMENT:**

- Sterile 4x4 gauze
- Disposable debridement kit:
  - Scalpel with #15 blade
  - Forceps with teeth
  - Curved iris scissors
- Gloves (1 pair sterile and 1 pair non-sterile)
- Absorbent under pads as needed to clean wound
- Sterile saline
- Dressing supplies as appropriate for wound
- Protective wear (mask, goggles, gown, etc.) as appropriate for wound drainage
- Sharps container
- Disposable bags
- Silver nitrate sticks (optional) or Surgical Gelfoam (optional)

**PROCEDURE:**

1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Review the physician’s orders.
4. Position and drape the patient for the procedure.
5. Prepare sterile field. Open debridement kit, saline and all supplies needed for procedure.
6. Apply facemask, goggles and gown if the wound appears to have any pressure or fluid behind it.
7. Apply non-sterile gloves.
8. Remove and dispose of existing wound dressing.
9. Don sterile gloves.
10. Cleanse area with antiseptic (Betadine or Hibiclens if iodine allergy).
11. Clearly identify tissue to be removed as avascular (grasp avascular tissue with forceps and hold it taut so that line of demarcation is clearly visualized).
12. Perform debridement.
13. Control any minor bleeding with pressure by using sterile gauze (4x4, etc.) or silver nitrate sticks or gelfoam.
14. Dress wound per physician’s orders.
15. Double bag all contaminated supplies. Dispose of all instruments in sharps container.

**AFTER CARE:**

1. Reposition patient in a comfortable position in bed or chair with no pressure on wound(s).
2. Instruct patient and caregiver, if available, in proper positioning and turning techniques to avoid friction, shear and pressure on wound(s).

**REFERENCES:**


**PURPOSE:**
Skin around pin sites remains free of signs and symptoms of infection.

**CONSIDERATIONS:**
1. Some types of braces, skeletal traction and external fixators use pins. These pins make a direct pathway to the bone. This pathway increases the risk of infection.
2. Pin care should be performed by the patient and/or caregiver as directed by the physician, generally 1 to 3 times per day.

**EQUIPMENT:**
1-Bottle of hydrogen peroxide
1-Bottle sterile normal saline
Sterile container with lid
Sterile cotton tipped applicators
Pair unsterile gloves
Sterile specimen cup
1- Protective barrier, such as a blue pad

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Explain procedure to patient/caregiver.
3. Gather equipment and supplies.
4. Don non-sterile gloves.
5. Mix hydrogen peroxide (H$_2$O$_2$) and Normal Saline solution in equal amounts to achieve 1/2 strength (or as ordered by physician).
6. Solution may be saved for up to 24 hours. Label container with name of solution and date. *(See Preparing Solutions in the Home.)*
7. Place protective barrier under extremity that requires pin care.
8. Wet cotton tip applicator with solution.
9. Place the applicator where the pin enters the skin and gently clean skin surrounding pin, making outward strokes away from pin.
10. Use a new applicator for each stroke until a complete circle has been made.
11. Pull the skin away from the pin using the cotton applicator to keep skin free from pin, using the applicator to remove any crust from pin site.
12. Assess for signs of infection at the pin site, to include redness, increased pain, swelling, pus-like drainage or black tissue. Report presence of signs to physician.
13. Clean the pin itself with cotton tip applicator and the solution making strokes along the pin, using a new applicator with each stroke.
14. Continue Step 13 until all pin sites are free of drainage or crusting. Use a new applicator for each full circular motion then discard.
15. Discard soiled materials per agency procedure.
16. Wash hands.
17. Instruct patient and/or caregiver in pin care.
18. Instruct patient and/or caregiver to report any of the following signs of infection immediately:
   a. Redness at the pin site.
   b. Increased pain at the pin site.
   c. Swelling at the pin site.
   d. Pus-like drainage at the pin site.
   e. Black tissue around the pin site.
   f. Fever of 101 degrees Fahrenheit (38.3 Celsius) or above.
   g. Chills.
19. Document in patient’s record:
   a. Procedure and observations.
   b. Instructions given to patient/caregiver.
   c. Response to instruction.
   d. Communication with physician.

**REFERENCES:**


PURPOSE:
To reduce inflammation of the skin and to promote localization of purulent matter in tissues.

CONSIDERATIONS:
1. Wet compresses provide the following benefits:
   a. Antibacterial action if antibacterial added to the water.
   b. Wound debridement – macerates crusts to allow removal.
   c. Inflammation suppression – the evaporative cooling effect constricts superficial vessels thus reducing erythema.
   d. Drying – repeated application of wet dressings followed by a period of drying will cause skin to dry out.
2. The procedure is effective in the treatment of oozing dermatitis, furunculitis and/or cellulitis.
3. The procedure gives symptomatic relief of itching and burning by its cooling effect. Use cool temperature for anti-inflammatory effect and tepid to debride.
4. When treating large areas of skin, apply dressings to no more than 1/3 of the body at one time to avoid chilling or hypothermia.
5. To avoid skin maceration, it may be desirable to apply petroleum jelly or a moisture barrier cream to intact skin.
6. Certain wounds may require sterile techniques. Use appropriate sterile supplies.

EQUIPMENT:
Compress material, i.e., soft toweling, gauze
Gloves
Protective bed pad
Impervious trash bag
Wetting solutions, e.g., room-temperature tap water, normal saline, magnesium sulfate, aluminum acetate solution, e.g., Burrow's Solution®
Clean basin
Ice cubes, if needed to cool solution

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient and have patient assume a comfortable position.
3. Place dressings in pan and moisten with wetting solution to the point of sopping wet (neither running nor just damp).
4. Apply moist compress directly to affected area; Replace compress every 5 minutes, or as needed to maintain warmth; assess treatment area each time. Place towel over compress.
5. After 20 minutes, terminate treatment and dry skin. Repeat per physicians order.
6. DO NOT pour more solution on wet dressing to keep it wet (unless using tap water) because this can increase the concentration of the solution and lead to irritation. Remove the compress and replace with a new one.
7. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Patient's response to procedure.
   b. Temperature and vital signs.
   c. Appearance of the skin and lesions.
   d. Instructions given to patient/caregiver.
2. Instruct patient/caregiver in procedure.
**Integumentary – Preparing Solutions in the Home**

**SECTION: 4.12**

**Strength of Evidence Level: 3**

**PURPOSE:**
To prepare Normal Saline Solution, Dakin’s Solution and 25% Acetic Acid when prepared solutions are not available.

**CONSIDERATIONS:**
1. Homemade solutions are prepared using sterile technique.
2. Leave written instructions in the home for caregiver to prepare needed solutions.
3. Preparing solutions in the home reduces cost to the patient.
4. Use single dose saline for small wounds, when possible.
5. Spray wound cleansers may be appropriate if patient/family unable to prepare solution. Obtain physician order.
6. DO NOT use private well water or seawater to prepare solutions.
7. Limit use of caustic solutions, i.e., Dakin’s, Betadine, Acetic Acid, Hydrogen Peroxide and debriding agents to infected and/or necrotic wounds.
8. For wounds requiring sterile technique, excess solutions must be discarded after each use. Refer to specific agency policy regarding saline use and storage.
9. Baking soda is added to Dakin’s to adjust Ph.
10. Use at least 2 patient identifiers prior to administering medications.

**EQUIPMENT:**
Wide-mouth glass jar with lid, e.g., peanut butter jar, mason jar
Measuring spoons or cup
Large pan with lid
Non-iodized table salt for preparation of normal saline
White bleach (Sodium hypochlorite solution 5.25%) for preparation of Dakin’s solution. Do not purchase scented or concentrated bleach solutions.
White Distilled vinegar (Acetic acid, 5% by volume) for preparation of Acetic Acid solution
Baking soda for preparation of Dakin’s solution

**PROCEDURE:**

**Normal Saline**
1. Adhere to Standard Precautions.
2. Sterilize a large, clear jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
3. Bring to a boil for 20 minutes one quart of water.  
   [Note: Four cups is equal to one quart.]
4. Add two teaspoons of table salt, then cover container.
5. Let solution cool.
6. Pour solution into jar and cover with the clean cap, label contents and date.
7. When using solution, only handle the outside of the jar and cap. DO NOT leave cap off jar for long periods of time.

**Dakin’s Solution (also known as sodium hypochlorite solution 0.5%)**
1. Sterilize a large, clean jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
2. Bring to boil one quart of water.
   [Note: Four cups is equal to one quart.]
3. Using a sterile measuring spoon, add 1/2 teaspoonful of baking soda to the boiled water.
4. Determine strength needed:
   a. Full Strength – Add 3 oz. (or 95 mL) of liquid bleach (such as Clorox, Purex, etc.).
   b. Half Strength – Add 3 Tablespoons + 1/2 teaspoon (or 48 mL) of liquid bleach.
   c. One-quarter Strength - Add 1 Tablespoon + 2 teaspoons (or 24 mL) of liquid bleach.
   d. One-eighth Strength – Add 2 1/2 teaspoons of liquid bleach.
5. Let solution cool.
6. Pour solution into jar and cover with a clean screw cap, label with contents and date. Store away from direct sunlight.
7. When using solution, only handle the outside of the jar and cap. DO NOT leave cap off jar for long periods of time.
   [Note: Dakin’s solution, Betadine, Acetic Acid, and Hydrogen Peroxide impairs fibroblasts. If possible, obtain physician order for petroleum jelly gauze or skin barrier to prevent irritation of surrounding skin. Limit the use of Dakin’s solution < 10 days.]

**0.25% Acetic Acid Solution**
1. Sterilize a large, clean jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
2. Bring to boil 5 cups of water for 20 minutes.
3. Pour 5 cups of water into prepared jar; let cool.
4. Use a clean measuring spoon to add 4 tablespoons of white distilled vinegar.
5. Close lid and shake to mix.
6. Label with contents, date and store away from direct sunlight.
7. Prepare new solution every day.
AFTER CARE:

REFERENCES


Integumentary - Pressure Ulcer and Wound Assessment

SECTION: 4.13

Strength of Evidence Level: 3

PURPOSE:
To provide recommendations for assessing patient wounds.

CONSIDERATIONS:
1. Assessment is the starting point in preparing to treat or manage an individual with a wound.
2. Assessment involves the entire person, not just the wound, and is the basis for planning treatment and evaluating its effects.
3. Adequate assessment throughout the healing process is critical to proper management and healing.
4. Assess all patients on admission to homecare, resumption of care and recertification. Periodically reassess for risk factors related to pressure ulcers using the Braden Scale (See Appendix A- Braden Scale.)
5. A consultation with an enterostomal therapist (ET) or certified wound ostomy care nurse (CWOCN) is recommended for patients with full thickness wounds, complex wounds, stage III and IV pressure ulcers and deteriorating/non-healing wounds.
6. Consults by the dietician, physical therapist, occupational therapist and medical social worker may also be required.

EQUIPMENT:
Gloves
Disposable measuring guide
Sterile cotton-tipped applicator
Camera, specific for wound measurement (optional)

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain the procedure to the patient.
3. After completing the assessment, discard soiled supplies in appropriate containers.

Assessing the wound
1. Initial assessment:
   a. Position the patient exposing the wound site.
   b. Assess the wound(s) for:
      (1) Location.
      (2) Etiology: Identifying the type of tissue damage and underlying causes will help in planning the interventions (i.e., compression for venous ulcers, offloading for pressure ulcers, glucose management for diabetic ulcers, etc.)
      (3) Classification of Type of Wound Base Tissue
   c. Necrotic, nonviable, or devitalized: Tissue that has died and has therefore lost its physical properties and biologic activity.
   d. Eschar: Black or brown necrotic, devitalized tissue: tissue can be loose or firmly adherent; hard, soft, or boggy.
   e. Slough: Soft, moist, avascular (necrotic/devitalized) tissue; may be white, yellow, tan, or green; may be loose or firmly adherent.
   f. Granulation tissue: Pink/red moist tissue comprised of new blood vessels, connective tissue, fibroblasts, and inflammatory cells, fills an open wound when it starts to heal; typically appears deep pink or red; surface is granular, berry-like or cobblestone appearing.
   g. Clean, non-granulating: Absence of granulation wound surface appears smooth and red but not granular, and berry-like or cobblestone appearing.
   h. Epithelial: Regenerated epidermis across the wound surface; pink and dry in color.
   i. Newly epithelialized: The process of regeneration of the epidermis across a wound surface or regeneration of the epidermis across a wound surface
   j. Non-epithelialized: The absence of regenerated epidermis across a wound surface.
   k. Unhealed: The absence of the skin’s original integrity. (See also: WOCN OASIS C Guidance Document Glossary)
      (1) Staging (Only pressure wounds can be staged).
      Stages:
      Suspected Deep Tissue Injury (DTI):
      • A purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlined soft tissue from pressure and/or shear.
      • The areas may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
      Further Description:
      • DTI maybe 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 with thin eschar. Evolution may be rapid, exposing additional layers of tissue destruction, 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 area.
      Further Description:
The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Stage 1 may be difficult to detect in individuals with dark skin tones (a herald 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 skin 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 bridges of the nose, ear, occiput and malleolar 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 skin 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 malleolar 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 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.

(2) Thickness: Wounds can be classified as either partial thickness or full thickness to describe the level of tissue damage:

**Partial Thickness:**
- Tissue damage extends through the first layer of skin (epidermis) and into, but not through, the second layer of skin (dermis); heal by epithelialization.

**Full Thickness:**
- Tissue damage extends through both the epidermis and dermis and may involve subcutaneous tissue, muscle and, possibly, bone.

(3) Size:

**Length and Width:**
- Length and width are measured as linear distances from wound edge to wound edge. Wound length and width can also be documented by making a tracing of the wound on transparent paper with a permanent marker, tracing on an acetate guide, or photographic documentation.

[Note: For the OASIS Assessment, the length is measured by measuring the longest head-to-toe linear measurement of the wound bed. The width is obtained by measuring the greatest width, perpendicular to the length (i.e., at a 90 degree angle).]

**Depth:**
- Depth is the distance from the visible surface to the deepest point in the wound. To measure wound depth, gently insert a sterile, flexible, cotton-tipped applicator into the deepest part of the wound. Then measure the length of the sterile cotton-tipped applicator that was in the wound.

(4) Undermining: Tissue destruction to underlying intact skin along wound margin.

(5) Tunneling/Sinus Tracts: Course or pathway that can extend in any direction from the wound surface; results in dead space with potential for abscess (direction and depth of tunneling).
SECTION: 4.13

Strength of Evidence Level: 3

1. Physical health and complications.
   a. Complete history and physical examination.
   b. Complications (e.g., decreased mobility, incontinence).

2. Nutritional assessment and management.
   a. Evaluate for adequate dietary intake, including calories, protein, vitamins and minerals.
   b. Nutritional assessment for individuals at risk for malnutrition:
      (1) At least every 3 months for individuals at risk for malnutrition.
      (2) Laboratory tests, as ordered (e.g., albumin, total protein, hematocrit).
      (3) Height, weight, history of weight loss.

   c. Nutritional support requirements (e.g., tube feeding, nutritional supplements).
   d. Vitamin and mineral supplement requirements (e.g., vitamins A, C, Zinc).
   e. Hydration status.


4. Psychosocial assessment and management.
   a. Assessment of the individual to include:
      (1) Mental status.
      (2) Learning abilities.
      (3) Signs of depression.
      (4) Social support.
      (5) Polypharmacy or over medication.
      (6) Alcohol or drug abuse.
      (7) Lifestyle.
      (8) Culture and ethnicity.
      (9) Stressors.
   b. Assessment of resources (e.g., availability and skill of caregivers, finances, equipment).
   c. Assessment of mechanical and environmental factors.

2. Reassessment:
   a. Reassess the wound weekly, according to the initial assessment guidelines.
   b. It is not appropriate to reverse stage a pressure wound. A Stage III cannot become a Stage II or a Stage I. Chart the progress by noting an improvement in the characteristics (size, depth, etc.) or identify the wound as a healing Stage III or a healed Stage III wound. The same applies for a Stage IV pressure ulcer.
   c. Reevaluate the treatment plan as soon as any evidence of deterioration is noted.

3. Monitoring progress:
   a. A clean wound with adequate innervation and blood supply should show evidence of some healing within two to four weeks.
   b. If progress is not demonstrated within two to four weeks, reevaluate the overall treatment plan, adherence to the treatment plan and make appropriate changes and referrals (ET/CWOCN).

Assessing the Individual

1. Physical health and complications.
   a. Complete history and physical examination.
   b. Complications (e.g., decreased mobility, incontinence).

2. Nutritional assessment and management.
   a. Evaluate for adequate dietary intake, including calories, protein, vitamins and minerals.
   b. Nutritional assessment for individuals at risk for malnutrition:
      (1) At least every 3 months for individuals at risk for malnutrition.
      (2) Laboratory tests, as ordered (e.g., albumin, total protein, hematocrit).
      (3) Height, weight, history of weight loss.

   c. Nutritional support requirements (e.g., tube feeding, nutritional supplements).
   d. Vitamin and mineral supplement requirements (e.g., vitamins A, C, Zinc).
   e. Hydration status.

REFERENCES:


PURPOSE:
To identify patients at risk for the development of pressure ulcers and define early interventions.

CONSIDERATIONS:
1. Patients at increased risk for development of pressure ulcers are those who are chairfast or bedfast.
2. The following characteristics further increase the risk for pressure ulcer development:
   a. Advanced age.
   b. Chronic Illness that requires bed rest; poor circulation.
   c. Dehydration, malnutrition, significant obesity and thinness.
   d. Diabetes mellitus.
   e. Incontinence, excessive perspiration, wound drainage.
   f. Diminished pain awareness.
   g. Fractures, trauma, paralyses.
   h. Corticosteroid therapy, immunosuppression.
   i. Mental impairment, possibly related to coma, altered level of consciousness, sedation and/or confusion.
3. Rating scales, such as the Braden (See Appendix A- Braden Scale), Gosnell and Norton are the most common risk assessment tools used by clinicians to identify the patients at greatest risk for pressure ulcers.
4. Early intervention refers to treatment prescribed for those patients determined to be at high risk for developing pressure ulcers. These include: adequate pressure redistribution, frequent repositioning, attention to nutritional status, aggressive and gentle perineal care, protective devices that lift the heels off the bed and padding for ankles and knees.
5. Recommendations for an effective prevention program include four goals:
   a. Identifying at-risk individuals who need prevention and the specific factors placing them at risk.
   b. Maintaining and improving tissue tolerance to pressure in order to prevent injury.
   c. Protecting against the adverse effects of pressure, friction, and shear.
   d. Reducing the incidence of pressure ulcers through educational programs.

EQUIPMENT:
Pressure Redistribution (as defined by the National Pressure Ulcer Advisory Panel, 2007) Support Surfaces:
  - Reactive support surface: A powered or non-powered support surface with the capability to change its load distribution properties only in response to applied load.
  - Active Support Surface: A powered support surface, with the capability to change its load distribution properties, with or without applied load.
  - Integrated Bed System: A bed frame and support surface that are combined into a single unit whereby the surface is unable to function separately.
  - Powered: Any support surface requiring or using external sources of energy.
  - Non-powered: Any support surface not requiring or using external sources of energy.
  - Overlay: An additional support surface designed to be placed directly on top of an existing surface.
  - Mattress: A support surface designed to be placed on the existing bed frame

Skin Protectants/Emollients and Sprays:
  - Lotion
  - Ointment
  - Moisture-barrier creams
  - Transparent film

Comfort Aids (does not reduce pressure but aids in comfort):
  - Pillows
  - Heel and elbow protectors

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Risk Assessment Tools and Risk Factors
   1. Assess all patients on admission to homecare with a validated tool (e.g. Braden) and reassess every visit for risk factors related to pressure ulcers using clinical assessment.
   2. Assess bed- and chair-bound patients for additional risk factors such as, incontinence, altered level of consciousness and impaired nutritional status.
   3. Document assessment of all risk factors.
4. Skin Care and Early Treatment
   1. Inspect the skin at each visit and instruct patient/caregiver to do so on a daily basis, paying particular attention to bony prominences.
   2. Individualize and teach frequency of skin cleansing according to need and/or patient preference. During the cleansing process, use minimal force and friction on the skin.
   3. Avoid hot water and use a mild cleansing agent that minimizes irritation and dryness of the skin, then apply moisturizers and a barrier cream.
   4. Minimize environmental factors leading to dry skin, such as low humidity (less than 40%) and exposure to the cold. Treat dry skin with moisturizers.
   5. Avoid massaging over bony prominences.
   6. Minimize skin exposure to moisture due to incontinence, perspiration or wound drainage. When sources of moisture cannot be controlled, be sure to use a Moisture Barrier to protect the skin and use linen-saver pads or briefs made of materials that absorb moisture and present a quick-drying surface to the skin.
SECTION: 4.14

Strength of Evidence Level: 3

7. Use proper positioning, transferring and turning techniques to lessen skin injury due to friction and shearing. To reduce additional friction injuries, use lubricants, protective dressings, and protective padding.

8. Ensure adequate nutrition and hydration that includes adequate intake of protein, calories, vitamins, minerals and fluids. A plan of nutritional support and/or supplementation may need to be implemented for those patients who are nutritionally compromised. Dietitian referral may be indicated.

9. Keep the patient as active as possible. Use active and passive exercise including range of motion. Physical therapy referral may be indicated.

Mechanical Loading and Pressure Redistribution Support Surfaces

Patient confined to bed:
1. Educate patient/caregiver in a systematic turning and repositioning schedule that repositions the patient at least every 2 hours. A written plan may be helpful.
2. Protect bony prominences, such as ankles and knees, from contact with each other with pillows or foam wedges. For a completely immobile patient, use devices that totally relieve pressure on the heels. DO NOT use donut-type devices.
3. Avoid positioning the patient directly on the trochanter, when the side-lying position is used.
4. Maintain the head of the bed at the lowest degree of elevation possible ≤ 30 degrees. Limit the amount of time it is elevated.
5. Use lifting devices during transfers and position changes.
6. Place at-risk patients on a pressure-reducing device, such as foam, static air, alternating gel or water mattress.

Patient confined to chair:
1. Initiate a systematic schedule for repositioning that shifts the points under pressure at least every hour. If able, have patient shift weight every 15 minutes. A written plan may be helpful.
2. Use a pressure-reducing device, such as those made of foam, gel, air or a combination, as indicated. DO NOT use donut-type devices.
3. Consider postural alignment, distribution of weight, balance and stability and pressure relief when positioning patient.

Education

1. The keystones to prevention are educational programs that are structured, organized and comprehensive. These programs must be directed at all levels of healthcare providers, patients, families and caregivers.
2. Educational programs should include information on the following items:
   a. Etiology of and risk factors for pressure ulcers.
   b. Risk assessment tools and their application.
   c. Skin assessment.

   d. Selection and/or use of support surfaces.
   e. Development and implementation of an individualized program of skin care.
   f. Demonstration of positioning to decrease risk of tissue breakdown.
   g. Instruction of accurate documentation of pertinent data.

3. Utilize Pressure Ulcer Prevention patient education tool as appropriate.

AFTER CARE:

1. Document in patient’s record:
   a. Assessment of risk and risk factors identified.
   b. Instructions given to patient/caregiver.
   c. Patient’s/caregiver’s ability to demonstrate teaching instructions.

REFERENCES:


**Integumentary – Pressure Ulcer: Treatment of Stage I**

**SECTION: 4.15**

**Strength of Evidence Level: 3**

**PURPOSE:**
To identify dressing and treatment modality options for Stage I pressure ulcers.

**CONSIDERATIONS:**
1. A Stage I pressure ulcer is defined as an area of intact skin with non-blanchable redness, usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area. The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Stage 1 may be difficult to detect in individuals with dark skin tones (a herald of risk). If required, obtain physician’s order for cleansing agents other than soap and water and for the use of a transparent film.
2. If protection from shearing is needed, application of transparent film is indicated.
3. Use clean technique.
4. Topical treatment options for Stage I pressure ulcers include:
   a. Lubricating sprays.
   b. Moisturizing lotions and gels.
   c. Skin protectants.
   d. Transparent films.
5. Additional therapy modalities include:
   a. Support surface.
   b. Nutritional support.
6. Continue to follow procedures for prevention and assessment of pressure ulcers. (See Integumentary- Pressure Ulcer-Prevention and Pressure Ulcer-Assessment.)

**Option I**
Use of Lubricating Sprays/Moisturizing Lotions and Gels/Skin Protectants.

**EQUIPMENT:**
- Gloves
- Soap, mild/non-oily or commercial skin cleanser
- Lubricating spray or moisturizing lotion
- Skin protectant
- Moisture barrier

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Wash affected area with wound cleanser agent as ordered or soap and water.
4. Apply moisturizer to skin if needed.
5. Substitute a moisture barrier or skin protectant if patient is incontinent of urine or feces or has excessive sweating.
6. Lotions and moisture barriers need to be reapplied as directed by manufacturer. Usage is product type specific.
7. Discard soiled supplies in appropriate containers.

**AFTER CARE:**
1. Document in patient’s record:
   a. Procedure.
   b. Patient’s response to procedure.
   c. The condition of the patient according to the assessment procedure for pressure ulcers.
2. Instruct the patient/caregiver in:
   a. Care of the pressure ulcer.
   b. Pressure reduction techniques (See Integumentary- Pressure Ulcer-Prevention.)
   c. Reporting signs and symptoms of infection and other areas of breakdown.
   d. Diet to promote healing.
   e. Medications/disease processes that may be impeding healing.
   f. Activities permitted.

**Option II**
Transparent Film (See Integumentary- Application of Transparent Film.)

**Option III**
Hydrocolloid Dressings (See Dressing Changes)
PURPOSE:
To identify dressing and treatment modality options for Stage II pressure ulcers.

CONSIDERATIONS:
1. A Stage II pressure ulcer is defined as an area of 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. 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.
2. Obtain physician’s order for all treatment and cleansing agents.
3. Normal saline is an acceptable agent for cleansing pressure ulcers.
4. Use clean technique.
5. Topical treatment options for Stage II pressure ulcers include:
   a. Transparent films.
   b. Composite, hydrocolloid, hydrogel wafer, foam, antimicrobial dressing or alginate (for heavily exuding wounds only) dressings.
   c. Amorphous hydrogel and cover dressing.
6. Additional therapy modalities include:
   a. Nutritional support.
   b. Support surface.
   c. Electrical Stimulation-for recalcitrant Stage II Pressure Ulcers.
7. Continue to follow procedures for prevention and assessment of pressure ulcers. (See Pressure Ulcer and Wound Assessment.)

Option I
Options for clean granular wounds with minimal exudate:
1. Transparent Film. (See Integumentary- Transparent Film Application.)
2. Composite, Hydrocolloid, Hydrogel Wafer
3. Hydrocolloid (if no significant depth)
4. Hydrogel dressing (amorphous or impregnated gauze)
5. Apply secondary dressing, if needed.

Option II
Options for clean granular wounds with moderate to large amount of exudates:
1. Foam.
2. Calcium Alginate (for heavily exuding wounds).
3. Apply secondary dressing.

Option III
Options for granular wounds with local signs of infection:
1. Antimicrobial dressing, such as silver-based or cadexomer iodine based.
2. Apply secondary dressing, as dictated by amount of exudates.

EQUIPMENT:
Gloves
Gauze
Basin (optional)
Cleansing solution, normal saline or other
Protective bed pad
Amorphous Hydrogel as primary dressing
Secondary dressing
Skin protectant
Tape
Impervious trash bag

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Clean wound with normal saline or wound cleanser per wound care orders. (See Integumentary- Wound Cleansing.)
4. Apply primary dressing according to manufacturer’s guidelines and physician’s orders.
5. Dress wound, as needed, with appropriate cover dressings following the manufacturer’s guidelines for use. (See Integumentary- Dressing Changes.)
6. Discard soiled supplies in appropriate containers.
7. Clean reusable supplies before leaving the home, according to agency policy.

AFTER CARE:
1. Document in patient’s record:
   a. Procedure.
   b. Patient’s response to procedure.
   c. The condition of the patient according to the assessment procedure for pressure ulcers.
2. Instruct the patient/caregiver in:
   a. Care of the pressure ulcer.
   b. Pressure redistribution techniques. (See Pressure Ulcer: Prevention.)
   c. Reporting signs and symptoms of infection and other areas of breakdown.
   d. Diet to promote healing.
   e. Medications/disease processes that may be impeding healing.
   f. Activities permitted.
Integumentary – Pressure Ulcer: Treatment of Stage III and IV

Strength of Evidence Level: 3

PURPOSE:
To identify dressing and treatment modality options for Stage III and Stage IV pressure ulcers.

CONSIDERATIONS:
1. **Stage III** pressure ulcers are defined as full thickness skin 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. The depth of a Stage III pressure ulcer varies by anatomical location. The bridges 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.

2. **Stage IV** pressure ulcers are defined as full thickness skin 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. 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.

3. Obtain physician’s order for all treatment and cleansing agents.

4. Normal saline is an acceptable agent for cleansing pressure ulcers.

5. Use clean technique.

6. Topical treatment options for Stage III pressure ulcers include:
   a. Composite, hydrocolloid, hydrogel-impregnated foam, amorphous hydrogel, enhanced gauze, moist packing gauze dressings for wounds with light to moderate exudate and no necrosis.
   b. Alginate, exudate absorbing, foam cavity, enhanced gauze and gauze moistened with prescribed solution or hydrogel dressings for wounds with moderate to heavy exudate, some necrosis and dead space.

7. Additional therapy modalities include:
   a. Electrical stimulation.
   b. Nutritional support.
   c. Hyperbaric oxygen therapy.
   d. Support surface.
   e. Pulsed lavage–indicated for large amount necrotic tissue.
   f. Negative pressure therapy.
   g. Ultrasound.

8. When a pressure ulcer is covered with eschar, it may not be possible to stage the ulcer accurately as Stage III or Stage IV. (See Scoring of Eschar.)

9. Continue to follow procedures for prevention and assessment of pressure ulcers. (See Pressure Ulcer and Wound Assessment.)

10. Certified wound consult may be indicated.

**Option I**
Options for clean granular wounds with shallow depth and minimal amount of exudate (Objective is to maintain moisture in wound bed.):
   1. Hydrocolloid.
   2. Hydrogel: amorphous or impregnated gauze.
   3. Apply secondary dressing, if needed.

**Option II**
Options for clean granular wounds with depth and minimal to large amount of drainage (Objective is to fill dead space and to manage moisture):
   1. Hydrogel or impregnated gauze (for minimal exudating wounds).
   2. Calcium alginate, hydrofiber or cavity foam (for moderate to heavily exuding wounds).
   3. Apply secondary dressing.

**Option III**
Options for wounds with undermining/tunneling/sinus tract (Objective is to prevent premature closure and absorb exudate and maintains moisture balance):
   1. Apply hydrogel or pack loosely with hydrogel-impregnated gauze (for minimal exudating wounds); and apply moistened gauze (if needed to fill dead space).
   2. Pack loosely with calcium alginate, cavity foam or hydrofiber (for heavily exuding wounds); lightly pack w/ moistened gauze if needed to fill dead space.
   3. Apply secondary dressing.

**Option IV**
Option for wounds with necrotic tissue (Objective is to debride/prevent infection):
   1. Apply hypertonic saline gauze, hypergel or enzymatic agent.
   2. Apply calcium alginate (for wounds with moderate to large amount of drainage and minimal slough in wound bed).
   3. Apply hydrocolloid or transparent dressing for autolytic debridement (not appropriate if the wound is infected).
   4. Apply secondary dressing, as needed.
   5. Dry stable heel eschar, necrotic arterial wounds or dry gangrene should NOT be debrided (protect/paint with betadine).

**Option V**
For granular wounds with local signs of infection:
   1. Cleanse with irrigation device (as ordered).
   2. Antimicrobial dressing, such as silver-based or cadexomer iodine based or antimicrobial gauze
   3. Pack loosely to fill space (as needed).
   4. Apply secondary dressing, as dictated by wound exudate.
5. Request testing for osteomyelitis/infection:
   Sedimentation rate, x-ray or bone scan, cultures.

EQUIPMENT:
- Dressings (as needed)
- Hypoallergenic tape
- Gloves
- Skin protectant
- Basin (optional)
- Cleansing solution, normal saline or other
- Protective bed pad
- Scissors
- Personal protective equipment (as needed): apron/gown, eyewear
- Impervious trash bag
- Sterile Cotton tipped applicator

PROCEDURE:
1. Adhere to Standard Precautions.
2. Review physician’s orders.
3. Explain procedure to patient/caregiver.
4. Establish a clean field with all the supplies and equipment that will be necessary.
5. Remove tape by pushing skin from tape. Remove soiled dressing. Discard dressing and gloves in appropriate containers. Decontaminate hands and don clean gloves.
6. Observe for:
   a. Wound size including length, width and depth. Document weekly and when needed.
   b. Wound bed tissue type/color including necrotic, slough, eschar, granulating, clean, non-granulating and epithelial.
   c. Evidence of wound healing or deterioration.
   d. Drainage characteristics including type, amount, color and odor.
   e. Symptoms of infection including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining or sinus tract that may require packing.
7. Cleanse wound with normal saline or wound cleanser per wound care orders. *See Wound Cleansing.*
8. Dress wound with appropriate dressings following manufacturer’s guidelines and physician orders.
9. If the dressing’s edges need to be secured with tape, apply a skin sealant (optionally) to the intact skin around the wound and allow to dry. Secure the dressing to the skin with hypoallergenic tape.
10. Write date of application and initials of applier directly on the dressing (optional).

AFTER CARE:
1. Document in patient’s record:
   a. Procedure and type of dressing used.
   b. The patient’s response to the procedure.
   c. Wound and pressure ulcer assessment (see Wound and Pressure ulcer assessment procedure).
   d. General patient assessment, including temperature and vital signs
   e. Response of the wound to the prescribed treatment.
2. Instruct the patient/caregiver in:
   a. Care of the pressure ulcer, including techniques to change or reinforce dressings, as appropriate.
   b. It is not routine to teach lay people to pack wounds.
   c. Pressure reduction techniques.
   d. Reporting signs and symptoms of infection and other areas of breakdown.
   e. Diet to promote healing.
   f. Medications/disease processes that may be impeding healing.
   g. Activities permitted.
Integumentary – Pressure Ulcer: Treatment of Deep Tissue Injury (DTI)  
SECTION: 4.18

Strength of Evidence Level: 3

PURPOSE:
To identify dressing and treatment modality options for suspected deep tissue injury pressure ulcers.

CONSIDERATIONS:
1. Suspected Deep Tissue Injury (DTI) is defined as a 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 areas may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.
2. Further description: DTI may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over dark wound bed. The wound may further evolve and become covered with thin eschar. Evolution maybe rapid, exposing additional layers of tissue destruction, even with optimal treatment.
3. If protection from shearing is needed, application of transparent film is indicated (not recommended for blistered DTI).
4. Use clean technique.
5. Topical treatment options for DTI pressure ulcers include:
   a. Lubricating sprays.
   b. Moisturizing lotions and gels.
   c. Skin protectants.
   d. Transparent films.
   Frequent assessment of the wound is needed to identify and manage changes in wound status.
   Additional therapy modalities include:
      a. Support surface.
      b. Nutritional support.
      c. Offloading of affected area.
6. Continue to follow procedures for prevention and assessment of pressure ulcers. (See Pressure Ulcer and Wound Assessment.)

Option I
Use of Lubricating Sprays/Moisturizing Lotions and Gels/Skin Protectants

EQUIPMENT:
Gloves
Soap, mild/non-oily or commercial skin cleanser
Lubricating spray or moisturizing lotion
Skin protectant
Moisture barrier

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Wash affected area with wound cleanser agent, as ordered, or soap and water.

4. Gently apply moisturizer to skin, if needed.
5. Substitute a moisture barrier or skin protectant if patient is incontinent of urine or feces or has excessive sweating.
6. Lotions and moisture barriers need to be reapplied as directed by manufacturer. Usage is product type specific.
7. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Procedure.
   b. Patient's response to procedure.
   c. The condition of the patient according to the assessment procedure for pressure ulcers (see wound and pressure ulcer assessment).
2. Instruct the patient/caregiver in:
   a. Care of the pressure ulcer.
   b. Pressure reduction techniques. (See Pressure Ulcer - Prevention.)
   c. Reporting signs and symptoms of infection and other areas of breakdown.
   d. Diet to promote healing.
   e. Medications/disease processes that may be impeding healing.
   f. Activities permitted.

Option II
Transparent Film. (See Integumentary- Application of Transparent Film.)
**Purpose:**
To identify dressing and treatment modality options for Unstageable pressure ulcers.

**Considerations:**

1. **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 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.  

2. When a pressure ulcer is covered with eschar, it may not be possible to stage the ulcer accurately until the wound bed is visible. (See Scoring of Eschar.)

3. Obtain physician's order for all treatment and cleansing agents.

4. Normal saline is an acceptable agent for cleansing pressure ulcers.

5. Use clean technique.

6. Topical treatment options for unstageable pressure ulcer includes:  
   a. **Palliative:** Offloading, keep wound dry and free of infection; paint with betadine or cover with skin prep.  
   b. **Restorative:** Sharp, mechanical, enzymatic and/or autolytic debridement of necrotic tissue.

7. Continue to follow procedures for prevention and assessment of pressure ulcers. (See Integumentary - Pressure Ulcer: Prevention and Pressure Ulcer: Assessment.)

8. Certified wound consult may be indicated.

**Option I:**

Dry, stable eschar with no induration, erythema, or exudates (goal is to keep dry and free from infection). Initiate offloading, keep wound dry and free of infection; paint with betadine or cover with skin prep; apply dry gauze dressing, if needed.

**Option II:**  
Debridement of necrotic tissue.

**Considerations:**

1. Debridement is the removal of dead or devitalized tissue. Sharp, mechanical, enzymatic and/or autolytic debridement techniques may be used for removal of devitalized tissue per physician’s orders.  
   
   a. **Sharp debridement** involves the use of a scalpel, scissors or other sharp instrument to remove the devitalized tissue.  
   
   (1) Sharp debridement is the most rapid form of debridement and may be the most appropriate technique for removing areas of thick, adherent eschar and devitalizing tissue in extensive ulcers.  
   
   (2) It is the most effective, economical means for removing necrotic tissue.  
   
   (3) Those performing sharp debridement should have demonstrated the necessary clinical skills and meet licensing requirements (See Integumentary - Conservative Sharp Debridement.)

b. **Mechanical debridement** includes wet-to-dry dressings, hydrotherapy, wound irrigation (pulsed lavage).  
   
   (1) Wet-to-dry dressings remove necrotic tissue and absorb a small amount of exudates. Since it is not selective, this method can injure exposed healthy tissue in the wound bed. Caution should be used to ensure the dressing procedure is followed consistently among caregivers. (See Application of wound dressing).

(2) Wound irrigation removes necrotic tissue with fluid delivered at 8-12 pounds per square inch (psi). Follow manufacturers’ instructions when using commercially prepared irrigation system (See Integumentary - Wound Irrigation.)

   c. **Enzymatic debridement** is accomplished by applying topical proteolytic enzymes to devitalized tissue on the wound surface.  
   
   (1) Enzymes break down necrotic tissue without affecting viable tissue.  
   
   (2) A physician’s order and prescription are required for use of these products.  
   
   (3) Follow manufacturers’ guidelines carefully for use of all enzymes.

   d. **Autolytic debridement** involves the use of synthetic dressings to cover a wound and allow devitalized tissue to self-digest from enzymes normally present in wound fluids.  
   
   (1) Use transparent film or hydrocolloid wafer dressings to promote autolysis in superficial wounds.  
   
   (2) Use calcium alginates and exudate-absorptive dressings, which absorb many times their weight, to debride extensive ulcers and to promote autolysis.  
   
   (3) DO NOT use autolytic debridement if the wound is infected.

2. Heel ulcers with dry eschar should not be debrided if they do not have edema, erythema, fluctuance or drainage.

3. Pain is often associated with debridement. Use appropriate methods to prevent or manage pain.

**Equipment:**

See Integumentary - Wound Cleansing, Wound Irrigation, Application of Transparent Film and Dressing Changes.
PROCEDURE:
1. Follow manufacturers’ guidelines on all products used for debriding.
2. See Integumentary - Wound Cleansing, Wound Irrigation Transparent Film Application and Dressing Changes.

AFTER CARE:
1. Document in patient's record:
   a. Procedure.
   b. Patient’s response to procedure.
   c. The condition of the patient according to the assessment procedure for pressure ulcers.
2. Instruct the patient/caregiver in:
   a. Care of the pressure ulcer.
   b. Pressure reduction techniques. (See Integumentary - Pressure Ulcer: Prevention.)
   c. Reporting signs and symptoms of infection and other areas of breakdown.
   d. Diet to promote healing.
   e. Medications/disease processes that may be impeding healing.
   f. Activities permitted.
PURPOSE:
To safely care for Closed Vacuum Drains such as Jackson Pratt (JP) drains, or Hemovac drains.

CONSIDERATIONS:
1. Physician order is needed for the care of the drain including dressing changes and frequency for milking of the tube to remove clots.
2. Notify physician of: unrelieved pain, leakage at wound site, s/s infection, marked increase or halt in drainage volume, any other s/s of complication.
3. Do NOT remove drains in the home. Patients go to their doctor’s office to have drains removed.
4. Drain must be compressed at all times, except when emptying, to maintain suction.
5. Change dressing per MD orders. Observe for drainage.
6. Relieve pressure on tubing by attaching drain to clothing using a safety pin or clip. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.

EQUIPMENT:
- Gloves
- Graduated drainage collection container
- Alcohol Swabs
- 4x4 gauze
- Drain Sponges/Split Gauze
- Tape
- Soap & Water or NSS for cleansing (per MD order)
- Drainage Log for documenting amount & character of drainage

PROCEDURE FOR EMPTYING DRAIN:
2. Identify the patient & explain procedure.
3. Confirm physician order.
4. Follow clean technique, assemble equipment. (Collection container, alcohol swabs, gloves, Drainage log)
5. Position the patient for comfort, easy access to the drain and privacy.
6. Unfasten pin or clip attaching drain to clothing.
7. Cleanse drain port with alcohol swab.
8. Open drain port and turn the drain upside down over the graduated collection container, gently squeezing the drain to empty it.
9. Continue to squeeze the drain until flat, cleanse port with alcohol swab, and replace plug on drain port.
10. Relieve pressure on tubing by attaching drain to clothing using a safety pin. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.


PROCEDURE FOR MILKING/STRIPING DRAIN TUBING:
1. Do not milk unless specifically specified by physician.
3. Identify the patient & explain procedure.
4. Follow clean technique, assemble equipment. (alcohol swabs, gloves) Don Gloves.
5. Position the patient for comfort, easy access to the drain and privacy.
6. Unfasten pin or clip attaching drain to clothing.
7. Using one hand, firmly hold the tubing near where it comes out of the patient’s skin. This will prevent the tubing from being pulled out while it is being stripped.
8. Firmly pinch the tubing with your other hand, using your thumb and index finger. Squeeze the tubing so that it becomes flat & slowly slide your fingers down the tubing toward the drain. An alcohol pad may be used around tubing to make it easier to slide fingers along the tube. Do not use fingernails as they may damage tubing.
9. Carefully observe that tubing is NOT being pulled out of the patient.
11. Relieve pressure on tubing by attaching drain to clothing using a safety pin. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.

PROCEDURE FOR CLOSED VACUUM DRAIN DRESSING CHANGE:
2. Identify the patient & explain procedure.
3. Confirm physician order.
4. Follow clean technique, assemble equipment. (gloves, gauze, tape, nss or soap & water, gauze, split drain gauze)
5. Position the patient for comfort, easy access to the drain and privacy.
6. Unfasten pin or clip attaching drain to clothing.
7. Cleanse drain port with alcohol swab.
8. Open drain port and turn the drain upside down over the graduated collection container, gently squeezing the drain to empty it.
9. Continue to squeeze the drain until flat, cleanse port with alcohol swab, and replace plug on drain port.
10. Relieve pressure on tubing by attaching drain to clothing using a safety pin. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.

11. Dispose of dressing & gloves, perform hand hygiene.
12. Don clean gloves.
10. Cleanse tubing site in a circular motion beginning from area closest to tube, then outward using gauze and cleansing solution as ordered by MD (i.e. soap & water or NSS).
11. Observe area for signs of infection.
12. Apply split gauze dressing & 4x4s (per MD order). Tape carefully so that dressing can be removed without dislodging tubing.
13. Relieve pressure on tubing by attaching drain to clothing using a safety pin. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.

AFTER CARE:
1. Document in patient's record:
   a. Procedure and observations.
   b. Patient's response to procedure.
   c. Appearance of the wound, amount, consistency, and odor of drainage.
   d. Any instructions to patient including wound care, precautions, or signs or symptoms of complications.
   e. Patient response to instruction.
   f. Any communication with the physician.
2. Instruct patient/caregiver in care of drain site including:
   a. Notify physician/nurse of: unrelieved pain, leakage at wound site, signs of infection, marked increase or halt in drainage volume, any other signs of complications.
   b. Changing the protective dressing.
   c. Showering or bathing, when permitted by physician.
   d. Milking/Stripping tubing if ordered by MD.
   e. Teach the patient care, purpose & function of the drain including: signs of infection, monitoring temperature twice daily, dressing changes, milking procedure, emptying drain and recording drainage amount/odor/consistency, & when to contact physician/nurse.
   f. Empty drain 2x/day or when half full & record amount/odor/consistency of drainage.
   g. Relieve pressure on tubing by attaching drain to clothing using a safety pin. Do NOT perforate tubing or drain. Maintain drain below level of wound to facilitate drainage.

References:
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PurPOSE:
To remove staples or clips after healing has occurred.

CONSIDERATIONS:
1. Skin staples or clips are often substituted for surface sutures when cosmetic results are not a primary consideration, e.g., on the abdomen.
2. Although the physician orders the removal of skin staples, there are general guidelines for timing the removal based on location:
   a. Head and neck, 3 to 5 days after insertion.
   b. Chest and abdomen, 5 to 7 days after insertion.
   c. Lower extremities, 7 to 10 days after insertion.

EQUIPMENT:
Gloves
Sterile staple or clip extractor
Alcohol or antimicrobial sponges
Impervious trash bag
Dressing and tape
Butterfly strips
Skin protectant

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Use clean technique, remove dressings and discard in appropriate container.
4. Observe the wound for gaping, drainage and signs of infection. Ensure that proper healing has taken place and it is time to remove the staples.
5. Examine the wound before removing staples.
6. Position the patient so that the suture area is without tension.
7. Assemble the necessary equipment at the bedside.
   (Open package containing sterile staple extractor).
8. Cleanse the incision line gently with antimicrobial wipe and/or alcohol.
9. Using the sterile staple extractor, position the extractor's lower jaws beneath the width of the first staple or clip.
10. Squeeze the handle until the jaws are completely closed and the staple or clip is away from the skin.
   By changing the shape of the staple or clip, the extractor pulls the clip out of the skin.
11. Discard the removed staple or clip by holding the extractor over the trash bag and releasing the handle. Remove every other staple along the incision line and observe for any gaping of the wound. If gaping occurs, DO NOT remove any of the remaining staples, apply butterfly strips and notify patient's physician. (See Integumentary—Application of Butterfly Strips.) If no gaping occurs, continue removal until all staples have been removed.
12. Cleanse the suture line with antimicrobial sponges.
13. For incision line support, prevention of a wide scar, or slight skin separation, butterfly strips may be used. Use skin protector to increase length of strips' adherence. Strips may be left in place 3 to 5 days.
14. Apply dry, sterile dressing secured with tape, if necessary.
15. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Procedure and observations.
   b. Patient's response to procedure.
2. Instruct patient/caregiver on healing of incision line, including:
   a. Reporting redness, discharge or other signs of infection.
   b. Changing the protective dressing.
   c. Showering or bathing, when permitted by physician.
   d. Protecting the incision line from direct sunlight for at least 6 months.

REFERENCES:
PURPOSE:
To remove sutures after healing has occurred.

CONSIDERATIONS:
1. Although the physician orders the removal of non-absorbable sutures, there are general guidelines for timing removal based on location:
   a. Head and neck, 3 to 5 days after insertion.
   b. Chest and abdomen, 5 to 7 days after insertion.
   c. Lower extremities, 7 to 10 days after insertion.

EQUIPMENT:
- Suture removal tray or sterilized pick-up forceps and suture scissors
- Alcohol or antimicrobial sponges
- Impervious trash bag
- Dressing and tape
- Butterfly strips
- Skin protectant (optional)
- Gloves

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Follow clean technique, remove all dressings and discard in appropriate containers.
4. Examine the wound before removing sutures.
5. Observe the wound for gaping, drainage, signs of infection or embedded sutures. Ensure that proper healing has taken place and it is time to remove the stitches.
6. Position the patient so that the suture area is without tension.
7. Assemble the necessary equipment at the bedside and open sterile instrument set.
8. Cleanse suture area thoroughly with antimicrobial wipe and/or alcohol wipe.
9. To remove interrupted sutures:
   a. With forceps, grasp the knot of suture with gentle upward pull to slightly expose a small segment of the suture that was below the skin. Cut exposed suture on the opposite side of the knot. No segment of the stitch that is above the skin's surface is to be drawn below or through the skin.
   b. Still holding the knot, pull the cut suture up and out. Discard suture.
   c. Remove every other suture along the incision line and observe for any gaping of the wound. If gaping occurs, DO NOT remove any of the remaining sutures. Approximate edges, apply butterfly strips and notify the patient's physician. (See Integumentary- Application of Butterfly Strips.) If no gaping occurs, continue removal until all sutures have been removed.
10. To remove plain, continuous sutures:
    a. Grasp the first suture and cut that suture on the opposite side of the knot.
    b. Cut the next suture in line on the same side. Pull the first suture out in the direction of the knot. Discard the suture.
11. Following any suture removal:
    a. Cleanse the suture line with a sponge.
    b. For incision line support, prevention of a wide scar or slight skin separation, butterfly strips may be used. Use skin protector to increase length of strips' adherence. Strips may be left in place 3 to 5 days.
12. Apply dry, sterile dressing secured with tape, if needed.
13. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Procedure and observations.
   b. Patient's response to procedure.
2. Instruct patient/caregiver in care of healing incision line, including:
   a. Reporting redness, discharge or other signs of infection.
   b. Changing the protective dressing.
   c. Showering or bathing, when permitted by physician.
   d. Protecting the incision line from direct sunlight for at least 6 months.

REFERENCES:
PURPOSE:
To enhance local penetration of enzymatic debridment agents to the nonviable wound base of black, hard eschar on small pressure ulcers allowing autolytic debridement agents or chemical, enzymatic debriding agents to have direct contact with the ulcer bed. This is one example for scoring of eschar and the procedure itself varies greatly by institution and medical provider.

CONSIDERATIONS:
1. Scoring of an eschar may be done by a trained clinician under the agency's medical policy, State Practice Acts and physician order.
2. When eschar is black and hard, no enzyme or ointment will debride the pressure ulcer and healing will not take place. Debridement can only be done surgically or by scoring (cross hatching).
3. Not every homecare patient is a candidate for scoring to debride eschar. The candidate for the scoring procedure must be carefully chosen using the following guidelines:
   a. Supportive, involved family/caregiver.
   b. Bedbound, non-transportable patient.
   c. Small ulcer, for example, not larger than 2 inches (4.5 cm) on coccyx or 1 inch (2.5 cm) on the heel.
   d. Nutritional status at least fair.
   e. Medically fit patient i.e. no diagnosis of peripheral vascular disease, diabetes, anemia or hypoproteinemia.
4. Contraindications:
   a. Patient on anticoagulants.
   b. Patient is medically unfit.
   c. Lack of expertise in procedure.
   d. Nonhealable ulcer (i.e. lack of insufficient vascular supply to allow healing).
5. It is not possible to stage the pressure ulcer when it is covered with eschar.
6. Heel ulcers with dry, stable eschar need not be debrided if they do not have edema, induration, erythema or drainage.

EQUIPMENT:
Antimicrobial solution
Gauze sponges
Gloves
Sterile scalpel (#11 or #15)
Normal saline
Enzymatic or autolytic debriding agent
4x4 gauze pads
Hypoallergenic tape

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain the procedure carefully to the patient/caregiver. The scoring procedure is painless and bloodless.
3. Position the patient to afford the nurse a good view of the ulcer and allow patient comfort.
4. Cleanse the eschar and surrounding tissue with antimicrobial soaked gauze sponge working in a circular motion from inside out. Use a new sponge for each stroke.
5. Rinse the area very well with normal saline until there is no trace of antimicrobial solution to prevent interaction with enzymatic agent.
6. Using a scalpel, carefully make parallel, vertical or horizontal incisions every 1/8-1/4 inch (.25-.5 cm) into the black eschar layer. Make a criss-cross pattern. Make the incision into the eschar layer only until a pale gray to pink color is observed in the incision. When making the incision into the eschar layer, it is possible to feel the difference between cutting into the hard eschar and the softer, underlying tissue. Scoring is just through the eschar layer, not into viable tissue. It may be necessary to go over the incisions more than once to achieve sufficient depth.
7. Apply a thin layer of enzymatic debriding agent or hydrogel on the eschar only. DO NOT apply to the viable skin around the ulcer.
8. Cover with a wet-to-dry dressing using normal saline, gauze pads and hypoallergenic tapes or transparent dressing.
9. Autolytic debridement involves the use of synthetic dressing to cover a wound and allow devitalized tissue to self-digest from enzymes normally present in wound fluids.
   a. Use transparent film or hydrocolloid wafer dressings to promote autolysis in superficial wounds.
   b. Use calcium alginates and exudates-absorptive dressings which absorb many times their weight, to debride extensive ulcers and to promote autolysis.
   c. DO NOT use occlusive dressing if the wound is infected.
10. Reposition patient.
11. Discard soiled supplies in appropriate containers.

AFTER CARE:
1. Document in patient's record:
   a. Procedure and observations.
   b. Patient's response to procedure.
   c. Instructions given to patient/caregiver.
2. Plan a revisit schedule to ensure that the dressing is changed at least every 24 to 48 hours.
3. Observe the wound closely for signs and symptoms of infection and patient's/caregiver's adherence to the care regime.
4. Instruct the patient/caregiver to:
   a. Change the dressing as ordered.
   b. Report signs and symptoms of infection including a change in the amount or character of the drainage and an elevated temperature.
   c. Give adequate hydration and diet to promote healing.
   d. Render prophylactic skin care to prevent or detect early or further skin breakdown.
   e. Evaluate the debridement process. After all the necrotic tissue is gone, use treatment for appropriate stage of pressure ulcer depending on the depth of the ulcer.

REFERENCES:


**Integumentary – Wound Cleansing**

**SECTION: 4.24**

**Strength of Evidence Level: 3**

**PURPOSE:**
To remove bacteria and debris with as little chemical and mechanical trauma as possible, while protecting healthy granulation tissue.

**CONSIDERATIONS:**
1. The process of cleansing a wound involves selecting both a wound-cleansing solution and a mechanical means of delivering that solution to the wound.
2. Wound irrigation is an acceptable method of wound cleaning. (See Integumentary- Wound Irrigation).
3. The benefits of obtaining a clean wound must be weighed against the potential trauma to the wound bed as a result of such cleansing. Routine wound cleansing should be accomplished with a minimum of chemical and mechanical trauma.
4. Cleanse wounds initially and at each dressing change.
5. Normal saline promotes a moist environment, promotes granulation tissue formation and causes minimal fluid shifts in healthy cells. Skin cleansers or antiseptic solutions, such as acetic acid, hydrogen peroxide, sodium hypochlorite (Dakin's® solution) or povidone-iodine damage healthy tissue and delay healing. Base the choice of a cleansing solution on the indications, contraindications and benefits to healthy tissue.

**EQUIPMENT:**
- Gloves
- Gauze
- Clean basin
- Sterile basin (optional)
- Cleansing solution, normal saline or other
- Protective bed pad
- Materials as needed for dressing change
- Impervious trash bag

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Explain procedure to patient.
3. Review physician's orders.
4. Establish a clean field with all the supplies and equipment that will be necessary.
5. Remove tape by pushing skin from tape. Remove soiled dressing; discard dressing and soiled gloves in appropriate container. Decontaminate hands and don gloves.
6. Observe for:
   a. Wound size, including length, width and depth.
   b. Wound bed tissue type/color including necrotic, slough, eschar, granulating, clean, non-granulating or epithelial.
   c. Drainage characteristics, including type, amount, color and odor.
   d. Evidence of wound healing or deterioration.
   e. Symptoms of infection, including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining or tunneling/sinus tract that may require packing.
7. Using a clean gauze moistened with the prescribed cleansing solution, wipe wound areas.
   a. Clean a linear wound from top to bottom, and work outward from the incision in lines running parallel to the incision. Always wipe from the clean area toward the less clean area. Use a new gauze pad for each downward stroke.
   b. For an open wound, moisten a gauze pad with the prescribed cleansing solution; squeeze out excess solution. Clean the wound in full or half circles beginning in the center and working toward the outside. Clean to at least 1 inch (2.5 cm) beyond the end of the new dressing or 2 inches (5 cm) beyond the wound margins, if not applying a dressing. Use a new gauze pad for each circle.
8. Dress wound with appropriate dressings following the manufacturer's guidelines for use. (See Integumentary- Application of Wound Dressing.)
9. Discard soiled supplies in appropriate containers.
10. Clean reusable supplies before leaving the home, according to agency policy.

**AFTER CARE:**
1. Document in patient's record:
   a. Procedure.
   b. Patient's response to procedure.
   c. Temperature and vital signs per agency policy.
   d. Wound observations noted in No. 6 of procedure.
   e. Response of the wound to the prescribed treatment.
2. Instruct patient/caregiver in care of the wound including:
   a. Reporting any changes in pain, drainage, temperature or other signs and symptoms of infection.
   b. Techniques to change or reinforce dressings.
   c. Diet to promote healing.
   d. Medications/disease processes that may be impeding healing.
   e. Activities permitted.

**REFERENCES:**
Integumentary – Wound Cleansing

Strength of Evidence Level: 3


PURPOSE:
1. To obtain a wound culture when:
   a. Signs and symptoms of infection are present.
   b. There are systemic signs of infection.
   c. Glucose is suddenly elevated.
   d. There is pain in a neuropathic extremity.
   e. A clean wound does not show any progress in healing after 2 weeks.

CONSIDERATIONS:
1. All chronic wounds are considered contaminated. The degree of contamination and the distinction between contamination and infection are difficult to determine clinically.
2. The appearance of the wound may be misleading. Collect a wound culture when signs of infection are present, i.e., induration, fever, erythema and edema, purulent drainage, when a wound fails to heal in a patient who is immunocompromised, or when the wound healing is atypical and iatrogenic factors have been ruled out.
3. If a wound appears infected and contains necrotic tissue or a sinus tract, obtain both a culture for aerobic (with oxygen) and anaerobic (without oxygen) microbes. Contact the laboratory for special instructions or supplies needed for obtaining an anaerobic culture.
4. Swab cultures are of questionable value as multiple bacteria are often present in wound fluid and on wound surfaces, particularly when occlusive dressings have been used. Take a swab culture only when the wound shows clinical signs of infection.
5. When collecting, DO NOT use purulent matter to culture and DO NOT swab over hard eschar. Use a sterile calcium alginate or rayon swab, not a cotton swab. In some cases, a tissue biopsy from the wound may be indicated to accurately diagnose infection.

EQUIPMENT:
Gloves
Sterile normal saline
Protective bed pad (optional)
Culture swab(s)
Container to transport specimen to lab
Laboratory requisition form(s)
Impervious trash bag

PROCEDURE:
1. Obtain physician order for swab.
2. Adhere to Standard Precautions.
3. Assemble equipment.
4. Explain procedure to patient.
5. Use clean technique, remove dressing and discard in appropriate container.
6. Thoroughly and gently rinse the wound with sterile normal saline before culturing. Avoid touching the wound surface with gloved hand or any other object.
7. Use either the Z-stroke or Levine’s technique (Modified Swab Technique) to obtain a culture.
8. Moistening the swab with normal saline or transport medium is recommended prior to specimen collection.
9. Swabs using the Z-stroke entail rotating the swab between the fingers as the wound is swabbed from margin to margin in a 10 point zig-zag fashion.
10. The Levine Technique consists of rotating the swab over a 1 cm square area with enough pressure to express fluid from within the wound tissue. This technique is thought to be more reflective of tissue bio-burden than swabs taken with a Z-stroke. The Levine Technique is best used when in the wound is first clean and there is no necrotic tissue or eschar.
11. Place culture swab in appropriate container immediately, making sure not to touch swab tip or inner surface of collector container.
12. Discard soiled supplies in appropriate container.

AFTER CARE:
1. Complete all laboratory requisitions, including specific description and location of culture source and type of culture requested (aerobic/anaerobic).
2. Send culture swab to laboratory as soon as culture is taken because delays in plating may alter the results.
3. Follow agency policy for reporting of laboratory results to physician.
4. Document in patient’s record:
   a. Procedure and observations.
   b. Identity and location of laboratory where cultures taken.
   c. Patient’s response to procedure.
   d. Instructions given to patient/caregiver.

REFERENCES:

Integumentary – Wound Debridement: Silver Nitrate Stick Therapy

SECTION: 4.26

Strength of Evidence Level: 3

PURPOSE:
To provide guidelines for the safe use of silver nitrate sticks to reduce and/or eliminate the risk of unintentional injury. Use of Silver Nitrate stick is to remove dead, dying or infected tissue on wounds.

CONSIDERATIONS:
1. Silver Nitrate Stick Therapy is an antimicrobial, and has anti-inflammatory and healing characteristics.
2. Be sure to have a physician’s order before proceeding with treatment.
3. Silver Nitrate Stick Therapy is a chemical cautery agent which is used to:
   a. Remove excess granulation tissue around stomas such as gastrostomy and tracheotomy stomas.
   b. Remove necrotic tissue from a nonhealing or infected wound.
   c. Remove warts, moles and other unwanted skin blemishes.
   d. Treat hemostasis issues such as oral ulcers and nosebleeds.
4. Silver nitrate is a caustic agent and therefore great care should be taken when used as it can leak and cause skin staining and tissue burns to other unintended areas of treatment.
5. If the silver nitrate leaks into unintended areas, the site should be irrigated with copious amounts of sterile water.
6. Eye protection should be worn in the event it is splattered from the nose or tracheostomy stoma of a breathing patient.
7. Due to the type of action, pain is associated to the use of silver nitrate. Consider patient’s pain tolerance and need for pre-medication prior to procedure including use of topical anesthetic.

EQUIPMENT:
Clean wound dressings
Nitrile gloves
Normal saline
Silver nitrate sticks or pencils
Vaseline, or petroleum jelly
Topical anesthetic

PROCEDURE:
1. Adhere to Standard Precautions
2. Explain procedure to the patient.
3. Medicate patient with pain medication, as needed.
4. Assess wound, review physician orders and appropriate use of Silver Nitrate Stick Therapy for wound debridement.
5. Using normal saline, cleanse the wound bed prior to debridement. Dry surrounding area with a sterile dressing.
6. Apply skin preparation or barrier product to surrounding skin for protection against skin staining and tissue burns.
7. Don nitrile gloves as opposed to vinyl gloves. Vinyl gloves do not protect from burn through or from staining hands.
8. Apply silver nitrate sticks gently to the wound. A moist, or bleeding wound will be wet enough to activate the stick. However, if it is dry, briefly touch the edge of the stick into the normal saline to activate the stick.
9. Use a rolling method to apply sticks to wound, being careful not to touch healthy skin. Time for application on wound is dependent on wound status.
10. It may take more than one stick and/or more than one session to debride entire wound.
11. If using for cauterizing purposes, apply some pressure during the procedure.
12. Be sure to stop treatment procedure if the burning sensation is too much for patient without any anesthetic.
13. Remove all dead and extra tissue to reduce risk of bacterial growth.
14. Flush with normal saline again to cleanse the wound.
15. Treat wound with any necessary topical antibiotics as ordered by physician.
17. If treatment is ineffective on granulation tissue, consult a dermatologist for biopsy of tissue.

AFTER CARE:
1. Instruct the patient on the appearance of the wound. The silver with burn the dead tissue leaving it grey. This is normal. The wound may look worse at next dressing change, but the grey tissue will come off easily when wiped with saline-moistened gauze.
2. Record procedure and patient response in the clinical record.
3. Follow-up with physician as needed or when changes to orders are warranted for patient condition.

REFERENCES:
Application and Use of Silver Nitrate (AgNO3). (2009 December) VNA Home Health and Hospice Clinical Policy Manual.
http://www.health.state.mn.us/divs/fpc/cww/pressureulcersbrochure.pdf


**Integumentary – Wound Irrigation**

**Strength of Evidence Level: 3**

**PURPOSE:**
To flush the wound in order to cleanse tissues and remove cell debris and excess drainage from an open wound.

**CONSIDERATIONS:**
1. Irrigation helps the wound to heal properly from the inside out; it helps prevent surface healing over an abscess pocket or infected tract.
2. If the wound is small or shallow, use the syringe with a catheter for irrigation.
3. Irrigation may be done with a soft-rubber catheter attached to a piston syringe.
4. A barrier ointment or skin sealant wipe may be spread around the wound site to protect normal skin from wound exudate and moisture.
5. Certain wounds may require sterile technique. Use appropriate sterile supplies.

**EQUIPMENT:**
- Impervious trash bag
- Protective bed pad
- Basin
- Gloves
- Apron or gown (optional)
- Prescribed irrigant
- Normal saline, 30-35 mL
- Soft-rubber catheter with catheter tip syringe (optional)
- Materials as needed for wound care
- Protective eye wear, if appropriate
- Sterile petrolatum (optional)
- 19 gauge angiocath (8 pounds per square inch [psi] force for irrigation), if needed

**PROCEDURE:**
1. Adhere to Standard Precautions.
2. Review the physician’s orders.
3. Explain procedure to patient.
4. Using aseptic technique, dilute the prescribed irrigant to the correct proportions with sterile water or normal saline solution, as ordered. Let the solution stand until it reaches room temperature or warm it to 90-95 degrees Fahrenheit. (32-35 degrees Celsius.) DO NOT use any solution that has been opened for longer than 24 hours, if sterile technique is necessary.
5. Position the patient for the procedure. Place the protective bed pad under the patient to catch any spills and avoid linen changes. Place the basin below the wound so the irrigation solution flows into it from the wound.
6. Don clean gloves and remove soiled dressing; discard the dressing and soiled gloves in appropriate container. Decontaminate hands and don clean gloves.
7. Pour the prescribed amount of irrigating solution into a container.
8. Fill the syringe with the irrigating solution.
9. Gently instill a slow, steady stream of irrigating solution into the wound until the syringe empties. Make sure the solution flows from the clean tissue to the dirty area of the wound to prevent contamination of clean tissue by exudate. Be sure the solution reaches all areas of the wound.
10. Refill the syringe and repeat the irrigation.
11. Continue to irrigate the wound until you have administered the prescribed amount of solution or until the solution returned is clear. Note the amount of solution administered. Remove and discard the syringe in the appropriate container.
12. Keep the patient positioned to allow further wound drainage into the basin.
13. Cleanse the area around the wound to help prevent skin breakdown and infection.
14. Observe for:
   a. Wound size including length, width and depth.
   b. Drainage characteristics including type, amount, color and odor.
   c. Wound bed tissue type/color including necrotic, slough, eschar, granulating, clean, non-granulating, epithelial.
   d. Evidence of wound healing or deterioration.
   e. Symptoms of infection including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining sinus tract that may require packing.
15. Gently pack the wound, if ordered, and/or apply dressing. (See Integumentary- Application of Wound Dressing.)
16. Discard soiled supplies in appropriate containers.

**AFTER CARE:**
1. Document in patient's record:
   a. Procedure.
   b. Patient's response to procedure.
   c. Wound observations noted in No. 15 of procedure.
   d. Response of the wound to the prescribed treatment.
2. Instruct patient/caregiver in care of the wound, including:
   a. Reporting any changes in pain, drainage, temperature, or other signs and symptoms of infection.
   b. Techniques to change or reinforce dressing, if indicated.
   c. Diet to promote healing.
   d. Medications/disease processes that may be impeding healing.
   e. Activities permitted.
REFERENCES:


Updated 10/2013
PURPOSE:
To keep a wound open, apply continuous medication, and/or allow wound to heal from the inside out.

CONSIDERATIONS:
1. Avoid using cotton-lined gauze sponges since the fibers can adhere to the wound's surface.
2. Packing should be done gently; overpacking can impair circulation and cause pain.
3. Packing is done as part of a dressing change; follow the ordered dressing procedure.
4. Moist packing facilitates wound healing and should be used whenever possible.
5. Certain wounds may require sterile technique. Use appropriate sterile supplies.

EQUIPMENT:
Cotton tipped swab stick
Dressing (as needed)
Non-cotton lined gauze sponges, rolled gauze, packing strips
Cotton mesh gauze (optional)
Gloves
Apron or gown (optional)
Protective eye wear (optional)
Skin protectant
Protective bed pad
Montgomery straps (optional)
Solution, such as normal saline, and/or medication
Impervious trash bag

PROCEDURE:
1. Adhere to Standard Precautions.
2. Review the physician's orders.
3. Explain procedure to patient.
4. If sterile technique required, establish a sterile field with all the supplies and equipment that will be necessary.
5. Using gloves, remove old dressing. Normal saline may be necessary to loosen the old dressing.
6. Remove soiled dressing. Discard dressing and soiled gloves in appropriate container.
7. Decontaminate hands and don clean gloves.
8. Cleanse wound appropriately per physician's orders.

Observe for:
   a. Wound size including length, width and depth.
   b. Drainage characteristics including type, amount, color and odor.
   c. Wound bed tissue type/color including necrotic, slough, eschar, granulating, clean, non-granulating, epithelial.
   d. Evidence of wound healing or deterioration.
   e. Symptoms of infection including redness, swelling, pain, discharge or increased temperature.
   f. Development of undermining or tunneling/sinus tract that may require packing.

9. If ordered, apply prescribed topical medication or solution to packing material, e.g., normal saline solution. (See Preparing Solutions in the Home.)
10. Don sterile gloves.
11. Using forceps or cotton tipped swab stick, gently pack the wound with fluffed, non-cotton lined gauze or other dressing material.
12. If packing wound for mechanical debridement:
   a. Cotton mesh gauze is a common choice because it has large interstices that readily retain moisture and conform to the wound.
   b. Fluff the gauze before packing into wound to maximize surface area.
   c. Make sure all the wound surfaces are covered and kept moist so that complete debridement can take place.
   d. Pack the wound only until wound surfaces and edges are covered to prevent maceration of surrounding tissue.
13. Apply new dressing by placing 4x4 gauze pad evenly over the wound allowing enough layers to absorb drainage until the next scheduled change. Absorbent dressing may be used for outer layers of the dressing, if additional absorbency is needed.
14. If the dressing's edges need to be secured with tape, apply a skin sealant to the intact skin around the wound. After area dries, secure the dressing to the skin with hypoallergenic tape.
15. For frequent dressing changes Montgomery straps or a hydrocolloid dressing may be used to prevent trauma to the periwound skin.
16. Discard soiled supplies in appropriate containers.
17. Clean reusable instruments before leaving the home, according to agency policy.

AFTER CARE:
1. Document in patient's record:
   a. Procedure.
   b. Patient's response to procedure.
   c. Temperature and vital signs.
   d. Wound observations noted in No. 8 of procedure.
   e. Response of the wound to the prescribed treatment.
2. Instruct patient/caregiver in care of the wound, including:
   a. Reporting any changes in pain, drainage, temperature or other signs and symptoms of infection.
   b. Techniques to change or reinforce dressings. It is not routine to teach lay people to pack wounds.
   c. Diet to promote healing.
Integumentary – Wound Packing

Strength of Evidence Level: 3

- d. Medications/disease processes that may be impeding healing.
- e. Activities permitted.

REFERENCES:


### Braden Risk Assessment Scale

**NOTE:** Bed and chairbound individuals or those with impaired ability to reposition should be assessed upon admission for their risk of developing pressure ulcers. Patients with established pressure ulcers should be reassessed periodically.

<table>
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<tr>
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<tbody>
<tr>
<td>Ability to respond meaningfully to pressure-related discomfort</td>
<td>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.</td>
<td>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 1/2 of body.</td>
<td>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.</td>
<td>Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.</td>
</tr>
<tr>
<td>Degree to which skin is exposed to moisture</td>
<td>Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.</td>
<td>Skin is often, but not always, moist. Linen must be changed at least once a shift.</td>
<td>Skin is occasionally moist, requiring an extra linen change approximately once a day.</td>
<td>Skin is usually dry. Linen only requires changing at routine intervals.</td>
</tr>
<tr>
<td>Degree of physical activity</td>
<td>Confined to bed.</td>
<td>Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.</td>
<td>Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.</td>
<td>Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.</td>
</tr>
<tr>
<td>Ability to change and control body position</td>
<td>Does not make even slight changes in body or extremity position without assistance.</td>
<td>Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.</td>
<td>Makes frequent though slight changes in body or extremity position independently.</td>
<td>Makes major and frequent changes in position without assistance.</td>
</tr>
<tr>
<td>Usual food intake pattern</td>
<td>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 NPO and/or maintained on clear liquids or I.V.'s for more than 5 days.</td>
<td>Rarely eats a complete meal and generally eats only about 1/2 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.</td>
<td>Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered. OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.</td>
<td>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.</td>
</tr>
<tr>
<td>Friction and Shear</td>
<td>1. Problem</td>
<td>2. Potential Problem</td>
<td>3. No Apparent Problem</td>
<td></td>
</tr>
<tr>
<td>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 lead to almost constant friction.</td>
<td>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.</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Patients with a total score of 16 or less are considered to be at risk of developing pressure ulcers. (15 or 16 = low risk; 13 or 14 = moderate risk; 12 or less = high risk)

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Room Number:  
Date:  

Total Score: 223

Last Update 9/10
REFERENCES:


