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 exudating 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 exudating 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 hydrocolloidal 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 to the intact skin around the wound. After area dries, 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.