R.B. Turnbull, Jr. MD School of WOC Nursing Education

Mini Case Scenarios: Wounds

Cleveland Clinic

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Reviewed by: _____ **Date:** _____

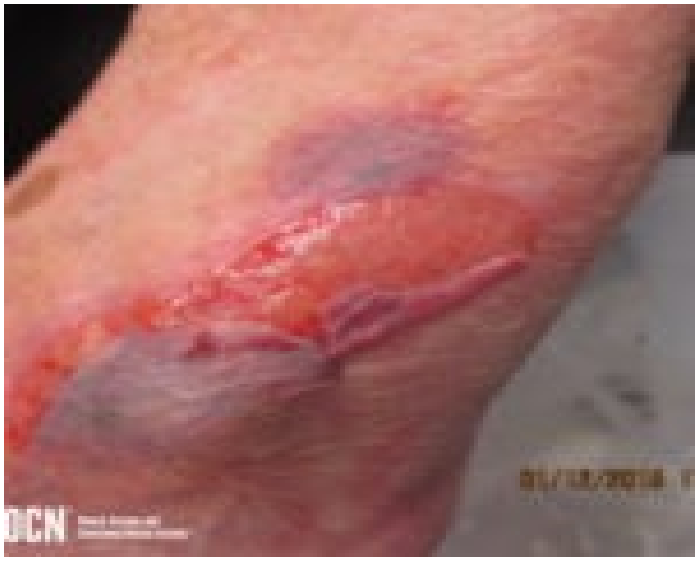
Score: /96

For the following wound case scenarios:

1. Identify the type of wound pictured.
2. Apply wound characteristics provided to identify recommendations/nursing orders for this patient & the wound.
3. Include the following in the recommendations/orders
    a. Dressing
        i. Type of dressing
        ii. Brand name(s)
        iii. Secondary dressing if needed
        iv. Dressing change schedule
    b. Other nursing orders pertinent to successful wound healing or prevention
    c. Rationale for choices
4. Provide an alternative to your initial dressing choice. This should be a product substitution, not simply a brand name substitution.
5. Answer any additional questions.

A case study has been completed for you below as an example.

Scenario Example



85-year-old in an extended care facility has a skin tear on her right forearm after a recent fall. The skin tear has been classified as Type ??? as described by the International Skin Tear Advisory Panel (ISTAP).

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Skin tear, Type 2
(1 point)

Wound Nurse recommendations/orders:

1. Use no rinse, pH balanced bath wipes at bathtime vs. soap, minimize rubbing at bath time, & gently dry fragile skin
2. Apply mesh contact layer (Hollister Adaptic)
3. Moisturize both arms daily with Medline Remedy moisturizing lotion
4. Wrap with roll gauze (Kerlix).
5. Change dressing on every shower day or if wet or soiled
6. Use long sleeve garments or sleeve covers for patient during waking hours

(3 points)

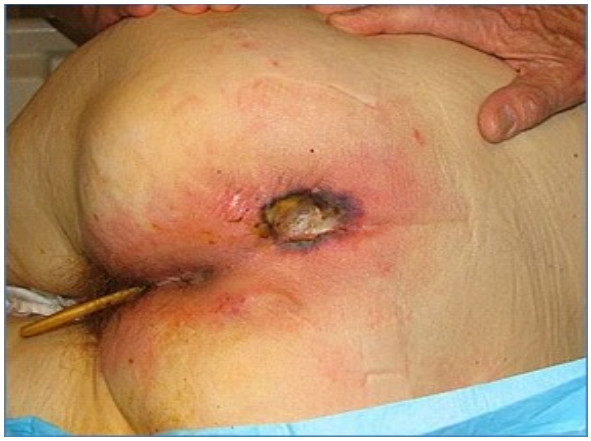
Rationale for choices

1. Bath wipes are pH balanced & soap is usually alkaline & difficult to rinse if person not showering
2. Rubbing creates friction which may cause skin tears
3. Contact layer prevents dressings from sticking to wound
4. Skin moisturizing is a preventive measure for skin tears
5. Roll gauze keeps contact layer in place & patient from touching wound & is non-adhesive
6. Long sleeves protects patient's skin and discourages picking at dressing

(3 points)

1 alternative primary/secondary dressing: Non-adhesive foam dressing, 5 layers, (Allevyn) secured with elastic mesh dressing (Medline elastic retention dressing).
(1 point)

Scenario 1



You are asked to assess a new resident admitted with a sacral wound. Patient is 82-year-old and admitted with dementia. Wound on sacrum with 100% yellow slough and brown necrotic tissue at wound edges. Wound measures approximately 4 cm x 3 cm x 2 cm. Periwound with blanchable erythema.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Unstageable pressure injury

(1 point)

Wound Nurse recommendations/orders:

1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Consult surgeon for potential surgical debridement.
3. Wet-to-dry mechanical debridement using Vashe Solution and Dukal Sterile Plain Woven Gauze Fabric Packing Strips.
4. Cover with Allevyn Life Adhesive Gel Foam Sacrum Dressing
5. Change dressing daily and PRN if dressing is compromised by incontinence.
6. Strict Q 2 hour repositioning and low air loss mattress.

(3 points)

Rationale for choices:

1. Cleansing is recommended to remove devitalized tissue and decrease bacterial burden. A 35 ml syringe/19 gauge needle creates 8 psi pressure (optimal PSI is 4-15 psi)
2. Devitalized tissue prevents wound healing and promotes the growth of pathological organisms. Surgical debridement is done by a physician.
3. Wet-to-dry debridement using Vashe Solution removes devitalized tissue with each dressing change. Vashe contains pure hypochlorous acid, a molecule produced by the human immune system to fight bacteria and infection. Gauze will remove devitalized tissue with each dressing change. Woven material will not leave debris in the wound bed.
4. Allevyn foam will maintain a moist environment
5. Cleaning after an episode of incontinence of stool or urine could compromise the dressing and contaminate the wound.
6. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss provides airflow and assists microclimate control for the skin (humidity, perspiration)

(3 points)

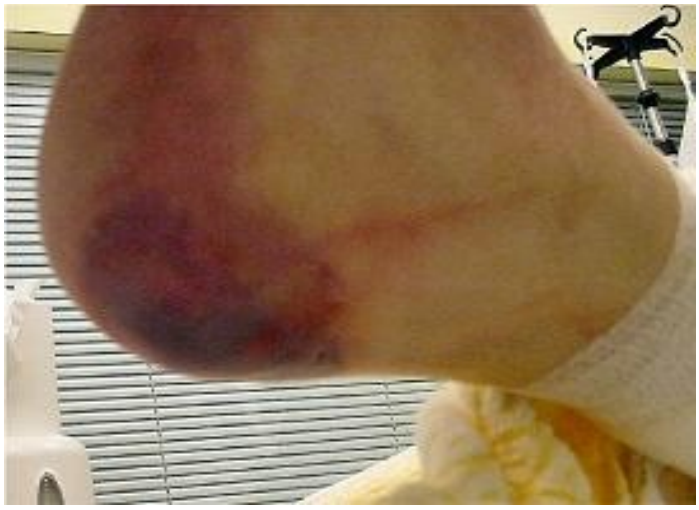
1 alternative primary/secondary dressing

NPWT with transparent drape to suction at 125 mm Hg (change Q 3 D)

(1 point)

/8 points

Scenario 2



The wound care nurse is consulted to see a 54-year-old, post op day 4 after an abdominal surgery. Left heel has non-blanchable purple discoloration.

Image courtesy of Judy Mosier, MSN, RN, CWOCN.

Wound type: Deep Tissue Injury

(1 point)

Wound Nurse recommendations/orders:
1. Offload heels at all times using offloading boots (Tru-Vue)
2. Access heels Q 8 hours
3. Strict Q 2-hour repositioning and low air loss mattress.

(3 points)

Rationale for choices:
1. Off-loading will prevent further tissue damage
2. DTPI can deteriorate quickly to an open wound
3. Wound must be offloaded to heal and offloading will prevent new pressure injury.

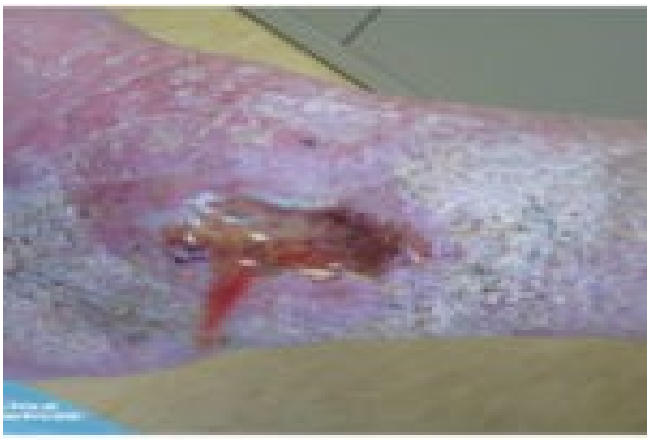
(3 points)

1 alternative primary/secondary dressing
If off-loading boots are unavailable, pillows under the calves can be used to off-load pressure to the heels.

(1 point)

/8 points

Scenario 3



A 70-year-old arrives at the outpatient wound clinic with a nonhealing wound located on gaiter area of right lower extremity. The wound measures approximately 5 cm x 2.5 cm x 0.5 cm. The wound is a shallow, irregular shaped ulcer with moderate amount of exudate. Periwound is macerated. Hemosiderin staining is noted to BLE. Patient has ABI of 0.85 to RLE and 0.90 to LLE

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Venous Ulcer

(1 point)

Wound Nurse recommendations/orders:

1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Apply Vashe soaked gauze for ten minutes. Remove and gently pat dry
3. Apply Hydrofiber Dressing Aquacel Advantage cover with layer of gauze, secured with Mefix tape.
4. Apply Compression Wrap and change dressing/wrap every three days
5. Encourage intermittent elevation of lower extremities.

(3 points)

Rationale for choices:

1. Cleansing is recommended to remove devitalized tissue and decrease bacterial burden. A 35 ml syringe/19 gauge needle creates 8 psi pressure (optimal PSI is 4-15 psi)
2. Vashe contains pure hypochlorous acid, a molecule produced by the human immune system to fight bacteria and infection.
3. Calcium Alginate will absorb moderate to heavy drainage, and gauze will not damage fragile peri-wound skin.
4. Compression therapy is the main treatment for venous ulcers

(3 points)

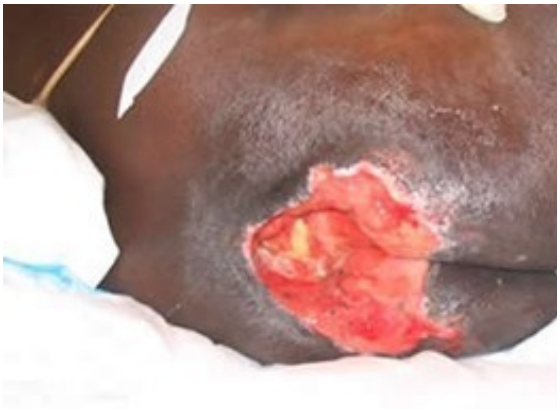
1 alternative primary/secondary dressing:

Silver Hydrofiber Dressing Aquacel® Ag Advantage
Unna boot should be used if patient is ambulatory

(1 point)

/8 points

Scenario 4



An 85-year-old is admitted to the hospital with a stage ??? pressure injury on sacrum and is bedridden. Full thickness wound measures approximately 8 cm x 10 cm x 0.4 cm. Wound bed pink with small amount of yellow slough. No structures, no bone noted. Wound has moderate serosanguineous drainage.

Image courtesy of Judy Mosier, MSN, RN, CWOCN.

Wound type: Stage 3 pressure injury.

(1 point)

Wound Nurse recommendations/orders:
1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Apply NPWT at 125 mmHg, after protecting the peri-wound edges with transparent drape.
3. Change Q 3 D and PRN if dressing is compromised by incontinence.
4. Strict Q 2 hour repositioning and low air loss mattress.
5. Consult Dietician and encourage increased protein intake.

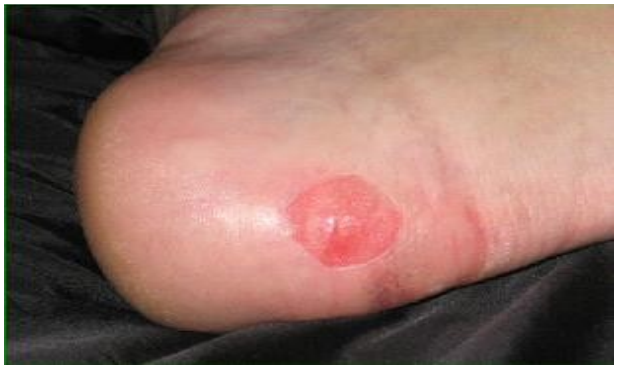
(3 points)

Rationale for choices:
1. Cleansing is recommended to remove devitalized tissue and decrease bacterial burden. A 35 ml syringe/19 gauge needle creates 8 psi pressure (optimal PSI is 4-15 psi)
2. NPWT promotes healing by removing edema and increasing nutrient and oxygen delivery and removing exudate which is a breeding media for bacteria.
3. Episodes of incontinence of stool or urine could compromise the dressing and contaminate the wound.
4. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss with alternating pressure mattress provides airflow and assists microclimate control for the skin (humidity, perspiration) and alternates pressure points.
5. Protein is necessary for wound healing. Register dieticians can address nutritional deficiencies. **(3 points)**

What support surface would you recommend and why?
low air loss with alternating pressure mattress - Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss provides airflow and assists microclimate control for the skin (humidity, perspiration) and alternates pressure points.
(1 point)

/8 points

Scenario 5



56-year-old hospitalized for cardiac surgery. During the hospital stay, developed a blister related to pressure on right heel. The blister has now ruptured.
Image courtesy of Judy Mosier, MSN, RN, CWOCN.

Wound type: Stage 2 pressure Injury

(1 point)

Wound Nurse recommendations/orders:
1. Cleanse with Vashe, pat dry.
2. Apply 3M Cavilon No-Sting Barrier Film, cover with a non-adherent pad. Wrap with gauze.
3. Access heels Q D and change dressing daily
4. Offload heels at all times using offloading boots (Tru-Vue)
5. Strict Q 2-hour repositioning and low air loss mattress.

(3 points)

Rationale for choices:
1. Vashe contains pure hypochlorous acid, a molecule produced by the human immune system to fight bacteria and infection.
2. Barrier film will protect the wound, non-adherent pad will not stick to the wound and cause additional damage.
3. Daily dressing changes allow daily assessment of wound to determine if there is further breakdown.
4. Off-loading will prevent further tissue damage.
5. Presence of a pressure injury increases potential for additional skin breakdown. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss mattress provides airflow and assists microclimate control for the skin (humidity, perspiration). Prevents new pressure injuries.

(3 points)

1 alternative primary/secondary dressing
Nexcare™ Blister Waterproof Bandage, no secondary

(1 point)

/8 points

Scenario 6

82-year-old arrives to the acute care setting with a pressure injury on the right ischium. Patient has been cared for at home by spouse and spends many hours per day in a wheelchair.
The wound measures approximately 6 cm x 8cm x 2 cm. Wound bed 80% pink tissue with bone visible. Small amount of tan drainage noted with assessment. Periwound intact.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Stage 4 pressure Injury

(1 point)

Wound Nurse recommendations/orders:
1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Apply NPWT at 125 mmHg, after protecting the peri-wound edges with transparent drape.
3. Change Q 3 D.
4. Strict Q 2 hour repositioning using wheelchair cushion and wedges or pillows to wheelchair. Low air loss with alternating pressure mattress when in bed.
5. Consult Dietician and encourage increased protein intake.

(3 points)

Rationale for choices:
1. Cleansing is recommended to remove devitalized tissue and decrease bacterial burden. A 35 ml syringe/19 gauge needle creates 8 psi pressure (optimal PSI is 4-15 psi)
2. NPWT promotes healing by removing edema and increasing nutrient and oxygen delivery and removing exudate which is a breeding media for bacteria.
3. Standard for NPWT
4. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss with alternating pressure mattress provides airflow and assists microclimate control for the skin (humidity, perspiration) and alternates pressure points.
5. Protein is necessary for wound healing. Register dieticians can address nutritional deficiencies.

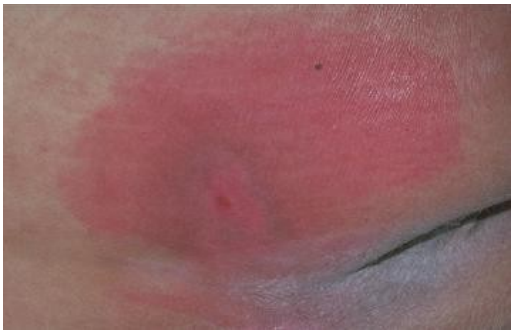
(3 points)

1 alternative primary/secondary dressing:
Primary: PROMOGRAN Matrix Wound Dressing - encourage tissue regeneration, contains an exudate that forms into a soft, form-fitting, and biodegradable gel, ensuring full contact with the wound bed. It keeps the wound's environment moist, thereby enabling it to heal faster.
Secondary: ConvaTec Hydrocolloid Dressing DuoDERM® Signal® 8 X 9 Inch Sacral Sterile

(1 point)

/8 points

Scenario 7



The wound care nurse is consulted to see a 66-year-old who developed non-blanchable erythema on right sacrum after being on bedrest for the past 24 hours.

Image courtesy of Judy Mosier, MSN, RN, CWOCN.

Wound type: Stage 1 pressure injury

(1 point)

Wound Nurse recommendations/orders:
1. Cleanse area with Vashe solution, pat dry.
2. Medline Exuderm Satin Hydrocolloid Wound Dressing Thin Sacrum
3. Assess area daily and change Q 3 D
4. Low air loss with alternating pressure mattress.

(3 points)

Rationale for choices:
1. Vashe contains pure hypochlorous acid, a molecule produced by the human immune system to fight bacteria and infection.
2. Protective, translucent barrier allows for wound observation
3. Pressure injuries can deteriorate quickly.
4. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss with alternating pressure mattress provides airflow and assists microclimate control for the skin (humidity, perspiration) and alternates pressure points.

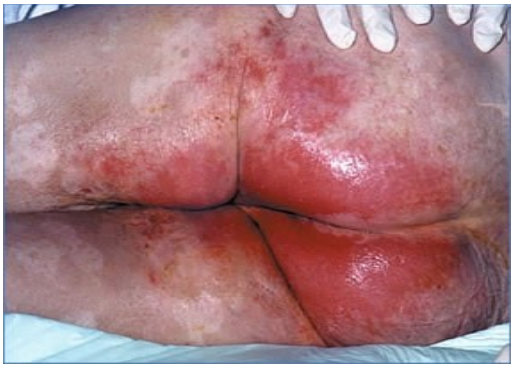
(3 points)

1 alternative primary/secondary dressing
3M Cavilon No-Sting Barrier Film, leave open to air

(1 point)

/8 points

Scenario 8



Wound care nurse consulted to see a 56-year-old with a "sore bottom". Patient has been at your facility for 2 weeks with diagnosis of C-Diff. Today you have been consulted for a treatment plan for damaged skin.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Incontinent-associated dermatitis

(1 point)

Wound Nurse recommendations/orders:
1. Administer C-diff treatment as ordered.
2. Minimize skin contact with urine and feces, assess for incontinent episodes Q 2 H. Instruct patient to call with each incontinent episode.
3. Cleanse skin with a slightly acidic cleanser after each incontinent episode and use soft materials (washcloth or towel) for cleansing and drying.
4. Apply 3M Cavilon Durable Barrier Cream to affected area
5. Low air low mattress.

(3 points)

Rationale for choices:
1. Treating the underlying cause is a priority.
2. Decreasing/preventing the irritant from contacting the skin facilitates healing.
3. An Alkaline microclimate will compromise skin barrier integrity.
4. This will provide a physical barrier to urine and feces.
5. Low air loss mattress provides airflow and assists microclimate control for the skin (humidity, perspiration).

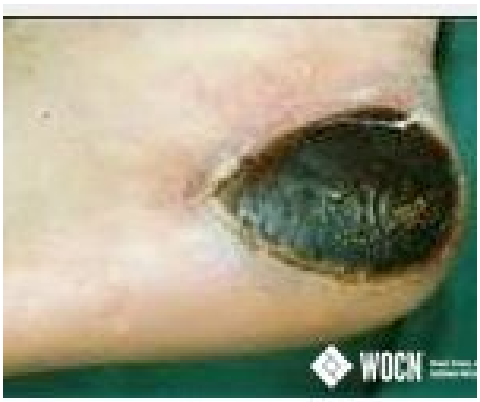
(3 points)

1 alternative primary/secondary dressing:
Desitin to affected area

(1 point)

/8 points

Scenario 9



An 85-year-old presents to acute care with dry black eschar on left posterior heel. Cared for at home by elderly spouse, he has been bedridden for the past 6 months. The wound measures approximately 6 cm x 10cm x 0 cm. Wound edges are dry and periwound has no erythema.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Unstageable Pressure Injury

(1 point)

Wound Nurse recommendations/orders:
1. Offload heels at all times using offloading boots (Tru-Vue)
2. Assess skin integrity daily
3. Strict Q 2-hour repositioning and low air loss mattress with alternating pressure.
4. Leave eschar intact and wound open to air.

(3 points)

Rationale for choices:
1. Off-loading will prevent further tissue damage
2. Presence of a pressure injury increases potential for additional skin breakdown.
3. Wound must be offloaded to heal and offloading will prevent new pressure injury. Low air loss with alternating pressure mattress provides airflow and assists microclimate control for the skin (humidity, perspiration) and alternates pressure points. Prevents new pressure injuries.
4. The eschar is a natural barrier to infection, keeping the bacteria from entering the wound.

(3 points)

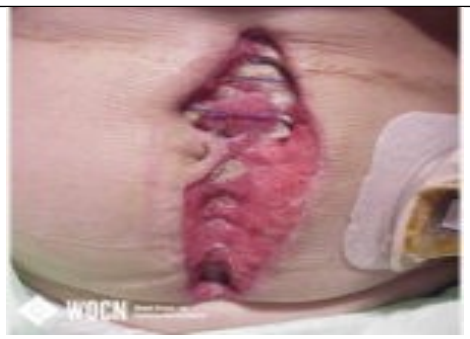
1 alternative primary/secondary dressing:
Wrap the heel in dry gauze, paint with Betadine or liquid barrier film

(1 points)

/8 points

Scenario 10

/8 points



The wound care nurse is consulted to see a 74-year-old patient transferred from a community hospital with an abdominal wound several days post-surgery for ischemic bowel. Wound measures approximately 10 cm x 4 cm x 3 cm with visible sutures. Wound bed dry, pink with small areas of yellow tissue (less than 10% of wound base). Periwound skin intact. WOC team consult for NPWT orders.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Surgical Wound Dehiscence
(1 point)

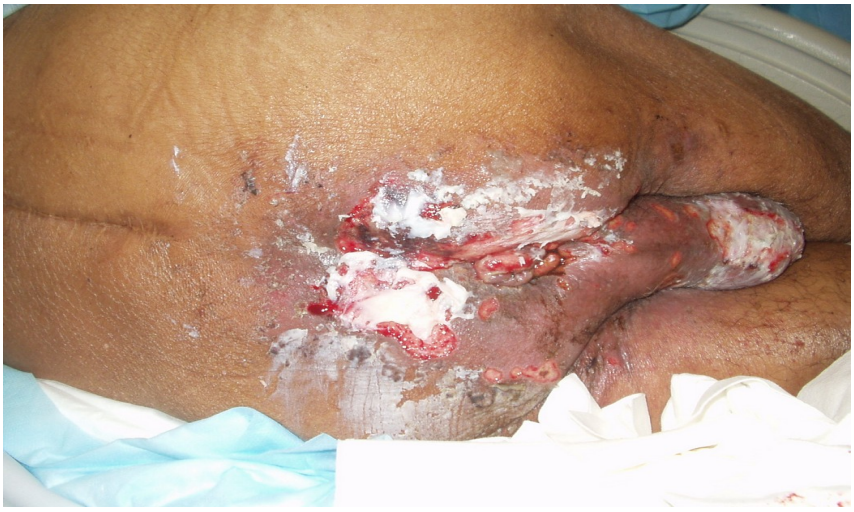
Wound Nurse recommendations/orders:
1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Apply NPWT at 125 mmHg, after protecting the peri-wound edges with transparent drape.
3. Change Q 3 D
4. Consult Dietician and encourage increased protein intake.
(3 points)

Rationale for choices:
1. Cleansing is recommended to remove devitalized tissue and decrease bacterial burden. A 35 ml syringe/19 gauge needle creates 8 psi pressure (optimal PSI is 4-15 psi)
2. NPWT promotes healing by removing edema and increasing nutrient and oxygen delivery and removing exudate which is a breeding media for bacteria.
3. Standard for NPWT
4. Protein is necessary for wound healing. Register dieticians can address nutritional deficiencies.
(3 points)

1 alternative primary/secondary dressing:
Hydrofera Blue Ready Transfer Foam Dressing spiraled and packed lightly into the wound bed, cover with ABD pads secure with Mefix tape.
(1 point)

/8 points

Scenario 11



Wound care nurse consulted to see a 45-year-old with a "sore bottom". Patient has been at your facility for 2 weeks with diagnosis of C-Diff. Today you have been consulted for a treatment plan for damaged skin.

Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Moisture-Associated Skin Damage
(1 point)

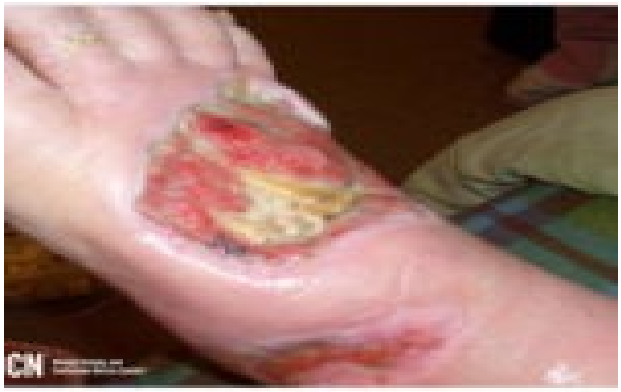
Wound Nurse recommendations/orders:
1. Administer C-diff treatment as ordered.
2. Minimize skin contact with urine and feces, assess for incontinent episodes Q 2 H. Instruct patient to call with each incontinent episode.
3. Cleanse skin with a slightly acidic cleanser after each incontinent episode and use soft materials (washcloth or towel) for cleansing and drying.
4. Apply 3M Cavilon Durable Barrier Cream to affected area
5. Low air low mattress.
(3 points)

Rationale for choices:
1. Treating the underlying cause is a priority.
2. Decreasing/preventing the irritant from contacting the skin facilitates healing.
3. An Alkaline microclimate will compromise skin barrier integrity.
4. This will provide a physical barrier to urine and feces.
5. Low air loss mattress provides airflow and assists microclimate control for the skin (humidity, perspiration).
(3 points)

1 alternative primary/secondary dressing:
Apply Desitin to affected areas

(1 point)

/8 points **Scenario 12**



A 75-year-old is admitted to acute care setting from home with pneumonia. They have a history of Raynaud Disease and Diabetes Mellitus. Has been seen at an outpatient wound clinic but is uncertain what the treatment plan is and you have no access to those medical records.
Open wound on dorsum of foot with exposed tendon. Measures approximately 8 cm x 12 cm x 0.2 cm. Wound bed 60% pink tissue and 40% yellow/black, brown tissue. Scant amount of tan drainage. Periwound intact with epibole.
Image courtesy of Wound, Ostomy and Continence Nurses Society image library.

Wound type: Arterial Ulcer

(1 point)

Wound Nurse recommendations/orders:
1. Cleanse area gently with normal saline using a 35 ml syringe/19 gauge needle.
2. Consult surgeon for potential surgical debridement.
3. Wet-to-dry mechanical debridement using Vashe Solution and Dukal Sterile Plain Woven Gauze Fabric Packing Strips.
4. Cover with Allevyn Life Adhesive Gel Foam Dressing and wrap foot with gauze. Change dressing Q 3 D.
(3 points)

Rationale for choices:
Epibole will need surgical debridement
(3 points)

1 alternative primary/secondary dressing:
Hydrofera Blue Ready Transfer Foam Dressing spiraled and packed lightly into the wound bed, cover with ABD pads secure with Mefix tape.
(1 point)

/8 points