WOC Complex Plan of Care

Name: Melinda Grace Taft

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Clinical Focus: Wound

Number of Clinical Hours Today: 8

One complex journal is required for each specialty in which you are enrolled/registered. This assignment evaluates the transition from bedside nurse to that of a specialist/consultant. Critical thinking skills and understanding of evidence based, best practices should be evident. Rationales should be cited and referenced using current APA formatting.

Choose a patient from your clinical experience that exhibits multiple care needs allowing for development of an expanded, holistic plan of care. It is recommended this complex plan of care be your last journal for each specialty allowing for incorporation of previous instructor feedback. Reach out to your Practicum instructor for any questions.

Pertinent Medical/Nursing History	Pertinent lab/diagnostic test results
10-year-old male with no previous medical/surgical history. • Admitted to the hospital via EMS for a degloving injury to the left calf d/t ATV accident, resulting in exposed bone and tendon. • S/p two irrigation and debridement procedures with placement of NPWT intraoperatively. NPWT managed by Pediatric General Surgery team. • Plastic Surgery consulted. S/p left lower extremity free flap reconstruction. • Dehiscence noted at flap and donor sites. Wound care plans initiated by Plastic Surgery MD: o Wound care to flap site (left calf), BID and PRN if soiled/saturated: 1. Gently pack gauze soaked with Dakin's solution into all open/dehisced areas. 2. Cover the site with dry gauze. 3. Wrap the calf with rolled gauze. o Wound care to donor site (left anterior thigh), BID and PRN if soiled/saturated: 1. Gently pack gauze soaked with Dakin's solution into all open/dehisced	**[Historical] Aerobic Wound Culture (+) Pseudomonas aeruginosa, Enterobacter cloacae complex** o Completed 14-day course of Cefepime. **Most Recent BMP** • Sodium: 138 mmol/L • Potassium: 4.5 mmol/L • Chloride: 104 mmol/L • CO2: 22 mmol/L • Glucose: 111 mg/dL (↑) • BUN: 20 mg/dL • Creatinine: 0.35 mg/dL • BUN/Creatinine Ratio: 57.1 (↑)

areas.
2. Cover the site with dry gauze.
3. Secure the dressings with an ACE wrap.

- Purulent, malodorous drainage noted from both the donor and flap sites, with patient report of increased pain/tenderness at these sites.
  - Cultures obtained.
  - Infectious Disease team consulted.
  - Systemic antibiotic therapy initiated and completed.
- CWOCN consulted for evaluation and treatment of the donor and flap sites.
- Followed by Pediatric Orthopedic, Plastic Surgery, and Hospitalist teams.

Regular diet for nutrition

Current Medications:

- Gabapentin 300 mg, BID
- Vitamin C 500 mg, daily
- Zinc sulfate 220 mg, daily
- Aspirin 81 mg, daily
- PRN: Zofran 4 mg, q.8h
- PRN: Morphine 2 mg, q.4h

- Calcium: 9.5 mg/dL
- Total Protein: 8.2 g/dL
- Albumin: 3.0 g/dL (↓)
- Bilirubin: 0.2 mg/dL
- ALT: 26 U/L
- AST: 27 U/L
- ALP: 142 U/L

Most Recent CBC

- WBC: 8.1
- RBC: 3.69 (↓)
- Hgb: 9.6 (↓)
- HCT: 30 (↓)
- Platelets: 585 (↑)

Assessment

Donor site (Left Anterior Thigh)

- A moderate amount of serosanguinous drainage is noted.
- Two round, full-thickness open areas of dehiscence are present along the vertical incision.
- The remainder of the incision is approximated with staples in place along the length.
- Superior open area: The wound base is shallow and moist with 75% pink tissue and 25% adherent, tan slough. The wound edges are rolled and closed (epibole). Intact staples are present along the right aspect (from 7 to 10 o'clock). The peri-wound skin is clean, dry, and intact. No peri-wound erythema, induration, or edema is noted.
- Inferior open area: The wound base is shallow and moist with 75% pink tissue and 25% adherent tan slough. The wound edges are rolled and closed (epibole). Intact staples are present along the right aspect (from 7 to 11 o'clock) and the left aspect (from 2 to 5 o'clock). The peri-wound skin is clean, dry, and intact. No peri-wound erythema, induration, or edema is noted.
- Measurements:
  - Superior: 5.5 cm L x 5 cm W x 0.2 cm D
  - Inferior: 6.5 cm L x 4.5 cm W x 0.2 cm D
- Scant bleeding is observed from the open areas with gentle cleansing.

WOC Complex Plan of Care

Flap Site

-
- A
-
-
-
-
-
-
- A at

(Left Calf)

The left lower leg flap has a viable, pink, well-adhered central area with around 90% peripheral dehiscence, revealing 75% moist, pink tissue and 25% loosely adherent, tan slough.

moderate amount of serosanguinous drainage is noted.

The largest area of tissue loss/dehiscence is noted at the distal-lateral flap border.

- Measurement: 14.1 cm L x 4.5 cm W x 3.4 cm D

Intact sutures are noted along the superior aspect of the flap.

The peri-wound skin is clean, dry, intact, and pink, with areas of scar tissue.

The wound edges are primarily unattached.

No areas of undermining or tunneling are appreciated.

Small, scattered scant are noted the exposed the flap. pulse was the doppler using a held Doppler.

areas of bleeding along base of

located stitch hand-

Flap site	**Lateral aspect of the flap**

Patient Behavior

- The patient hides under a blanket when the clinician arrives at the bedside.
- Due to the reported numeric pain level and his tendency to scream/cry out during dressing changes, the patient was appropriately pre-medicated with a PRN dose of morphine.
    - Short breaks are incorporated into the dressing changes to allow the patient time to calm down.
    - The clinician recognizes the patient's bravery and strength and thanks him for allowing her to care for him.
    - The clinician reminds the patient that the discomfort is temporary.
    - The clinician encourages the patient to participate in small aspects of his wound care (e.g. putting on a pair of gloves and opening packets of supplies) [*to help ease the patient's anxiety and allow him to feel a sense of control over the process]*.

Braden Scale

- Sensory Perception: No impairment (4)
- Moisture: Occasionally moist (3)
- Activity: Chairfast (2)
- Mobility: Very limited (2)
- Nutrition: Adequate (3)
- Friction and Shear: Potential Problem (2)

Total: 16 (**Mild risk** of pressure injury development)

Braden QD Scale

- Mobility: Limited (1)
- Sensory Perception: No impairment (0)
- Friction & Sheer: Potential Problem (1)
- Nutrition: Limited (1)
- Tissue Perfusion & Oxygenation: Adequate (0)
- Medical Device: 1 (*right AC PIV)*
- Repositionability/Skin Protection: Potential Problem (1)

Total: 5

Plan/Interventions/Alternatives

Negative Pressure Wound Therapy (NPWT) to left calf:

- Setting: -75 mmHg
- Therapy: Traditional (Black Foam)
- V.A.C.: 3M Ulta™
- V.A.C. Management: Nursing, wound care clinician
- Dressing changes: Twice per week (Tuesday/Friday)
- Change the cannister once per week. Label the cannister with the date when changed.
    - If the V.A.C. alarms:
        - Ensure that there is a proper seal.
            - If an air leak is noted/heard, first check the connection between the tubing. Alternatively, the dressing may need to be reinforced with additional pieces of drape.
    - If bright red, flowing blood is noted in the tubing and cannister, **immediately**:
        - Turn the VAC off
        - Hold pressure to the wound.
        - Notify MD
- **Dressing**:
  Supplies needed: Vashe™ Wound Solution, 4x4 gauze, 3M Cavilon™ No-Sting barrier film, scissors, Mölnlycke™ Mepitel™ Soft Silicone Wound Contact Layer, 3M™ V.A.C.® Black Granufoam™ large dressing, 3M™ V.A.C.® drape, Convatec™ ESENTA Sting Free Adhesive Remover spray
  *V.A.C should be turned off prior to performing a dressing change.
  1. Carefully remove the previous dressing using the adhesive releaser spray.
  2. Cleanse the open areas with Vashe-soaked gauze, applying the gauze as a compress for at least 30 seconds. Gently pat dry.
  3. Dab the peri-wound and flap skin with a barrier film pad. Ensure that all areas where drape will contact the skin are protected with the liquid barrier film.
  4. Cut pieces of Mepitel to fit over the wound bases and over the flap. Gently set in place.
  5. Cut pieces of black foam to fit within the open areas and over the flap. Gently set in place. Ensure that all pieces of black foam are making contact with each other.
  6. Cut and place pieces of drape along the peri-wound skin and over the pieces of black foam.
  7. Cut a small hole within the central portion of the draped foam dressing.
  8. Stick the t.r.a.c pad over the area of exposed black foam.
  9. Connect the t.r.a.c pad tubing to the V.A.C. and turn on.
  10. Confirm an appropriate seal and the correct settings on the V.A.C.

Alternative Dressing for the left calf, daily and PRN if soiled/saturated: *if the V.A.C. continues to alarm after attempts to troubleshoot, if the*

V.A.C. has been off for at least 2 hours, or if NPWT cannot be maintained
Supplies needed: Vashe™ Wound Solution, 4x4 gauze, 3M Cavilon™ No-Sting barrier film pads, Aquacel Ag Advantage™ 8" x 12" sheets, scissors, rolled gauze, 3M™ Medipore™ soft cloth tape, scissors

1. Cleanse the open areas with Vashe-soaked gauze, applying the gauze as a compress for at least 30 seconds. Gently pat dry.
2. Dab the peri-wound and flap skin with a barrier film pad.
3. Cut pieces of Aquacel to fit the into open areas, and loosely pack.
4. Wrap the calf with rolled gauze. Secure the gauze with Medipore tape.

Wound Care to the Left Anterior Thigh, every other day and PRN if soiled/saturated:
Supplies needed: Vashe™ Wound Solution, 4x4 gauze, 3M Cavilon™ No-Sting barrier film pads, Hydrofera Blue Ready™ foam, scissors, McKesson™ Island Dressings 4" x 4"

1. Cleanse the open areas with Vashe-soaked gauze, applying the gauze as a compress for at least 30 seconds. Gently pat dry.
2. Dab the peri-wound skin of each open area with a barrier film pad.
3. Cut and place pieces of Hydrofera onto each open area.
4. Cover each site with an island dressing.

Flap Integrity/Viability

- Keep the left lower extremity elevated using a pillow or Z-Flo fluidized positioner.
- Assess the integrity of the flap with every NPWT dressing change.
- [Per Plastic Surgery team] Prior to placement of a new NPWT dressing, locate the pulse at the doppler stitch site using a hand-held vascular doppler.
- [Per Plastic Surgery team] If the flap tissue appears pale/dusky, elevate the LLE above the level of the heart for 5 minutes.
    - **Promptly** notify Plastic Surgery MD if the flap continues to appear pale/avascular, or if doppler pulse cannot be obtained.

Pain Management/Emotional Support

- Appropriately pre-medicate the patient with a PRN analgesic prior to NPWT dressing changes.
- Implement non-pharmacological pain management techniques during dressing changes:
    - Distraction (playing a video game or with the iPad), guided imagery
    - Listening to soothing music
- Consultation to the child life specialist to assist with distraction/support during dressing changes, as well as to support the patient in coping with his injury.
- Consider a prescription for anti-anxiety medication, and time the administration with scheduled dressing changes.

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Nutrition

- Recommend consultation to registered dietician for evaluation of the patient's nutritional status.
- Recommend initiation of oral nutritional supplementation to assist with tissue healing (Juven™ or Ensure™).

Infection

- Notify MD if signs of infection develop at the donor and/or flap sites, including:
  - Purulent, malodorous drainage (thick consistency; tan or green in color)
  - Peri-wound erythema, induration, and/or edema
  - Localized pain/tenderness
- Notify MD if systemic signs of infection are noted, including:
  - Fever (100.6°F or above)
  - Chills
  - New-onset fatigue, lethargy
  - Increased WBC counts

Pressure Injury Prevention

- Turn/reposition the patient q.2h. Use foam wedges and Z-Flo Fluidized Positioners to help redistribute pressure.
- When sitting in the chair or wheelchair, ensure that a static air seat cushion (regular sized) in place for pressure off-loading.
- Perform head-to-toe skin checks for signs of pressure at least once per shift, per unit policy.
- Utilize Z-Flo Fluidized Positioners to float the patient's heels from the mattress.
- Maintain the head of the bed at 30 degrees.

Evaluation

- The areas of dehiscence become smaller and shallower. Red, shiny, moist granulation tissue is noted within the wound beds.
- Decreased/no non-viable tissue is noted within the wound beds.
- The epibole noted to the donor site open areas resolves.
- The patient remains free of infection, both locally [at the level of the wounds] and systemically.
- The patient remains free of pressure injury development.
- The patient experiences/reports minimal or decreased pain with wound dressing changes.

Rationale

Negative Pressure Wound Therapy (NPWT) to left calf

- NPWT is an advanced wound treatment that is indicated in cases of significant tissue loss and wound dehiscence. This therapy stimulates tissue granulation, absorbs exudate, and facilitates closure of the wound. In general, when selecting an appropriate NPWT setting for pediatric patients, consider the option that is closest to the patient's [average] mean arterial pressure (MAP) values (Lund & Singh, 2022).
- Utilizing a contact layer, such as Mepitel™, can prevent adherence of tissue to the foam dressing and thus minimize pain and discomfort during dressing changes (Lund & Singh, 2022; Wound Source Product Guide, n.d.-c).

Alternative Dressing for the left calf

- Vashe™ Wound Solution is a non-cytotoxic cleansing solution that provides antimicrobial protection of the exposed, healing tissues (Jaszarowski & Murphree, 2022).
- Aquacel™ Ag Advantage™ is an antimicrobial hydrofiber dressing that promotes autolytic debridement of non-viable tissue, has hemostatic properties, and helps maintain an appropriately moist wound bed through absorption of wound exudate (Wound Source Product Guide, n.d.-a).

Wound Care to the Left Anterior Thigh

- Hydrofera Blue Ready™ is an absorptive foam dressing infused with methylene blue and gentian violet. These substances have antibacterial properties and thus can prevent the development of infection (Weir & Schultz, 2022; Wound Source Product Guide, n.d.-b).
- In addition, this dressing can flatten epibole (Weir & Schultz, 2022). As stated previously, epibole describes the presence of rolled, closed wound edges; this phenomenon prohibits cellular migration across the wound bed. Wound edges that support wound healing/closure are attached and open (Ermer-Seltun & Rolstad, 2022).

Flap Integrity/Viability

- Success of the flap placement relies on the viability of the [flap] tissue. Therefore, close monitoring and careful assessment of the flap's integrity are warranted while NPWT is carried out.

Pain Management/Emotional Support

- Unmanaged pain is associated with poor or compromised wound healing.
- Pain can be appropriately mitigated with both non-pharmacologic and pharmacologic interventions (Ermer-Seltun & Rolstad, 2022).

Nutrition

- General tissue management and health rely on adequate nutritional intake and hydration.
- Appropriate dietary intake of macronutrients (protein, fat, and carbohydrates) and micronutrients (especially Vitamins A/E/C, copper, iron, and zinc) is vital in supporting tissue regeneration and wound healing.
- Nutritional support through supplementation or consumption of fortified foods may be warranted for patients who are not meeting their needs through food alone.
- Patients who are not meeting their nutritional needs are at increased risk of pressure injury development (Friedrich et al., 2022).

Infection

- Infection, unfortunately, is a common complication of wound healing that requires prompt intervention with appropriate antimicrobial therapy (Weir & Schultz, 2022).
- The presence of infection can prolong the inflammatory phase of wound healing and result in wound chronicity (Beitz, 2022).

Pressure Injury Prevention

- Standard interventions for pressure injury prevention, as recommended by the National Pressure Injury Advisory Panel, include frequent repositioning, nutritional support, use of pressure redistribution devices/support surfaces, routine skin checks, regular assessment with an evidence-based risk assessment tool, and moisture management (Borchert, 2022).

References

Beitz, J. M. (2022). Wound healing. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 39-55). Wolters Kluwer.

Borchert, K. (2022). Pressure injury prevention: Implementing and maintaining a successful plan and program. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 396-424). Wolters Kluwer.

Ermer-Seltun, J. M., & Rolstad, B. S. (2022). General principles of topical therapy. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 136-156). Wolters Kluwer.

Friedrich, E., Posthauer, M. E., & Dorner, B. (2022). Nutritional strategies for wound management. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management (2nd ed., pp. 116-135). Wolters Kluwer.

Jaszarowski, K., & Murphree, R. W. (2022). Wound cleansing and dressing selection. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 157-171). Wolters Kluwer.

Lund, C., & Singh, C. (2022). Skin and wound care for neonatal and pediatric populations. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 234-256). Wolters Kluwer.

Weir, D., & Schultz, G. (2022). Assessment and management of wound-related infections. In L. L. McNichol, C. R. Ratliff, & S. S. Yates (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Wound management* (2nd ed., pp. 187-213). Wolters Kluwer.

Wound Source Product Guide. (n.d.-a). Aquacel® Ag advantage. *HMP Global Learning Network*. https://www.woundsource.com/product/aquacel-ag-advantage

Wound Source Product Guide. (n.d.-b). Hydrofera blue ready®. *HMP Global Learning Network*. https://www.woundsource.com/product/hydrofera-blue-ready

Wound Source Product Guide. (n.d.-c). Mepitel® soft silicone wound contact layer. *HMP Global Learning Network*. https://www.woundsource.com/product/mepitel-soft-silicone-wound-contact-layer

WOC Complex Plan of Care

Content		Possible Points	Awarded Points	Comments
Summary of Selected Patient	Summarizes pertinent medical and surgical history	2		
Assessment	Describe assessment findings	6		
	List current products and interventions addressing WOC needs reflective of the specialty scope of practice (wound, ostomy, or continence)	6		
	Wound and Continence Case Study Journal: Using the Braden scale, assess for pressure injury risk. **You must submit your completed Braden risk assessment with your care plan.	5		
Planning	Formulate a comprehensive management plan based on the assessment and the specialty (wound, ostomy, or continence) needs. **Wound and Continence Case Study Journal:** Include specific Braden sub-scale scores	12		
	Propose alternative products. Include generic & brand names	4		
Evaluation	Identify plan of care evaluation parameters that demonstrate the desired outcomes	6		
Rationale	Explain the rationale for identified interventions	6		
Scholarly work	Rationales referenced & cited according to APA formatting guidelines	1		
	Proper grammar & punctuation used	1		
	References: See the course syllabus for specific requirements on references for all assignments	1		
	Total Points 80 % or higher is required to pass. Minimum scores: Ostomy: 36/45 Wound and Continence: 40/50			

Additional comments:

Reviewed by: _____ Date: _____