Wound Assessment Procedure

28.01PR

PROCEDURE

Procedures are a series of required steps to complete a task, activity or action

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Purpose:	To define the process for wound assessment, to ensure: • Safety for clients/patients/residents. • Consistency of wound bed assessment. This procedure works in conjunction with: • e-module: Wound Assessment • Guideline: Wound Bed Management for Adults and Children • Documentation Guideline: Wound Assessment &Treatment Flow Sheet (WATFS)

Scope:	• Audience: RNs, LPNs, RPNs, and NPs
	• Environment:
	  ○ Island-wide.
	  ○ All care areas and programs, including acute care, community health services, long-term care services, and ambulatory clinics.
	• Indications:
	  ○ Open measurable wounds, including the wound bed, underlying structures, and peri-wound skin.
	• Not included:
	  ○ Closed surgical incisions.
	  ○ Insertion sites for tubes, lines and drains.
	  ○ Dermal abrasion/excoriation.
	  ○ Injuries without a measurable wound surface, such as stage 1 pressure injuries and moisture associated skin damage (MASD).

Outcomes:	• Wounds will be assessed using standard methods and tools.
	• The characteristics identified during the assessment will inform the:
	  ○ Identification of etiology.
	  ○ Management of the wound bed (treatment plan).
	  ○ Care planning considerations.
	  ○ Healability.
	• Healing outcomes will be identified and addressed if the expected goals are not being met, or are partially met.
	• Clinical signs and symptoms of infection will be identified and addressed.
	
	Note: Prior to any wound cleansing or treatment, healability should be identified, and the intended and unintended outcomes are considered.

A wound assessment is completed as *a part* of a holistic assessment. A holistic assessment consists of a comprehensive client assessment, an assessment of the environmental factors, and the health care system factors.

To maximize consistency, the wound should be assessed and measured with the client in the same position at each assessment and, when possible, by the same clinician.

Frequency of wound assessment:

- A full wound assessment is done (weekly) every 7 days and whenever a significant change occurs (i.e., odour develops, signs and symptoms of infection, wound deterioration); this includes measuring the wound size, taking a wound photograph, and all other assessment parameters.
- A partial wound assessment is done for dressing changes that occur between the weekly assessments; this includes assessing all the wound parameters, but not measuring the wound.
- If there is no noticeable improvement of the wound within 3 weeks, consider a holistic reassessment of the client, consultations with NSWOC/Wound Clinician /Physician /NP, and/or modification to the treatment plan to address any wound bed management concerns.
- If there are signs of infection or deterioration, consider appropriate treatment plan changes and/or consult an NSWOC/Wound Clinician/Physician/NP.

1.0 Supplies and Equipment

- Two to 3 pairs of gloves (non-sterile and/or sterile, as identified based on selected aseptic technique).
- Cleansing solution equipment (selection should be based on cleansing technique selected, which is based on healability and goals of care).
  - Refer to: Procedure: Wound Cleansing, Wound Cleansing e-module, Skin and Wound Cleansers tip sheet.
- Wound measurement tools, such as paper ruler, foam-tipped wound probe with measurements, or sterile wound ruler.
- Wound probe for wounds with undermining, or sinuses/tunnels:
  - Use a foam-tipped flexible wound measurement device unless otherwise indicated by NSWOC/Wound Clinician /Physician/NP order.
  - A blunt-tipped metal probe may be used for wounds requiring a “probe-to-bone test” to identify osteomyelitis.
- Island Health-approved camera or photography device.
  - Procedure: Still Wound Photography (10.2.5 PR)
  - Guideline: Still Photography of Wounds in Community Services (10.2.52 G)
  - Procedure: Photography of Wounds in the Electronic Health Record (16.6.3 PR)
- Dressings supplies as indicated by treatment plan and/or assessment results, including dressing tray, forceps, etc.

2.0 Procedure

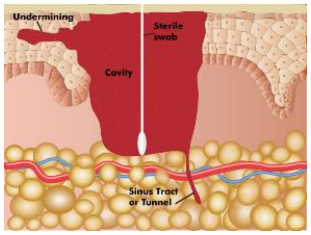
Steps	Key Points and Resources
1) On initial assessment, obtain the history of the wound, including: • Date of wound onset. • Precipitating factors or mechanism of injury. • Previous and current treatments and their effectiveness. • Previous wound occurrences (at same site or other sites).	Provides details to identify etiology and chronicity, and informs treatment planning options.
2) Define location of wound(s). • Define location as specifically as possible using anatomical terms.	Use anatomical descriptions such as medial, lateral, proximal, distal, dorsal, plantar, anterior, posterior, etc.

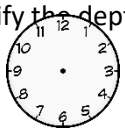
• Assign numbers to wounds, along with related anatomical positions if there is more than one wound present. Number the wounds from head to toe, and proximal from distal when possible. • Indicate wound location on body map (if available within documentation form/platform.)	Use anatomical landmarks such as ischial tuberosity, malleolus, scapula, etc.
3) Facilitate client positioning, which considers: • Client comfort, pain and modesty. • Ability to set up and access supplies while meeting aseptic requirements. • Ability to visualize, assess and access all parts of the wound. • Ability for cleansing solution to access the wound bed and be retrieved. • Time needed to conduct wound assessment and treatment. • Safety and ergonomic considerations of the clinician(s) and persons assisting.	Select a position that can be replicated for subsequent assessments and wound photographs to ensure consistency. Document this in the client record. Consider access to lighting for visualization of the wound bed and photography.
4) Prepare work space and set up supplies using the appropriate aseptic technique.	Aseptic techniques to consider are: sterile; no-touch; or clean.
5) Perform hand hygiene, don clean gloves and remove dressing.	
6) Assess for wound pain.	Resource: • E-Module: Skin and Wound: Assessing and Managing Wound Pain
7) Assess the wound exudate to determine: • Amount/volume • Type • Consistency	The amount of exudate is a subjective estimate based on the quantity of exudate in relation to the size of the wound. • None - Wound tissues are dry. • Scant - Wound tissues are moist, but there is no measurable drainage. • Small - Wound tissues are very moist or wet; the drainage covers less than 25% of the dressing. • Moderate - Wound tissues are wet; the drainage involves more than 25% to 75% of the dressing. • Large /Copious Wound tissues are filled with fluid that involves more than 75% of the dressing.

	Exudate quantity informs the dressing selection choice. For example: need for more absorptive dressing, or a non-adherent contact layer. If wound pouching is used, document the volume of exudate collected. An increase in wound exudate, compared to previous assessments, may be related to increased bacterial burden, irritation, or edema.
8) Cleanse wound and peri-wound and surrounding skin using appropriate solution and technique, based on wound characteristics and selected aseptic technique. **Alert**: Do not cleanse non-healable wounds with dry stable eschar. Refer to: Guideline: Wound Management for Adults and Children.	Cleansing the wound prior to inspection allows the wound bed and peri-wound and surrounding skin to be accurately assessed, and removes any residual odour from the dressing. Resources: • Procedure: Wound Cleansing • e-module: Wound Cleansing • Skin and Wound Cleansers
9) Identify presence of any wound odour after cleansing.	Wound odour may indicate infection.

10) Assess the wound bed to:
• Identify the type of tissue present, such as granulation, slough, eschar, etc.
  ○ Estimate the tissue type or structure by percentage, in increments of 10% (must add up to 100%).
  ○ Estimate the percentage of non-visible wound bed if appropriate.
• Identify any underlying structures, such as tendon, bone, vessel, muscle, nerve and vessels.
• Identify the presence of a foreign body, such as:
  ○ Bone fragments.
  ○ Surgical implements, like sutures, mesh, surgical implants, etc.
  ○ Unintentional debris, like wood, glass, stones, and unintentional maggots.
	Note: If the wound is large, a gloved finger (sterile or unsterile based on the identified aseptic technique) can be used to palpate the wound bed and any non-visible areas.
	Resource:
	• Wound bed structures

11) Assess need for debridement. If required, select the appropriate method based on: • Healability • Wound characteristics, such as type and amount of necrotic tissue. • Scope of practice, and access to resources.	Resources: • Professional Practice: Information for Care Providers • Guideline: Wound Management for Adults and Children • Types of Wound Debridement

Alert: Conservative sharps wound debridement is restricted to NSWOCs/Wound Clinicians, Physicians and NPs. **Alert:** Do not debride dry stable eschar on lower limbs. Refer to: *Guideline: Wound Management for Adults and Children.*	
12) Measure the wound bed: • Measure length by width by depth to the edge of the wound in centimeters (cm). ○ Measure the longest length. ○ Measure the widest width at a right angle to the length.  ○ Identify the deepest part of the visible wound bed and measure from this point straight up (at 90 degrees) to the surface for the skin/wound edge.  	Do not include epithelial tissue at the wound edge in the measurements. Measure the longest length, regardless of the orientation on the body. Consider the shape of the wound as a clue to etiology: • Medical device-related pressure injuries will have a similar shape as the device. • Arterial ulcers are usually round, uniform and appear punched out. • Venous ulcers other have an irregular shape with diffuse edges. • Erythema in a butterfly shape over the coccyx is suspicious for a pressure injury.
13) Assess for any undermining or tunnels/sinuses: • Gently palpate and explore the wound base; when resistance is felt with light pressure do not continue to add force. ○ Use a foam-tipped flexible wound measurement device, unless otherwise indicated. ○ If the wound is large, a gloved finger can be used to palpate the wound bed and any non-visible areas.	LPNs must complete "additional education" prior to assessment or care of non-visible wound beds. **Do not** explore a wound deeper than 15cm (6 inches). Refer to the physician/nurse practitioner (NP) and inform the wound clinician/NSWOC. Further investigation may be required to assess the true depth of the undermining, or to determine if the sinus tract or tunnel extends into a body organ or space (e.g., fistulas). • When using the clock face to identify land marks, the client's head = 12 o'clock, and the client's toes = 6 o'clock.

○ DO NOT probe surgical wounds unless ordered by the surgeon. • Identify areas of undermining and identify the location using the clock face. Using a marker to trace the undermining will support photographic documentation and serial assesments.  • Identify any sinuses/tunnels and identify the depth and location using the clock face. 	• A marker can be used to outline areas of undermining on intact skin.
14) Determine if the wound meets the criteria for a "*probe to bone test*" to identify osteomyelitis. Complete the probe to bone test if risk of osteomyelitis is identified. • Gently palpate the wound bed and into any sinuses using a metal probe, feeling for a hard, gritty texture (of bone). ○ If resistance is felt with light pressure do not continue to add force. • Contact the physician/NP to arrange for further diagnostics and/or treatment protocol if bone is identified in the wound bed.	The probe to bone test is most commonly used in diabetic neuropathic foot ulcers to identify the possibility of osteomyelitis. This test can also be used in other types of wounds that have a possibly of exposed bone, such as pressure injuries and non-diabetic neuropathic foot ulcers.
15) Asses the wound edges to determine if they are: • Open, and able to allow epithelial advancement and wound contraction. • Closed, and require intervention, such as with epibole (rolled wound edges). • Well-defined or diffuse. • Attached to wound edges, or unattached.	
16) Assess the periwound and surrounding skin and consider: • Colour. • Presence of erythema.	Periwound and surrounding skin will provide details about: • Wound bed management • Infection

• Texture/consistency (crepitus, turgor, etc.) • Integrity/condition (lesions, rash, blisters, excoriation, maceration, tolerance of adhesive, etc.) • Temperature. • Presence of edema or induration. • Pain on palpation. • Presence of callous.	• Etiology
17) Assess for wound infection using the clinical signs and symptoms. 18) Obtain wound swab for culture and susceptibility if indicated.	Resources: • Guideline: Assessment, Prevention & Treatment of Wound Infection • Guideline Summary –Wound Infection: Clinical Signs & Symptoms of Wound Infection • Procedure: Culture & Susceptibility (C&S) Swab in Suspected Wound Infection
19) Remove gloves and perform hand hygiene to take wound photo(s) by following Island Health's wound photography procedures for image capture and storage of images.	Resources: • Still Wound Photography (procedure) • Still Photography of Wounds in Community Services (guideline) • Photography of Wounds in the Electronic Health Record (procedure) **Note:** Never use personal cellphones or devices to take wound images of clients/patients/residents.
20) Identify current phase(s) of wound healing: • Hemostasis • Inflammation • Proliferation • Maturation/Remodeling	
21) Preform hand hygiene and don gloves to dress or re-dress the wound, based on the clinical needs, healability, client preference and appropriate aseptic technique. Clean up the work space when completed and perform hand hygiene.	Resources: • Guideline: Wound Management for Adults & Children
22) Document assessment findings and positioning using Island Health's approved tools/forms and electronic platforms.	

3.0 Definitions

- Additional education: "…structured education (e.g., workshop, course or program of study) designed so that licensed practical nurses (LPNs) can attain the competencies required to carry out a specific activity.

Additional education:

- Builds on entry-level LPN competencies
- Includes both theory and application to practice
- Identifies the expected LPN competencies
- Includes an objective, external evaluation of LPN competencies
    - BCCNP LPN Additional Education Resource

- Aseptic Technique: The technique used to limit the transfer of microorganisms from one person to another by minimizing the microbe count and preventing cross contamination. Includes *sterile*, *no-touch*, and *clean* techniques. The decision regarding the appropriate aseptic technique is made based on the client's clinical condition, the wound etiology, the wound location, the invasiveness of the dressing procedure, the goal of care, and agency policy.
    - Sterile technique: The use of sterile gloves, a sterile field, sterile tray, sterile instruments, sterile solution and sterile dressings. Only sterile gloved hands or instruments are used for direct contact with the wound.
    - No-Touch technique: The use of clean gloves and a sterile field, sterile tray, sterile instruments, sterile solution and sterile dressings. Only sterile instruments are used for direct contact with the wound.
    - Clean technique: The use of clean gloves (single client use, non-sterile), a clean field, a clean or sterile dressing tray, clean instruments (single client use), clean solution (single client use) and clean dressings. Clean gloved hands or instruments are used for direct contact with the wound.
- Epibole: A rolled or curled-under wound edge that is closed and cannot support an advancing epithelial edge. This may present with callus, lighter pigmentation and may feel firm or rigid.
- Peri-wound: Two to 4 centimetres beyond the wound edge and/or any skin that is covered by the dressing and influenced by the exudate.
- Probe to bone test: A clinical evaluation to determine risk for osteomyelitis, by identifying exposed bone in a wound bed that may not yet be visible. A blunt metal probe is used to gently palpate the wound bed; bone is identified by coming into contact with a hard, gritty surface. This positive result is highly predicable of osteomyelitis, especially in a diabetic foot injury.
- Tunnel/sinus: Destruction of tissue that tracts beyond the dermal layers and can occur in any part of the wound.
- Undermining: Occurs at wound edges with the destruction of tissue parallel to the surface of the skin.

4.0 Related Island Health Standards

- Procedure: Still Wound Photography (10.2.5PR)
- Guideline: Still Photography of Wounds in Community Services (10.2.52G)
- Procedure: Photography of Wounds in the Electronic Health Record (16.6.3PR)

5.0 Related Provincial Skin and Wound Decision Support Tools (found at: www.clwk.ca)

- Documentation Guideline: Wound Assessment &Treatment Flow Sheet (WATFS)
- Guideline: Wound Management for Adults & Children
- Guideline: Prevention, Assessment & Treatment of Wound Infections
- Guideline Summary: Wound Infection (Clinical Signs and Symptoms of Wound Infection
- Procedure: Culture & Susceptibility (C&S) Swab in Suspected Wound Infection
- Procedure: Wound Cleansing

6.0 References:

- Bates-Jensen, B. (2016). Assessment of the Patient with a Wound. In D. B. Doughty, & L. L. McNichol, in *Ostomy and continence nurses society core curriculum wound management* (pp. 38-68). Philadelphia, Wolters Kluwer.
- Botros, M., Kuhnke, J., Embil, J., Gottl, K., et al (2017) Best Practice Recommendations for the Prevention and Management of Diabetic Foot Ulcers in: Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada.
- Flowers, C., Pilgrim, J., & Carville, K. (2005). Probing the literature: Recommended practice for the use of wound probes. *Primary Intention*, *13*(2), 75-80.
- Lalani, T. & Schmitt, S.K. (2018) Osteomyelitis in adults: Clinical manifestations and diagnosis, in Spelman, D and Baron, E. (Ed.). *UpToDate.* Retrieved December 7, 2018 from www.uptodate.com
- Nix, D. P. (2016) Skin and wound inspection and assessment, in *Acute and Chronic Wounds. 5th edition*. (pp. 109-123), Elsevier.
- Slachta, P.A. (2016). Wound care made incredibly easy! 3rd edition (pp. 34-36). Wolters Kluwer.

7.0 Resources:

- e-Module: Wound Assessment
- e-Module: Wound Cleansing
- e-Module: Skin and Wound: Assessing and Managing Wound Pain
- Practice resource: Skin and Wound Cleansers
- Practice resource: Wound bed structures
- Practice resource: Wound Debridement Techniques
- Website: Professional Practice - Information for Care Providers