

14. Wound Care

14.1 Introduction

Purpose

This section is intended as a guide to assist staff in the best wound management practices and is an addition to the formal documentation of the clinical records.

For the purposes of the section, the term 'wound' is used to describe a variety of conditions where skin integrity is compromised.

Scope

This section is for the use of all nursing staff.

Associated documents

Older Persons Health Specialist Service Manuals

- Volume D – Nursing Standards, Policies and Procedures
- CDHB Volume 12 – Fluid and Medication Management - Entonox Administration
- Nursing Care Plan and Clinical Notes
- Braden Pressure Risk Assessment (OPHSS 0514)
- Mattress Selection Guide
- Carville, K (2007) Wound Care Manual. Western Australia: Silver Chain

Smith & Nephew Wound Care Product Catalogue in the wards and departments.

Resource People

The Wound Care Resource Group is composed of Wound Resource delegates from each area and is the first resource available should assistance be required for a patient's wound.

The Clinical Nurse Specialist – Wound Care is also available and can be contacted via the Telephone Operator.

Smith & Nephew Wound Care Product representative.

Written referral faxed to Nurse Maude for compression bandaging.

Technical advice from Intermed for VAC dressings and mattress hiring – phone 0800 333 444.

Department of Vascular. Endovascular and Transplant Surgery:

It is agreed that this service will provide a weekly, on site service for assessment of inpatients of Older Persons Health Specialist Services at The Princess Margaret Hospital (TPMH).

VASCULAR REGISTRAR:

The Vascular Registrar will be available to travel to TPMH on **Tuesday afternoons**, on an “as needed” basis.

The following process must be followed:

- The requesting team phones the Vascular Registrar prior to 1200MD each Tuesday to discuss the request
- The phone call is followed by a faxed , written Consult form providing appropriate clinical details

The Vascular Registrar is advised of the requesting ward cost centre code to enable transport arrangements (i.e. taxi chit)

Contact Numbers:

VASCULAR REGISTRAR Pager no. 8107 Fax – 80352

14.2 Wound Management Standard

Individual wound management is provided in an environment that optimises the healing process, using knowledge, skills and available resources within an inter-disciplinary team concept.

14.2.1 Forms

Wound Assessment and Treatment Form (OPHSS 0330)

Braden Assessment Tool (Ref: OPHSS 0514)

14.3 Patient Assessment

Factors affecting Wound Healing

Restoring skin integrity is a systemic process that occurs from the inside out. Effective wound management depends on the provision of systemic support.

Objective

To effectively manage wounds, addressing the 3 priorities:

- 1 Individual patient factors affecting wound repair.
- 2 Causative factors.
- 3 Topical therapy (In the context of Wound Management, Topical Therapy is any product that is applied topically to the wound) – remembering that topical therapy cannot compensate for an underlying pathological condition or host deficiency.

14.3.1 Indications of deficiencies in systemic support

Poor Tissue Perfusion

- Anaemia.
- Hypotension.
- Hypoxia.
- Hypovolaemia.
- Poor capillary refill.
- Altered blood glucose levels.
- Immunosuppressed – Neutropenia alone will not significantly impair wound healing but because of increased risk of infection care must be taken in wound prevention and management.
- Aged patients – often more susceptible to injury and less able to heal.
- Corticosteroids – steroids are known to inhibit epithelial proliferation and to exert powerful anti-inflammatory effects.

Poor Nutrition

- Body weight
- Alcoholism
- Dehydration

- Oedema
- Anorexia
- Dry skin
- Sparse hair
- Lethargy
- Protein, vitamin and mineral deficiencies

Systemic Infections

- Fever
- Malaise
- Pallor
- Altered vital signs
- Altered mental status
- Diminished urine output
- Leucocytosis

(Blood, wound, urinary and sputum cultures must be taken to establish the cause of infection and systemic antibiotic therapy.)

14.3.2 Conditions affecting wound healing

- Contenance Status
- Diabetes
- Respiratory Disease
- Peripheral Vascular Disease
- Renal and Hepatic Disease
- Malignancy
- Haematopoietic abnormalities
- Malnutrition
- Medication

Any systemic condition that adversely affects health status can negatively affect wound healing.

Intervention for compromised pulmonary or cardiovascular function must be treated as indicated.

14.4 The Healing Process

Wound healing consists of three stages:

- Inflammatory Stage (0-6 days)
- Proliferative Stage (3-24 days)
- Maturation Stage (3weeks – 2years)

These time factors may vary according to the nature, severity and type of wound.

14.4.1 Inflammatory Stage

The Inflammatory Stage begins with the defensive reaction when the tissue is disrupted by a wound. Vasoconstriction, platelet plug formation and blood coagulation occur to protect from excessive blood loss and exposure to bacterial contamination. This is followed by a destructive reaction where vasodilatation increases oxygen and nutrients to the damaged tissue and mobilisation of white blood cells to ingest bacteria and tissue debris. When dead tissue and infection is cleared the inflammatory stage will subside. If not, the prolonged inflammatory phase will delay healing.

14.4.2 Proliferation Stage

Fibrin in the clot breaks down and is replaced by granulating tissue composed of fibroblasts and collagen. This tissue is very fragile. Wound contraction occurs, reducing the wound area. Epithelial cells at the basal layer begin to degenerate, migrating towards the wound surface.

Re-epithelialisation will not occur over unhealthy tissue where dirt, foreign bodies or contaminated areas exist. Epithelialisation occurs only over living tissue, thus, in the presence of dehydrated eschar, new cells will burrow deeper towards moist tissue, resulting in a deeper scar. Epithelialisation occurs three times faster in a warm, moist environment.

14.4.3 Maturation Stage

This stage may last for weeks, months or years, depending on the wound. This is the time when the newly formed scar tissue strengthens vascularity decreases and the scar begins to flatten out.

14.5 Principles of Wound Management

The restoration of skin integrity is a systemic process that occurs from the inside out.

Objective

The aim of wound management is to promote progressive healing of tissue.

Effective wound management depends on:

- Elimination or control of causative factors.
- Provision of systemic support.
- Implementation of appropriate topical therapy.

Assessment prior to implementing a Wound Management Plan should include:

- Causative factors.
- Systemic factors.
- Local (wound environment) factors.

14.6 Wound Assessment and Documentation

Objective

- To make an accurate assessment of the wound by assessing the patient as a whole, the immediate cause of the wound and any underlying pathophysiology and to identify any factors that may delay healing.
- To recognise the healing process by identifying healthy granulation tissue and epithelialisation.

Associated Documents

Wound Assessment and Treatment Sheet (OPHSS 0330)

Braden Pressure Risk Assessment (OPHSS 0514)

Mattress Selection Guide

Nursing Care Plan and Clinical Notes

Carville, K (2007) Wound Care Manual. Western Australia: Sliver Chain

Complete Nursing Initial Assessment

Step	Action
Assess the wound and document the following significant details on the Wound Assessment and Treatment Sheet	
1.	Duration of the wound.
2.	Likely aetiology (differential diagnosis).
3.	Wound description (does it look unusual?).
4.	Site of wound (draw diagram).
5.	Size of wound (maximum length and width/tracing). Attach tracing to Wound Assessment Sheet.using Vitatrak
6.	Depth (superficial or deep)
7.	Exudate (light, moderate, heavy)
8.	Infection (odour, purulence or cellulitis; signs of inflammation; pain). Note: Some dressings generate their own exudate and odour.

Step	Action								
9.	<p>Colour classification (eg. stages of healing)</p> <table border="0"> <tr> <td>Black</td> <td>Necrotic</td> </tr> <tr> <td>Yellow</td> <td>Sloughy</td> </tr> <tr> <td>Red</td> <td>Granulating</td> </tr> <tr> <td>Pink</td> <td>Epithelialising</td> </tr> </table> <p>Treat the most severely affected area first (Black > yellow > red > pink). Due to the complicated nature of wounds, minor limitations to this classification can occur.</p>	Black	Necrotic	Yellow	Sloughy	Red	Granulating	Pink	Epithelialising
Black	Necrotic								
Yellow	Sloughy								
Red	Granulating								
Pink	Epithelialising								
10.	<p>Condition of surrounding skin (wet/dry/eczema). Note: If eczema is present elsewhere on the body the patient should be considered for referral to the Dermatology Clinic for patch testing as up to 25% of patients may be allergic to part of their current treatment.</p>								
11.	<p>Pain management</p>								
12.	<p>Haematoma formation – assessment for surgically closed wounds</p> <ul style="list-style-type: none"> • Tense wound • Red or bluish discolouration of skin • Pain • Bleeding (abnormal amount) 								

Note:

- 1 Know the difference between:

Clinically Infected Wounds (eg.

- cellulitis is present –
- pain,
- redness,
- swelling,
- heat,
- systemic temperature,
- uncharacteristic odour and
- purulent exudate)

and

Colonised Wounds (eg. organisms present in wound – often patient’s own flora) – small numbers with no “host” reaction.

Clinically infected wounds should be treated with systemic antibiotics as prescribed by medical staff.

- 2 Surgical Wounds – Also look for the presence of haematoma formation in assessing surgically closed wounds and, if present, document this in the patient’s record.

Signs/symptoms of haematoma include:

- Bleeding through dressing.
- Tense wound.
- Dark red or bluish discolouration of skin.
- Pain

14.7 Creating an Ideal Environment for Wound Healing

14.7.1 Wound Cleansing

Sterile Normal Saline is considered the solution of choice. When cleansing a wound, solutions should be warmed to body temperature to prevent the wound cooling. If the wound is cooled, the body takes several hours to raise it back to temperature causing a slowing in the wound healing process.

Sterile Normal Saline can be delivered in a variety of ways, e.g.

- bottled for irrigation
- small ampoules
- compressed canisters

Most other solutions are detrimental to the wound healing process, causing slowing of healing, or toxic effects such as interrupting the formation of fibroblasts.

Tap water in combination with a medisponge can be used for the cleansing of some wounds such as leg ulcers and burns without detrimental effects as long as the wound is dressed immediately afterwards and the wound is wrapped in gladwrap for the journey from bathroom to dressing station. This can have a positive psychological effect for the patients who may have been unable to wash themselves properly for some time.

Bathing is not recommended as water is absorbed into chronic wounds and very heavy exudate will occur for the next 2-3 days.

14.7.2 Topical Therapy

Topical therapy creates a local wound environment that supports and facilitates the repair process by:

- Removing necrotic tissue and slough.
- Identifying and eliminating infection.
- Obliterating dead space.
- Absorbing excess exudate.
- Maintaining a moist wound surface.
- Providing thermal insulation.
- Protection of the healing wound.

Debridement and the Removal of Necrotic Tissue and Slough

The presence of necrotic tissue and excess slough at a wound site delays healing and increases the risk of clinical infection developing. The risk of wound infection rises in proportion to the amount of necrotic tissue present in the wound.

The goal for any necrotic wound is the timely debridement of the eschar. This removes the source of infection by eliminating the culture medium and also eliminates a physical obstacle to epithelisation and contraction.

Surgical debridement under a general or local anaesthetic is the most rapid method of obtaining a clean wound bed. It may not, however, be appropriate for elderly or debilitated patients.

Other conservative forms of debridement can be used, these are:

1. Autolytic debridement. This may occur naturally and can be enhanced with the use of Hydrogels, hydrocolloids. The surrounding skin must be protected from maceration with the use of barrier wipes.
2. Sharp conservative debridement should only be carried out by a Registered Nurse with advanced wound care knowledge and with the support of the Clinical Nurse Specialist for Wound Management.

Hard black or brown necrotic tissue should be re-hydrated and conditions created that favour the body's natural debriding processes. A Hydrogel or similar debriding agent should be used.

Slough is dead tissue caused by injury or inflammation spreading from healthy tissue, which detaches leaving a granulating surface and can be removed using the above methods of debridement.

Contraindications:

- Lack of expertise in the procedure (Sibbald et al 2000)
- Non-healing ulcer from insufficient vascular supply
- Cellulitis
- Patient – medically unfit
- Anticoagulants

Advantages:

- Most rapid and effective form of debridement
- Improves local wound perfusion

Identifying and Eliminating Infection

The presence of wound exudate is not always a clear indication that a wound has become infected. The isolation of bacteria alone from a patient's wound is not always sufficient evidence on which to diagnose a wound infection.

Most chronic open wounds are heavily colonised by microorganisms that do not appear to delay the healing process. It is therefore only necessary to take a wound swab to identify microorganisms and to determine their antibiotic sensitivity if a wound is showing the clinical signs and symptoms of infection such as:

- Cellulitis is present
- Pain
- redness
- Swelling,
- Heat
- Systemic temperature
- Uncharacteristic odour and
- Purulent exudate
- Systemic temperature

The signs of wound infection described above may not be seen in the very young and the very elderly due to an immature or impaired immune system.

Note: In the elderly, the first evidence of infection may be generalised septicaemia accompanied perhaps by a subnormal temperature.

Wound Screening

When a wound exhibits clinical signs of infection, a surface sample can be taken to determine:

- the pathogen causing the infection
- appropriate antibiotic therapy
- appropriate management of the wound and patient

Surface Sample Technique

Step	Action
1.	Clean the wound. Collect the sample after the wound has been cleansed. Cleaning will remove irrelevant debris and wound dressing products. A sample from a cleansed wound will show the micro-organisms in the wound bed.
2.	Zigzag swab across the wound whilst rotating the swab between your fingers.

Aspiration

An aspirate of pus is more useful to determine the pathogen causing the infection.

Obliterating Dead Space

The term “dead space” refers to areas of tissue destruction underlying intact surfaces such as a sinus tract formation. Such areas provide a fluid medium for bacterial growth and can contribute to abscess formation. If the wound is granulating and contracting, sinus tracts also pose the risk of superficial wound closure over a fluid filled defect.

The “dead space” should be obliterated by light packing.

Absorbing Excess Exudate

Normal Exudate

An increase in permeability of small vessels occurs following injury, which allows leakage of a protein rich fluid. As a result, an inflammatory exudate is formed on the wound surface. It will be greatest where the tissues are oedematous or the inflammation intense. Exudate forms an important part of the wound's defence system as it contains proteins, including antibodies.

A healing wound produces decreasing amounts of exudate until epithelialisation is complete. Seen as a yellow stain on the dressing, it is a normal part of the healing process.

Excess Exudate

There is a delicate balance between the need for a moist wound environment and the need to remove excess exudate that can result in sloughing tissue. Exotoxin and cell debris present in the exudate retards healing by perpetuating the inflammatory response.

Large amounts of exudate can macerate surrounding skin and dilute the wound healing factors and nutrients at the wound surface. In addition, bacterial toxins in the exudate may inhibit the wound repair process.

The correct wound care dressing depends on the amount of exudate.

Maintaining a Moist Wound Surface

Moisture helps wounds heal. A moist wound/dressing environment facilitates recruitment of vital host defence and the necessary cell population, such as the macrophage that helps promote wound healing. An added benefit of moist wounds is decreased pain at rest, during ambulation and during dressing changes.

The use of moisture retentive dressings (eg. dressings capable of maintaining a warm, moist environment) has been shown to provide an optimal environment that accelerates healing and promotes tissue growth.

Applying the Appropriate Topical Therapy

There is no one ideal dressing for all wounds. A decision about wound management follows a thorough assessment of the patient and wound using the guidelines and the experience available.

Note: To promote wound healing, dressing changes should be minimised. Check rationale for frequency of dressing changes.

14.7.3 Types of Dressings

Refer to manufacturer's sheet for indication for use and contraindications, located in the Assessment room on Ground Floor of TPMH, opposite the ambulance bay.

Film Membrane e.g. Op Site, Flexigrid

Description

- Sterile, thin, semi-permeable, hypoallergenic, adhesive coated films.
- Variably transparent, depending on product.

May cling to itself during application – needs skill to apply.

Indications for Use

- Suitable for relatively shallow wounds.
- Used prophylactically to prevent pressure sores (minimises friction), retention dressings e.g. for cannulas and in theatres for operative surgery and to hold other dressings in place.

Contraindications

- Excessive exudate may accumulate under dressing.
- May be some adhesive trauma on removal, especially on inflamed and fragile skin.
- Extreme care should be exercised when using with elderly patients.

Hydrogels e.g. Intra-site gel/Duoderm gel, Solosite

Description

- Sterile gel, high water content.
- Secondary dressing required e.g. film membrane.
- Gel can be introduced into a small sinus via a quill.
- Removal is facilitated by irrigation with warmed saline.

Indications for Use

- All wound healing from debridement to protection of granulation tissue.
- Absorbs excess exudate and produces a moist environment.
- Causes reduction in pain for the patient.

- Promotes autolysis and softening of dry eschar.
- Re-hydrates the wound and debrides slough.
- Alternative choice to chlorinated solutions.

Hydrocolloids e.g. Comfeel/Duoderm, etc.

Description

- Requires no secondary dressing.
- Waterproof – patient can shower.
- Easy to use, comfortable and removable without causing trauma.

Indications for Use

- Dressings promote formation of granulation tissue and provide pain relief by keeping nerve endings moist.
- Suitable for de-sloughing and for light to medium exudate.
- Initially dressings may need changing daily. Once exudate has diminished, dressings may be left in place for up to 7 days. Heavy exudate leads to frequent changes of dressing due to leakage.

Contraindications

Dressings are “interactive” in contact with wound exudate.

May release degradation products from dressing into the wound.

Infected or heavily exuding wounds.

Alginates e.g. Algisite M, Seasorb, Kaltostat

Description

- Manufactured from various seaweeds.

Indications for Use

- Highly absorbent. Most appropriate for medium to heavily exuding wounds, venous leg ulcers, pressure sores, fungating wounds, infected wounds.
- Choose a dressing slightly larger than the wound. Do not cut down to the actual size of the wound – the periphery should be dressed.

Contraindications

- Not suitable for dry wounds.

Foams – Hydrophilic, polyurethane dressings e.g. Allevyn pad, Allevyn Ag

Description

- Highly absorbent.
- Seal edges with film.
- Allevyn Ag provides bacterial efficacy against a broad spectrum of gram positive, gram negative, yeasts, anaerobes and resistant bacteria including MRSA

Contraindications

- Adherence to the wound bed if used on too lightly exudating wounds.
- Moderate to heavily exudating wounds.
- Primary or secondary dressings infected or non infected wounds.

Foam Cavity Wound Dressing e.g. Allevyn Cavity

Description

- Hydrophilic polyurethane foam ‘chips’ held together by a low adherent perforated film.
- Available in circular and tubular sizes.
- Highly absorbent.
- Easy to apply.
- Requires a secondary dressing e.g. foam sheet, film membrane.

Indications for Use

- Large, deep, cavity wounds, e.g. pressure sores, surgical incisions, Pilonidal sinuses.
- Comfortable causes no trauma on removal.
- Can be left in situ approximately 3-4 days depending on volume of exudate.

Hydrofibre (Aquacel) Aquacel Ag

Description

- Highly absorbent.
- Requires secondary dressing.
- Aquacel Ag provides bacterial efficacy against a broad spectrum of gram positive, gram negative, yeasts, anaerobes and resistant bacteria including MRSA

Indications for Use

- Moderate-heavy exudating wounds.

Contraindications

- Not suitable for dry wounds.

1 Carbonet

Description

- Requires primary dressing.

Indications for Use

- Malodorous wounds.
- Once carbon is struck through it is inactivated.

2 Carboflex

Description

- Multi-layered dressing alginate/hydrofibre/carbon.

Indications for Use

- Moderate exuding wounds that are malodorous.
- Once strike through occurs it is inactivated.

Medicated Gels

Metronidazole Gel

Description

- Requires secondary dressing.
- Apply daily for 5-7 days.

Indications for Use

- Must be prescribed – only for use with known anaerobic infections.

Large Wound Drainage Bags

Description

- For a very heavily exuding wound unable to be controlled by daily or BD absorptive dressing.

Low Adherent – Melolin

Description

- Low adhesive absorbent pad.
- Requires secondary dressing e.g. film or adhesive tape.

Indications for Use

- Light exudating wounds.

Exudry

Description

- Anti-shear layer requires a 2 dressing.

Indications for Use

- Very high exudating wounds.
- Reduces the risk of maceration to the surrounding tissue.

Iodosorb

Description

- Progressively releases iodine-killing micro-organisms.
- Absorbs fluids and forms a protective gel.
- Requires secondary dressing e.g. film.

Indications for Use

- Infected exudating wounds.
- Change dressing when saturated with fluid and colour lost.

Contraindications

- Iodine is absorbed systemically. Should not be used on patients with known or suspected sensitivity to iodine or patients with a past history of thyroid disorder.

Inadine

Description

- Povidone-iodine, non adherent dressing

Indications for Use:

- Indicated for prophylaxis and treatment of infection in minor burns, leg ulcers, superficial skin loss injuries and as a dressing for adjunctive therapy in the treatment of infected ulcerative wounds

Contraindications:

- Inadine should not be used on patients who are sensitive to iodine or povidone-iodine

Acticoat/Acticoat 7

Description

- Silver dressings consist of layers of rayon inner core sandwiched between layers of silver coated, low adherent polythene net.

Indications for Use

- Prevents and reduces infection.
- Remains effective up to 3-7 days.
- Use for pressure areas, venous ulcers, diabetic ulcers and burns.

Contraindications

- Do not use on patients with a known sensitivity to silver.
- Do not use on patients undergoing MRI.

Adhesive Tape/Dressings

Description

- Dressings to be removed with remove wipes.
- Before applying an adhesive dressing wipe the skin clean with skin- prep barrier wipes and allow to dry.

Indications for Use

- Protection provides moist wound environment.

Contraindications

- Frail skin/high to moderate exudating wounds.

Skin care

Remove

- Gentle, effective adhesive remover to assist the removal of dressings and tapes.
- Do not apply directly to wound surface.

Skin Prep

- Preparation that cleans, disinfects, protects and improves adhesion of dressings.
- Apply to skin around the wound taking care not to touch the wound surface.
- Wait to dry prior to applying dressing.

14.8 Negative Pressure Dressings

14.8.1 Vacuum Assisted Closure (VAC)

Objective

To ensure the VAC/ dressing is applied safely by approved personnel

Rationale

Decision to apply negative pressure dressings requires consultation with Medical Staff, Clinical Nurse Specialist – Wound Care

Resource People

Refer to External Contractor for VAC dressings, OPHSS Clinical Nurse Specialist – Wound Care

Scope

Registered Nurses.

Enrolled Nurse/Nurse Assistant under the direction of a Registered Nurse.

Associated documents

CDHB Policy & Procedure Manual, Volume 10 – Infection Control
Hand washing
Wound Assessment and Treatment form
Patient Care Plan and Clinical Notes

Equipment

- Dressing trolley with rubbish bag attached.
- Sterile dressing pack
- Sterile Normal Saline – amount will depend upon wound size (30-100mL).
- Non-sterile gloves
- Sterile gloves
- 20mL syringe
- pairs of sterile scissors

- Sterile forceps preferably toothed for debridement (optional).
- Foam and film (small, medium or large) dependent on wound size.
- VAC canister
- VAC/
- “Convacare” or “Skin Prep” barrier wipes
- Thin Hydrocolloid to “picture frame” wound

Procedure

Step	Action	Rationale
1.	Apply dressing on the documented instruction of medical staff/Wound Care Consultant	
2.	Explain the procedure to the patient.	To ease patient anxiety and gain their co-operation.
3.	Administer prescribed analgesia.	When suction is initially applied it can be uncomfortable.
4.	Assemble the equipment on a trolley.	
5.	Social handwash	To maintain standard precautions. Refer to OPHSS manual Volume I – Infection Control.
6.	Set up the equipment on the trolley, using a “no touch technique”. Warm the normal saline (warmed to skin temperature by placing the saline ampoules in a bowl of hot tap water for 10 minutes prior to setting up dressing pack).	To maintain a sterile field. Warm saline reduces temperature loss and inhibition of fibroblasts to function.
7.	Place an incontinent sheet and the the paper dressing drape out of the dressing pack under the wound area to be dressed.	Provides a barrier between the patient and the bedding
8.	Place on non-sterile gloves to remove previous dressing if required. Dispose of the old dressing and the non-sterile gloves in the rubbish bag.	Refer: Procedure for Removal of VAC, and Negative Pressure Dressings.

Step	Action	Rationale
9.	Inspect the wound, assessing the following: <ul style="list-style-type: none"> • Wound bed – appearance, tissue type • Peri wound skin condition • Odour – present 	To monitor/record progress of wound Optimise peri wound Monitor for infection
10.	Procedural hand wash.	To maintain standard precautions.
11.	Don sterile gloves.	
12.	Using the syringe draw up warmed normal saline and irrigate the wound.	
13.	Remove excess saline from wound with the syringe and dry surrounding skin with sterile gauze.	
14.	Remove any loose or non-adherent slough with sterile blade and sterile forceps.	
15.	Wipe the “barrier wipes” around the periwound tissue.	To prevent trauma to the skin through repeated removal of the film seal.
16.	Apply a thin hydrocolloid around wound edges before application of the foam.	To avoid foam on periwound skin
17.	Using the second pair of sterile scissors, cut foam to the shape of the wound (this piece should fit within the wound and not overlap the edges).	
18.	Check whether the rubber disc of the connector extends beyond the wound edges. If so:	To prevent trauma to the periwound tissue.
		To protect the skin from the foam and connector.
19	Cut another piece of foam big enough to protect disc surface and place on top of first piece of foam (IT MUST NOT OVERLAP THE HYDROCOLLOID)	To prevent pressure and blistering from the disc on the skin.
20	Apply film with NO tension and wide margins. Secure by removing each section as labelled.	Tension will cause blistering to surrounding tissue when the vacuum is applied

Step	Action	Rationale
21.	Cut a hole in film where connector disc will be placed	
22	Remove the outer support layer and coloured edges	
23	Remove gloves and dispose in rubbish bag	
24	Clamp tubing, connect the tube from the foam on the patient and the tube from the canister together	
25.	Lock canister into machine	
26.	Turn the machine on.	
27.	Unclamp tubes.	
If continuing previous settings		
28.	Warn the patient for whom this is a change of dressing that the vacuum is commencing and may be uncomfortable.	
29.	Adjust intensity setting if pt finds too painful Press “therapy on”	
If new patient at commencement of therapy		
30.	Press arrow on the machine for “New” and it will go through the menu.	
31.	VAC Target will be set to appropriate level by the External contractor (normally 75-125mmhg) set at.	
32.	Press “OPTIONS” pad it will display “Continuous” or “Intermittent” therapy –whichever is flashing is the current setting. Push “Other” option arrow on the machine to change.	

Step	Action	Rationale
33.	<p>Press “OPTIONS” pad and it will display: “Reset timer” to (0) by pushing the arrow indicated on the machine.</p> <p>Continuous therapy always for first 48 hours of commencement of VAC therapy, then intermittent –if tolerated by the patient and no undermining of tissue, otherwise continue on “Continuous”.</p>	
34.	<p>Press “OPTIONS” pad only at the onset of treatment and display: “Configuration done” will appear, then “therapy off”</p>	
35.	<p>Warn the patient, the vacuum is about to be activated</p>	<p>Activation of the vacuum can cause pain/discomfort.</p> <p>When the Vacuum is working the foam compresses</p>
36.	<p>Press “therapy on”</p>	
37.	<p>Dispose of equipment, placing rubbish into biohazard rubbish bag.</p>	
38.	<p>Social hand wash</p>	
39.	<p>Document the following on Wound Assessment and Treatment Sheet and Patient Care Plan</p> <ul style="list-style-type: none"> • Wound bed – appearance, tissue type • Peri wound skin condition • Odour – present • Date of the next change of dressing <p>As a guideline, dressings are changed:</p> <ul style="list-style-type: none"> • 12 – 24 hours – if wound is infected • 48 hours – 1st dressing after application <p>then</p> <ul style="list-style-type: none"> • Dressings changed Mondays, Wednesdays and Fridays. 	

Step	Action	Rationale
40.	Document the following in the patient's clinical notes and wound assessment and treatment form: <ul style="list-style-type: none"><li data-bbox="261 383 719 421">• Pressure setting (eg 125mmHg)<li data-bbox="261 439 719 510">• Type of therapy (eg Continuous or Intermittent)	

14.8.2 Removal of all forms of Negative Dressings

Objective

To ensure the removal of a negative pressure dressing is undertaken safely by approved personnel.

Rationale

External provider is available for consultation for appropriate removal.

Scope

- Registered Nurses.
- Enrolled Nurse/Nurse Assistant under direction of a Registered Nurse

Associated documents

CDHB Volume 10- Infection Control

Equipment

- Dressing trolley with rubbish bag attached.
- Non-sterile gloves
- Plastic apron
- Adhesive remover wipes
- Sterile Normal Saline, volume dependent on wound size (30-100mL).

Procedure

Step	Action	Rationale
1.	<p>Change of dressing will be determined by:</p> <ul style="list-style-type: none"> • the type of foam used • the wound bed tissue • how quickly the granulation tissue forms and whether it is growing into the foam <p>Removal of the negative pressure dressing will be anywhere from 12-72 hours.</p> <p>This decision is usually made by the person applying the dressing, CNM and/or Medical Staff and the requirement will be documented in the clinical notes.</p> <p>As a guideline, dressings are changed:</p> <ul style="list-style-type: none"> • 12 – 24 hours – if wound is infected • 48 hours – 1st dressing after application • 72 hours if granulation tissue is not growing into foam or using denser foam. 	
2.	Explain the procedure to the patient.	To ease the patient anxiety and gain co-operation.
3.	Administer prescribed analgesia.	Removal of the foam may be painful.

Step	Action	Rationale
4.	<p>If the foam was adhered at the last dressing change as ascertained from the documentation in the patient's clinical record.</p> <ul style="list-style-type: none"> • Turn off the vacuum 30 mins prior to removal • Clamp off the suction or turn off the machine • Social handwash • Inject down the tubing inserted into the foam, or into the foam itself 20 – 30mL of sterile saline, warmed to skin temperature by placing the ampoules in a bowl of hot water while preparing the trolley for approx 10 minutes 	<p>This releases suction of foam and reduces adherence to the wound bed</p> <p>To aid removal of foam.</p>
5.	Place an incontinent sheet and the paper dressing drape out of the dressing pack under the wound area to be dressed.	Provides a barrier between the patient and the bedding
6.	Don non sterile gloves.	
7.	Ease the film off (use adhesive removal wipes) and discard in rubbish bag.	To reduce trauma to peri wound skin.
8.	Remove foam and discard in rubbish bag.	
9.	<p>Assess peri wound skin for signs of pressure from foam or tubing</p> <p>Document in the clinical notes any red areas, or signs of foam or tubing impression on the periwound skin. Cover areas with thin Hydrocolloid and alter the position on the wound where the tubing exits the wound</p> <p>If there are signs of necrosis then contact the medical staff.</p>	
10.	<p>Inspect the wound, assessing the following:</p> <ul style="list-style-type: none"> • Wound bed – appearance, tissue type • Peri wound skin condition • Odour – present 	

Step	Action	Rationale
11.	Remove gloves and discard in rubbish bag.	
12.	Social handwash.	
13.	Apply new negative pressure dressing or ordered alternative. Refer to application procedure.	
14.	Wipe the machine with a sodium hypochlorite solution to remove any body fluid splashes. Do not clean with phenol solution (eg. Prephen)	To minimise the risk of cross infection. Phenol damages plastic
15.	Document on the Wound Assessment and Treatment Sheet: <ul style="list-style-type: none"> • Wound bed – appearance, tissue type • Condition of periwound skin • Dressing product applied 	
16.	This procedure is usually performed in conjunction with the reapplication of a VAC or negative Pressure dressing. However, if the therapy is being discontinued then document in the patient's clinical record the reason for discontinuing therapy and who made the decision.	

14.8.3 Hiring of a VAC

Objective

To document the procedure to hire a Vac machine from contracted provider.

Conditions of Hire

After Hours a VAC machine should not need to be hired. An interim dressing can be applied (eg cavity foam or alginate rope to control exudates) for a maximum of 24 hours until a machine can be acquired.

Approval for hire must be obtained from Charge Nurse Manager

The contracted provider may be unable to provide a machine for 24-48 hours due to demand.

Scope

Charge Nurse Manager (CNM)

Associated documents

CDHB Supply Department Internal Requisition form. (QB00300)

Procedure

Step	Action	Rationale
1.	Following consultation with patient, nursing and medical staff document therapy decision in clinical records.	
2.	Obtain authorisation from the Charge Nurse Manager	
3.	Complete an internal requisition form clearly stating machine and equipment required, patient's name, ward and cost centre number. CNM to sign form.	Essential for record of payment
4.	The foam (depending on size) and canisters may be available from the Wound Product Cupboard or the equipment can be ordered from Supply Department.	

Step	Action	Rationale
5.	<p>Fax the internal requisition form to Supply Department.</p> <p>Staple original form to the patient's wound care assessment and treatment sheet.</p> <p>Ring Supply Dept for a purchase order number.</p>	
6.	<p>Ring contracted provider and organise delivery by phoning 0800 333 444 or 021 441122 and ask for Christchurch Rep.</p> <p>They will require the purchase order number.</p>	

14.8.4 To Return a Hired VAC

Objective

To document the procedure to return a VAC/Mini VAC machine hired from contracted provider

Scope

- Registered Nurse
- Enrolled/Student Nurse under the supervision of a Registered Nurse.
- Ward Clerk under the supervision of a Registered Nurse.

Associated documents

Delivery Note (note date & time of return)
Original CDHB Supply Department Internal requisition form (QB00300)

Equipment

Hired VAC/

Procedure

Step	Action	Rationale
1	Document the decision to discontinue therapy in the patient's clinical record. An entry made by a Ward Clerk is to be countersigned by an RN.	
2	Give an explanation to the patient.	
3	Remove machine from patient. Refer to procedure for removal.	
4	Dispose of disposables (eg. tubing, foam and canister) by closing clamps and placing in yellow plastic rubbish receptacles	

Step	Action	Rationale
5	Wipe the machine with a sodium hypochlorite solution to remove any body fluid splashes.	To minimise the risk of cross infection.
6	Note date and time of return on delivery note.	
7	Document on the Assessment and Treatment form the date therapy discontinued.	
8	Ring external contractor to organise for the machine to be picked up by phoning 0800 333 444 or 021 441 122 and ask for Christchurch Rep.	For their records.
9	Return intact VAC dressing products to the wound care cupboard.	

14.9 Pain Management

Pain is a very individual experience. To try and define pain in terms of another person's perception is both inaccurate and inappropriate. "Pain is whatever the experiencing person says it is, existing wherever they say it does" (McCaffery, 1979). Therefore, the implication is that the person is believed. This encompasses verbal and non-verbal expressions of pain.

Nursing actions should be designed to enhance the patient's opportunity to make decisions and/or to actively participate in and feel more in control of a situation.

For example:

An adult should be given the choice of having a support person with them. Privacy and screening is applicable for all procedures. In all situations the patient should be prepared emotionally by ensuring adequate information is given prior to the procedure and by offering timely pain relief that is appropriate.

14.9.1 Pain Management Considerations

CDHB Volume 12 – Fluid and Medication Management Manual
Nursing Initial Assessment Form

Entonox Gas

- As prescribed by the medical staff
- Useful for change of dressings and orthopaedic injuries.
- May be used effectively in adults.

Morphine Sulphate

- IV increments as prescribed.
- Weight of patient and allergy record must be established.

Paracetamol Elixir / Codeine Elixir

- As prescribed by medical staff.
- Given one hour prior to the procedure.

Phenergan

- IM or oral are the preferred methods of treatment.
- Useful where there has been an allergic type response.

14.10 Types and Nature of Wounds

14.10.1 Mechanical Damage

This is created by those forces that are applied externally to the skin. Each may occur in isolation or in combination with other mechanical injuries.

Pressure Wounds

Pressure is the most familiar form of mechanical damage. Pressure ulcers most commonly occur over a bony prominence such as the trochanter, sacrum or calcaneus. The tissue damage associated with a pressure ulcer is greatest at the bone-tissue interface, therefore these wounds extend typically into the subcutaneous tissue or deeper (eg. muscle, tendon or bone). Necrotic tissue will be presented initially.

Figure 5: Wound Care – On the back

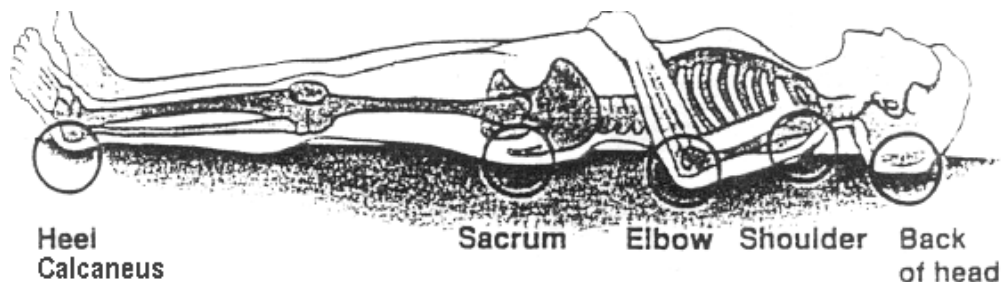


Figure 6: Wound Care – On the side

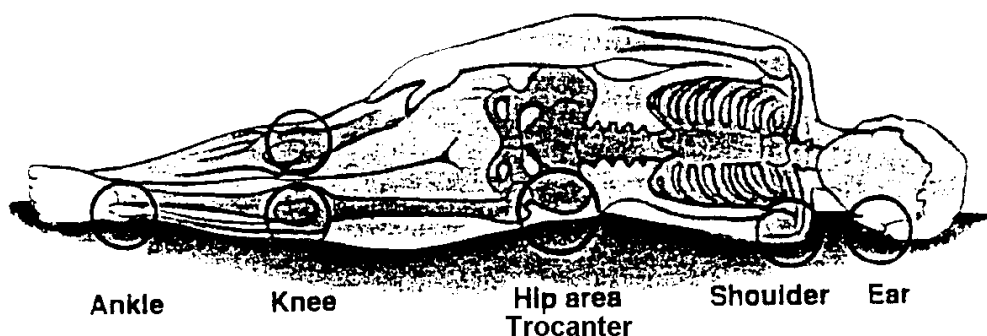
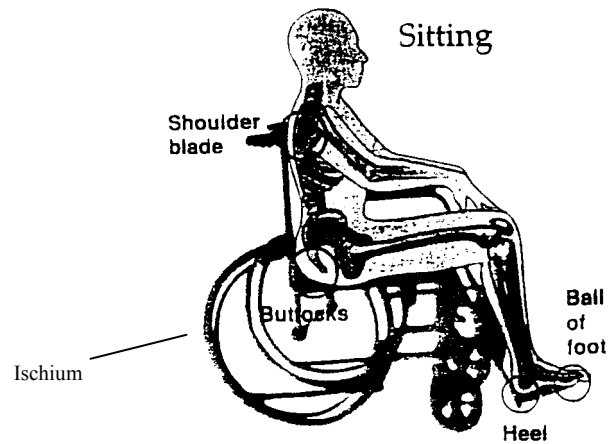


Figure 7: Wound Care – Sitting



General Nursing Interventions to reduce Pressure

Identify the 'at risk' patient. Refer to Policy and Procedure
Braden scale to be completed on admission.

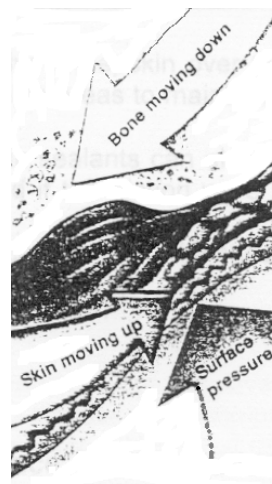
Implement preventative actions. Prevention involves maintenance
of healthy skin, frequent repositioning and the appropriate
utilisation of support surfaces.

Shear Wounds

Shear force is created by the interaction of both gravity and friction
(resistance) against the surface of the skin. Friction is always
present when shear force is present. The classic example of shear is
when a patient is in a semi-Fowler's position. While the torso
slides downward to the foot of the bed, the bed surface generates
enough resistance that the skin over the sacrum tends to remain in
the same location.

Figure 8: Wound Care – Shear & Friction

Two forces contribute
to pressure ulcers.
Opposite, but parallel,
sliding motions (shear)
– like bone moving
down and skin up –
compress blood vessels.
Surfaces rubbing
(friction) can cause skin
to break down.



Ultimately, the skin is held in place while the skeletal structures pull the body (by gravity) towards the foot of the bed. Consequently blood vessels in the area are stretched and angulated. Such changes may create small vessel thrombosis and tissue death.

Causes of Shear Injury

Shear injury is predominantly localised at the sacrum or coccyx and is most commonly a consequence of elevating the head of the bed or of improper transfer technique.

General Nursing Interventions to Reduce Shear

- The primary intervention nurses should use sliding sheets to reduce shear when repositioning the patient. This method would eliminate drag on the sacrum.
- Elevation of the bed should be limited to no more than 30° and be limited to short periods of time.
- Position feet against a footboard.

Patients at Risk of Pressure and Shear Wounds

- Mobility impaired.
- Bed or chair confined.
- Loss of bowel or bladder function.
- Poor nutrition.
- Lower mental awareness.
- Impaired circulation.
- Warfarin and/or long term steroids

Friction Wounds

Skin injured by friction results from two surfaces rubbing together and has the appearance of an abrasion. This type of injury is frequently seen on elbows heels and sacrum. Tissue necrosis does not occur with friction.

General Nursing Interventions to Reduce Friction

- Interventions involve the use of protective sheepskin over the elbows or heels and moisturisers sparingly applied to vulnerable areas to maintain proper hydration of the epidermis.
- Transparent adhesive dressings and skin sealants can also be effective at reducing friction. These would be contraindicated if the friction were sufficient to loosen the dressing.
- Reduce shear as friction always occurs in combination with shear.

14.10.2 Chemical Damage

Common causes are faecal incontinence, harsh solutions such as Betadine, improper use of products and drainage around percutaneous tubes or drains.

The presence of chemicals on the skin is a common source of skin damage. The presence of these solutions on the skin will destroy or erode the epidermis. Early manifestations start with erythema or an erythematous macular rash and can quickly progress to denudement if exposure continues.

General Nursing Interventions to Protect Skin from Chemical Damage

Moisture-barrier ointments, gentle skin cleansing and creative uses of skin barriers are the cornerstone to the prevention of chemical irritation when patients are identified as at risk.

- Identification of the 'at risk' patient.
- Protection of the skin around catheters or drains.
- Avoidance of the presence of harsh substances on the skin.
- Appropriate use of skin-care products.
- Contact the prescriber if the patient is on a laxative and suffering from faecal incontinence.

Patients at Risk of Chemical Damage

Loss of bowel/bladder function.

Uncontrolled exudate/drainage from wound/fistula/stoma.

Excessive washing/rubbing.

14.10.3 Vascular Ulcers

Ulcerations, particularly on the legs or feet, can occur as the result of venous hypertension, arterial insufficiency or neuropathy, or a combination of these factors. Although these types of lesions commonly develop incidentally to benign trauma, (eg. by bumping against the leg of a chair) each ulcer has very distinct distinguishing features, pathologic processes and treatment regimen.

The inter-disciplinary management regimen for all leg ulcers should include:

- Accurate assessment of the underlying cause of the ulcer.
- Treating the cause of the ulcer.
- Providing the optimum local environment for wound healing.
- Preventing complications.
- Preventing ulcer recurrence and providing patient education.

Causes of Lower Extremity Ulcers include:

- Venous hypertension
- Arterial disease
- Diabetes Mellitus
- Malignancy
- Rheumatoid Arthritis
- Trauma
- Insect bites

Arterial Ulcers

Arterial ulcers are not as common as venous ulcers. However, they are often more complex to manage because of co-existing diseases and complications. The difficulty in healing these ulcers lies in the lack of adequate arterial perfusion to the affected tissue.

Description

Arterial ulcers are typically deep ulcers with a pale wound bed and distinct wound margins. May also have a 'punched out' appearance. They may have black/necrotic tissue. Ischaemic changes in the leg may also be visible and include thin, hairless leg, thickened toenails and dry epidermis. The feet may develop redness/rubor when dependent and pedal pulses are likely to be absent or diminished.

Pain is a common complaint, often with exercise, at night or while resting and is a guide to the severity of the condition. This pain is exacerbated when the patient is in a recumbent position but can quickly be resolved by dangling the leg over the edge of the bed – arterial perfusion is thus enhanced with gravity.

Location

Arterial ulcers are frequently located on the feet, between toes or on the tips of toes and the lower leg.

Venous Ulceration

Lower leg ulceration is caused by venous hypertension that may develop as a result of incompetent perforator veins, and/or deep veins. Adequate perfusion of local tissue becomes increasingly difficult in the presence of venous hypertension.

Description and Location

Venous ulcers are characterised as being:

- Located in the ‘gaiter area’ (midcalf to heel)
- Shallow
- Irregularly shaped
- Painless to moderately painful
- High to moderately exuding

The lower leg is commonly oedematous and the surrounding skin may have a dry scale dermatitis, a woody texture (lipodermatosclerosis) and a reddish-brown discolouration (Haemosiderin staining).

Neuropathy

Neuropathy places the patient at risk of injury including trauma related to repetitive stress e.g. from poorly fitting shoes, misshapen nails and thermal injuries from hot water.

Description and Location

The foot is the common site for ulcers due to the presence of peripheral neuropathy and peripheral vascular disease. Repeated trauma, especially prolonged pressure, can cause ulceration on the sole of the foot, especially under the head of the first metatarsal bone, over enlarged bunions and on the bony prominences of the toes or at the heel while on prolonged bed rest.

Diabetic Ulcers

Diabetics with pre-existing leg or foot ulcers are extremely complex in their cause.

There are two contributing factors; arterial insufficiency, trauma and peripheral neuropathy (insensate foot). These factors delay wound healing and increase their vulnerability to infection. Gangrene may develop secondary to poor circulation and infection. The patient requires amputation of the affected area and may proceed to lower limb amputation.

Prevention

- Regular foot inspection by podiatrist.
- Good fitting shoes.
- Assessment of weight bearing loads.
- Toenail care by diabetic podiatrists.
- Removal of hyperkerotitic areas by diabetic podiatrists.
- Blood sugar control

Intervention

- Early management of cuts/infections.
- Referral to diabetic podiatrists.
- Avoid maceration of surrounding skin.

14.11 Wound Care Product Cupboard

Purpose

The purpose of the Wound Care Product Cupboard is to aid nursing staff to access quality wound care products not normally stored on the ward

The products available in the cupboard are either expensive one-off purchases, products used in complex wound care or some of the least used products.

For example, some stock is available only in large quantities making it uneconomical for ward areas to purchase. Ward areas may access the cupboard for the exact amount required and be charged accordingly.

Location

Ground floor opposite Ambulance Bay.

Contact Person

Charge Nurse Manager (CNM) or Duty Nurse Manager

Accessing the Cupboard

- Obtain the key (No:) from the Duty Nurse Manager or Orderlies and sign for it.
- Choose the appropriate product for your requirements. If unsure, consult the chart on the inside of the door or consult Clinical Nurse Specialist – Wound Care (OPHSS).
- Record the following details in the book provided in the cupboard:
 - The Patient Identification Label.
 - The product selected and the quantity.
 - Any other relevant information.
 - Signature, printed name, designation
 - Ward or Department.
 - Date

Restocking the Cupboard

The Clinical Nurse Specialist – Wound Care (OPHSS) restocks the cupboard weekly and the Ward or Department is charged for the product used.

Auditing the service

The Clinical Nurse Specialist – Wound Care (OPHSS) carries out a monthly check of the cupboard and completes an audit.

14.11.1 List of Products

List displayed in wound care cupboard and in wards.

1. Medisponge/Surgisponge
2. Large Hydrocolloid
3. Carbon Dressing
4. Cuticerin/Adaptic
5. Alginate Sheets
6. Alginate rope for packing – woven and unwoven
7. Hydrofibre sheets
8. Large/Medium/Small VAC foam dressings
9. Vac Canister
10. Mini vac foam and drape
11. Iodosorb
12. Inadine
13. Acticoat
14. Aquacel Aq
15. Exudry

Recommended Ward Stock – 1A

List displayed in wound care cupboard and in wards clinic rooms.
White board to communicate products needed and/or borrowed

Recommended Stock for Wards 1B, 2B, 3A, K1 & K2

List displayed in wound care cupboard and in wards and departments.

Recommended Stock for Wound Care Cupboard

List displayed in wound care cupboard and in wards and departments.

14.12 Latex Allergy Free Wound Products

- Airstrip
- Allevyn – all varieties
- Bactigras
- Carbonet
- Cica-Care Adhesive Gel Sheet
- Comfeel
- Elastogauze
- EXU-DRY
- Hypafix
- IntraSite Gel
- Iodosorb
- IV 3000 (Smith & Nephew)
- Jelonet
- OpSite
- OpSite Post Op
- OpSite Wound-Flexigrid
- Remove Wipes
- Skin-Prep Wipes/Spray
- SoloSite Gel
- Tapes (use only steristrips or mifix to tape eyes, secure ETT/LMAs and IVs)
- Triple Care Cream
- Triple Care Cleanser

All products are available via Supply Department

14.13 Treatment Interventions

Cause	Location	Characteristics	Prevention Interventions	Treatment
Pressure	Bony prominence in immobile patients.	Starts with non blanching erythema or ecchymosis (bruise colouring). Deep lesions.	Risk assessment of skin integrity and Braden Scale performed on admission Establish turning schedule Redistribute weight over larger surface area utilising sliding sheet . Keep pressure off heels. Use positioning aids, pillows and mattresses. Don't use air rings.	Complete Incident Form Complete Braden Scale on Admission Note Post Med Hx e.g. PVD, diabetes, paralysis etc. Remove pressure, reduce shear/friction. Keep off affected area. Complete Braden Assessment Referral to Dietitian
Shear	Areas exposed to bed or chair surface.	Shallow or deep. Tissue damage may present as haematoma.	Limit elevating head of bed to no more than 30 degrees & for limited times. Prevent sliding down bed. Raise foot of bed. Correct use of sliding sheets to reposition patients.	
Friction	Areas exposed to bed or chair surface.	Superficial.	Apply transparent dressing. Use sheepskin elbow or heel protectors. Gently apply moisturisers to skin. Reduce shear (friction occurs in combination with shear).	

Cause	Location	Characteristics	Prevention Interventions	Treatment
Epidermal Stripping	Areas exposed to tape.	Irregular shape and superficial.	Apply tape without tension. Use micropore tape. Remove tape – slowly peel tape away from anchored skin. Avoid tape on skin. Secure dressings with tubular stockinette.	Fragile skin. Prepare with barrier wipe. Hydrocolloid/foam dependent on exudate levels. Secure with tubular stockinette or carefully applied bandage. Use remove to facilitate ease of removal
Chemical	Areas exposed to urine, stool or drainage.	Superficial erythema Erythematous macular rash.	Gentle skin cleansing (no harsh soaps or rough cloths). Use moisture-barrier ointments in moderation. Prevent drainage from contacting the skin. Incontinence management bowel training prompted voiding programmes.	Remove source of chemical irritation. Protect surrounding skin – barrier wipe if skin not broken. “No Sting” 3M if skin broken and need to apply an appliance. Wound drainage or stoma bag.
Venous hypertension	Midcalf to heel	Hyperpigmentation. Oedema of surrounding tissue. Shallow. Irregular shape.	Compression therapy. Periodic elevation. Avoid trauma. Control underlying medical disorder. Referral to dietitian.	Elevate legs. Avoid tight socks. Dressings to absorb exudate. Compression therapy – to be applied by approved external contractor only

Cause	Location	Characteristics	Prevention Interventions	Treatment
Ischaemia	Feet, toes and lower leg. Distal areas of trauma.	Surrounding tissue cool and pale. Diminished or absent pulses. Delayed capillary refill. Pain made worse by walking. Deep ulcers with pale wound bed. Distinct wound margins. Often 'punched out' appearance Thin hairless leg. Thickened toenails Dry epidermis	Referral to multi-disciplinary team e.g. Diabetologist, Dietitian, Podiatrist, Vascular Surgeon, Physiotherapist. Avoid compression. Avoid constricting garments. Avoid trauma. Remoisturise the epidermis. Hydration. Elimination of nicotine and caffeine, avoidance of cold. Do not elevate legs. Relieve pressure on heels when in bed.	Keep wounds dry. Trim lifting eschar/necrotic tissue. Hydrate necrotic tissue under specific instruction. Avoid maceration of surrounding skin. Avoid nicks to skin.
Radiation	Areas exposed to radiotherapy.	Erythema. Often painful. Enlarges to the margins of the irradiated skin.	Protect from unnecessary trauma, friction, shear, pressure, adhesives or chemicals.	Refer to Radiology Department as required.

Cause	Location	Characteristics	Prevention Interventions	Treatment
Neuropathy	Areas of sensory loss exposed to trauma or pressure.	Common in patients with diabetes. Reduce pain/sensation. Punched out ulcer appearance. Callous often surrounds ulcer edge. May be in well-perfused extremity.	Prevent trauma from chemical, thermal and mechanical sources. Elevate heels off mattress. Referral to orthotics for footwear. Referral to Podiatrists, Diabetic Centre.	Dependent on wound bed assessment treat appropriately. Avoid maceration of surrounding skin.
Surgical incision	Areas exposed to surgery.	Acquired as the result of an operative procedure.	Apply non-adherent absorptive dressing.	Surgeon preference. Tape/Mefix
Allergies	Areas exposed to allergen.	Weeping epidermis. Crusting. Oedema. Erythema. Vesicles.	Avoid allergen. Anti-inflammatory agents may be warranted.	Remove allergen. Absorb exudate, protect skin. Foam Non adherent dressing
Accidental Injury	Areas exposed to trauma.	Acquired as the result of accidental trauma.	Depends on wound. Education about accident prevention.	ACC45 form must be completed for any accidental injuries that will require ongoing treatment.

14.14 Specific Wound Types

14.14.1 Skin Tears

Definition

A break in the skin integrity.

An acute partial thickness wound involving separation of the epidermis and dermis, mainly on the extremities of older adults.

Management of Skin Tears

Step	Action
1	Achieve haemostasis.
2	Re-hydrate skin flap by placing onto jelonet or saline soaked gauze.
3	Irrigate wound bed/skin tear with warm saline to remove debris and haematoma.
4	Replace skin flap – approximate skin edges, do not apply tension. Use steri strips if necessary but not over the tip of the flap. Deficits may heal by secondary intention.
5	Apply non-adherent dressing e.g. mepitel, cuticerin or adaptic, gauze and bandage. Algisite M may be applied underneath to help stop bleeding. Renew the dressing in 5 to 7 days or if breakthrough appears.
6	Elevate the limb, rest and give pain relief.
7	Initiate further prevention strategies and educate the patient.
8	Document in clinical notes and nursing care plan

Patients at risk of skin Tears

Fragile skin, especially with use of adhesive dressings.

Oedematous skin

Immunosuppressed.

Elderly.

Dementia.

Poor nutrition.

Warfarin and/or steroid use

References

Joanna Briggs institute (2008) Aged Care Manual –Registered Nurses

14.14.2 Split Skin Grafts

Skin grafts are recognised as a specialised procedure and, if unfamiliar to staff, contact the Clinical Nurse Specialist – Wound Care OPHSS

Definition

A thin shaving of skin (epidermis and part of the dermal layer) removed surgically and applied to recipient site, sometimes sutured or stapled into place, dressed and a fixation bandage applied.

The first dressing is usually done 5 days post operatively.

The graft is considered “taken” if it appears pink and is adherent to the wound base. The sutures or staples are removed at this stage. A new non adhesive dressing i.e.: mepitel, cuticerin is applied and then PFA. This is all then bandaged into place. This is then redressed at an appropriate date (eg. 4 – 5 day’s time) depending on the state of the graft.

Other appearances of the graft:

- White appearance indicates graft not taken.
- Complete absence of graft indicates a haemolytic strep A infection.
- Yellow/green exudates, sloughy, moth-eaten appearance may indicate a pseudomonas infection.

Inspect the graft earlier:

If the bandages or dressings have become loose or have fallen off.

If an infection is suspected.

If strike-through occurs.

If the bandages have become wet e.g. with urine.

14.14.3 Full Thickness Graft

Small grafts applied mostly to the facial area onto a clean surgical base.

These are sutured in place and a pack of PFA wool is tied into place over the graft to apply pressure to aid the graft to “take”.

The first dressing is usually applied at 5 days when the tie-over pack (T.O.P.) and sutures are removed. (See instructions for Split Skin Donors)

These grafts often appear whitish at first dressing.

14.14.4 Split Skin Graft Donor Sites

Definition

This is the raw area left on the skin after a thin shaving of epidermis and dermis has been removed surgically. It is similar to a graze.

Associated Documents:

Caville, Keryln, (2007). Wound Care Manual. Silver Chain: Western Australia

Guidelines for Alginates as Donor Site Dressings

Guidelines for Donor Site Dressings

Usual Donor Sites

- Upper inner thigh.
- Upper inner arm.
- Buttock
- Donor sites can be taken anywhere. The size of the site varies depending on the amount of skin required. The skin can be meshed to cover a greater area.

Once the skin is taken and haemostasis has been obtained a dressing is applied. This area then usually heals within 10 – 14 days if the dressing is undisturbed.

Dressing Choices include

- Mefix with secondary dressing (can be reduced 2-3 days).
- Alginates with a secondary dressing (can be reduced in 2-3 days).

A donor dressing is taken down earlier than the usual 10-14 days

If an unpleasant odour or increasing pain is detected or experienced at the site. As this could indicate an infection, send a bacterial swab for microbiological examination.

If strike-through occurs, remove the appropriate layers of the dressing and repad or redress as necessary.

If bandages or primary dressing slips off.

If bandages/dressings become wet e.g. non-waterproof type dressings.

14.14.5 Full Thickness Skin Graft Donor Site

Definition

A small area of skin consisting of epidermis and full thickness dermis is surgically removed from a defined donor region. The donor site is then directly sutured.

Common donor sites are

- Pre or Post Auricular
- Supraclavicular region

Sutures are removed between 7-10 days.

Site usually heals with no complications as ordinary suture lines.

14.15 Wound Management

14.15.1 Dressings – Sterile / Aseptic Procedure

Policy

Aseptic techniques will be used to promote wound healing with ongoing monitoring of granulation and healing

Purpose

To promote wound healing by the use of an aseptic technique.
To ensure staff are able to monitor granulation and healing and act accordingly.

Rationale

Wounds should be reviewed at least weekly by Medical Staff and documented in clinical records.

Scope

Medical staff
Registered Nurses
Enrolled Nurse/Nurse Assistant under supervision of a Registered Nurse
Nursing Students under direction of a Registered Nurse

Associated Documents

CDHB, Volume 10 – Infection Control
Clinical notes QMR0003
Wound Assessment and Treatment Form (Ref: OPHSS 0330)
Initial Nursing Assessment (Ref: OPHSS 0500, OPHSS 0478)
Patient Care Plan (Ref: OPHSS- AT&R 0614, OPHSS PSE 0468)

Definitions

- Asepsis is the purposeful prevention of the transfer of infection. Asepsis is an overarching technique or measure that controls the number of micro-organisms present. Can be medical or surgical aseptic technique. Refer to the Infection Control Manual, Aseptic Technique.

- Sterile as a process refers to the elimination of all micro-organisms including spores. (Infection Control Manual, Vol. 10).

Equipment

- Trolley with rubbish bag/hazard bag
- Disposable dressing packs
- 0.9% Sodium Chloride solution – sterile
- Sterile instruments if required, e.g. sterile forceps, scissors
- Pre-packed disposable gauze swabs
- Sterile choice of dressings
- Adhesive tape of choice
- Unsterile gloves
- Sterile Gloves
- Any other wound care product required.

Note: For large or infected/or specific sterile dressings (eg. PICC line/CVC dressings) sterile gloves should be added to equipment.

Procedure

Step	Action	Rationale
Pre Dressing		
1	Wash and dry hands or use alcohol hand gel.	To decrease skin contaminants.
2	Wipe dressing trolley with detergent and warm water.	To decontaminate the trolley.
3	Attach rubbish bag to side of trolley with adhesive tape and ensure that this side is nearest to the patient.	For rubbish disposal and also ensures that rubbish is not going over sterile field thus contaminating sterile area.
4	Prepare patient and environment, ensuring windows, doors and screens are closed.	Ensures patient's privacy and minimises air flow.
5	Wash and dry hands or use alcohol hand gel.	Decreases Nurse's skin contaminants.
6	Open sterile disposable dressing pack after checking that pack has not been damaged or opened.	Ensures that sterility is maintained.

Step	Action	Rationale
7	Peel open the pack at the indicated corner and open, sliding the pack out on to the trolley with the folded ends facing you.	Decreases the need of handling the pack if folded ends are facing you.
8	Open the pack by pulling each of its folded corners out – do not touch the inside of the cover. Then, by either taking out one sterile plastic forcep or by using your hand underneath the open pack, arrange your contents ready for use.	Ensures sterility is maintained.
9	<p>Pour 0.9% Sodium Chloride solution and any other solutions required into the divided container (remembering to pour away from label).</p> <p>Tap water may be used in appropriate cases i.e.: leg ulcers. This may be achieved by either bathing the leg using a bowl of warm H₂O and medisponge or alternatively showering the dressings off. The wound/s should be covered with gladwrap to return to room for the dressings Infection control policies must be followed.</p> <p>Warm normal saline to blood temperature.</p>	<p>So these are ready for immediate use without having to interrupt sterile procedure.</p> <p>To avoid obscuring of the label.</p>
10	Using non-touch technique, open other sterile dressing equipment and allow contents to drop on to the sterile field e.g. scissors, sterile forceps, gauze squares and steristrips.	<p>Maintains asepsis.</p> <p>Prepares all necessary equipment without having to interrupt sterile procedure.</p>
11	Remove old dressing by using either unsterile gloves or by using plastic forceps – all of which are discarded after task complete.	Prevents cross-infection.
	Note: If adhered, the dressing may be saturated off with 0.9% Sodium Chloride or alternatively showered off and covered with glad wrap to return to room for the dressing.	For easy removal and ensuring that damage is avoided to new epithelial cells and helps with patient's comfort.

Dressing		
12	Wash hands using aseptic technique (sterile gloves may be put on after this stage if indicated).	Maintains asepsis
13	Place sterile dressing sheet in position holding corners only.	Maintains sterile field.
14	Using 0.9% Sodium Chloride soaked gauze, clean the wound starting at the centre moving outwards, remembering to go from clean to dirty.	To avoid cross-infection.
15	Discard each swab after one wipe into paper bag. Swab down the side of the wound and discard swab before going to repeat this process for other side.	
16	Dress the wound as per wound care sheet/care plan.	
17	Secure the dressing with bandage/tape.	Ensures that the dressing will not be accidentally removed.
Post Dressing		
18	Ensure that the patient is comfortable.	
19	Discard all disposable material and place in rubbish bag on trolley, then dispose of by placing in rubbish bin in sluice room. If metal forceps used, place directly into the blue bin ready for sterilising.	Prevents cross-infection.
20	Wipe the dressing trolley with detergent and warm water or alternatively with an impregnated detergent wipe.	To decontaminate the trolley
21	If the dressing trolley is contaminated with Blood or body fluid, cleaning must be followed by disinfection using diluted Chlorwhite. See CDHB Infection Control Manual Volume 10.	

22	Wash hand with liquid soap and water or alcohol hand gel.	
23	Document and report any irregularities to Medical staff. Also, if required, record in other associated documents e.g. clinical notes QMR0003, Patient Care Plan, Wound Assessment & Treatment Sheet/s.	Ensures prompt and effective treatment.

14.15.2 Pressure Area Risk Assessment and Prevention

Policy

The skin integrity of all patients will be assessed on admission and then as appropriate using the Braden Assessment Tool. OPHSS 0514

Early intervention is indicated for the patient at risk of developing pressure areas.

Purpose

To ensure early intervention is initiated for any patient at risk of altered skin integrity.

Scope

Registered Nurse

Student Nurse under direct supervision of a Registered Nurse

Enrolled Nurse/Nurse Assistant under direction of a Registered Nurse

Associated Documents

Patient Care Plan (Ref AT & R – TPMH 0614 ; PSE – TPMH 0468)

Pressure Area Prevention Flow Chart

Braden Assessment Tool (OPHSS 0514)

Mattress Selection Guide

Falls Risk Assessment Strategies (OPHSS 0297)

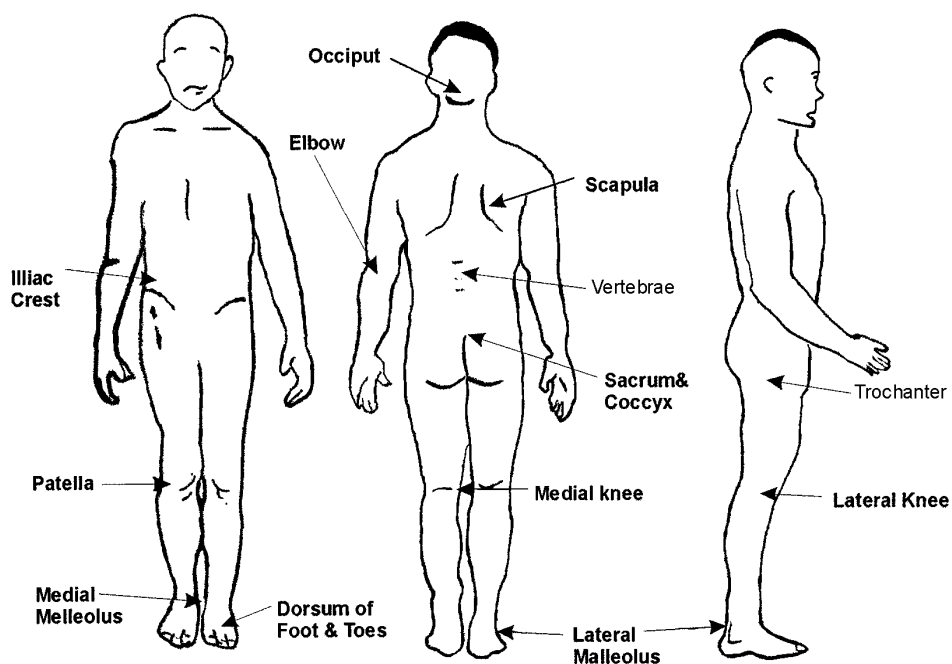
Quality Improvement Event Reporting Form (Ref: 1077)

Procedure

Step	Action
1	Early assessment intervention for all patients at risk of altered skin integrity: on admission, if the patient's condition deteriorates, if the patient undergoes prolonged anaesthetic, or if any significant event occurs that would alter the patient's ability to maintain their own skin integrity.

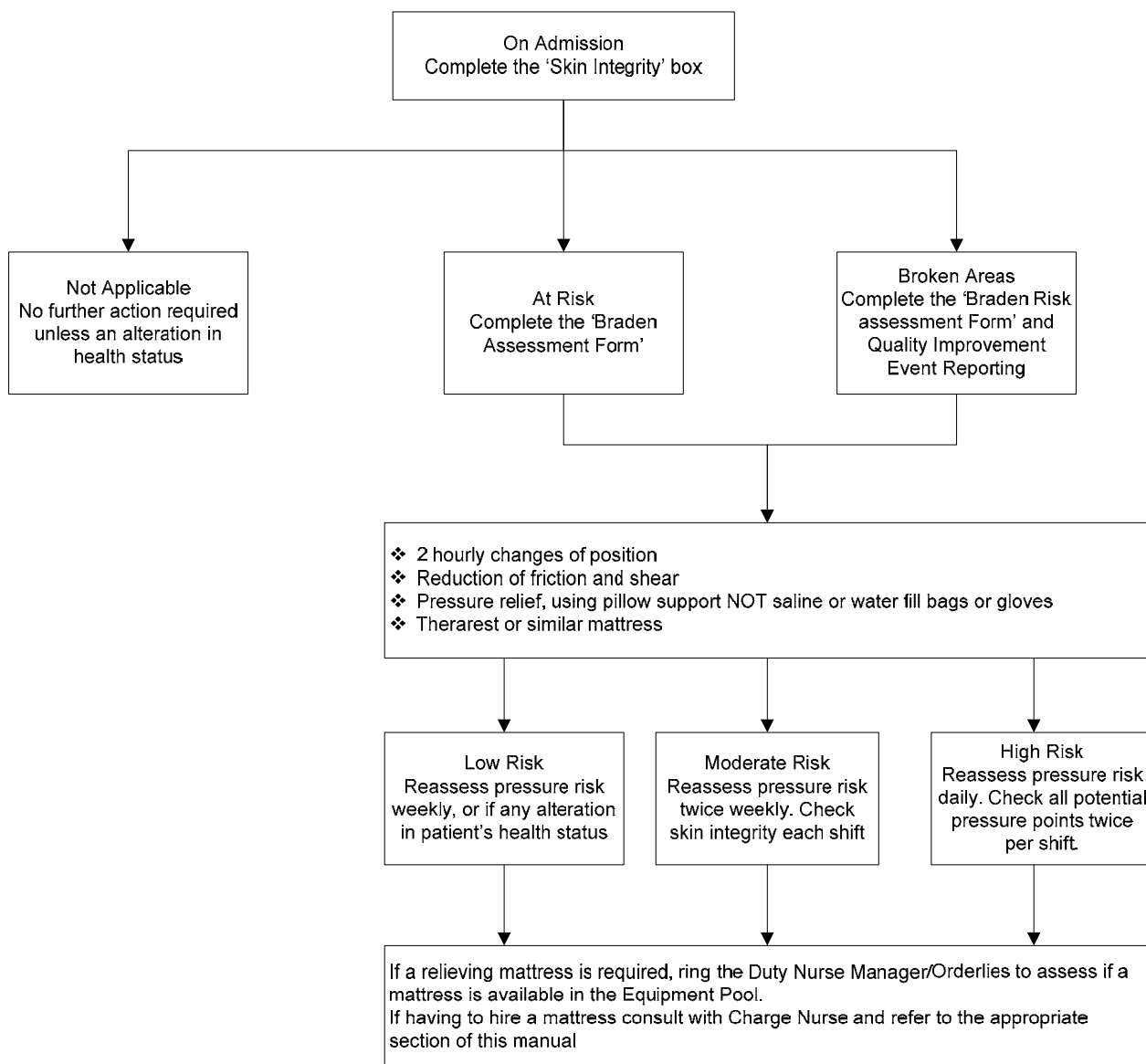
Step	Action
2	If skin integrity is compromised/altered or if the patient already has a pressure ulcer, the patient must then be assessed using the Braden Pressure Assessment Tool. Note: If the patient is admitted with an existing pressure ulcer a Quality Improvement Event Reporting Form (Ref: 1077) should be completed.
3	If the patient is assessed as a high risk, reassess pressure risk daily. Check all the potential pressure points twice each shift and on turns and document skin integrity status in the patient's clinical records.
4	If the patient is assessed as a moderate risk, reassess pressure risk twice weekly. Check skin integrity each shift and document skin integrity status in the patient's clinical records.
5	If the patient is assessed as a low risk, reassess pressure risk weekly and document skin integrity status in the patient's clinical records.
6	To protect skin integrity, all at risk patients are encouraged or assisted to change position 2 hourly or less, if there is an assessed need. A 30 degree movement from side is all that is required. The use of a sliding sheet is recommended for turning

Figure 9: Areas to check Skin Integrity



Step	Action
7	<p>Correctly reposition all 'at risk' patients to relieve pressure e.g. No more than a 30 degree angle when in semi-recumbent position.</p> <p>Reduce risk of friction and shear by preventing the patient from slipping down the bed. Position patients with loss of sacral sensation in an upright sitting position.</p>
8	<p>Use foam wedges/pillows to support limbs.</p> <p>Note: Use of bags of saline or water filled gloves is discouraged as they have the potential to rupture or leak.</p>
9	<p>Use skin preparations (eg. Barrier Wipe) prior to the application of tape/plaster and assess skin for reaction to tape/plaster.</p>
10	<p>Report any redness, blistering, bruising or interruption in skin integrity over pressure sites immediately.</p> <p>Complete documentation indicating action and treatment in the Clinical Notes, Care Plan, Wound Sheet Form and the Quality Improvement/Event Reporting Form (Ref 1077).</p>
11	<p>Keep susceptible skin sites clean and dry and apply protective barrier creams.</p>
12	<p>Allocate at risk patients the appropriate pressure relieving devices, as per flowchart (page 364).</p>
13	<p>A Quality Improvement/Event Reporting Form (Ref 1077) should also be completed for potential or actual development of pressure sores.</p>

14.15.3 Flowchart – Pressure Area Prevention



14.15.4 Braden Assessment Tool

This form is available on the intranet OPHSS 0514

14.16 Hiring Pressure Relieving Mattresses

Policy

The appropriate assessment and interventions must be performed before a pressure-relieving mattress is hired.

Purpose

To ensure all the steps are adhered to before a pressure-relieving mattress is hired from a company representative

Scope

This policy applies to the wards and departments of OPHSS

Personnel permitted to authorise the hire of a Pressure Relieving Mattress

Charge Nurse Manager

Duty Nurse Manager

Procedure

Step	Action
1	A Pressure Area Assessment form is to be completed by Nursing staff and the patient identified as a moderate or high risk using the Braden Scale. A moderate or high-risk category indicates the use of a pressure-relieving mattress.
2	Use the Mattress Selection Guide to determine the appropriate mattress. Note: The Therakair mattress is no longer used at TPMH as it is deemed unsuitable for our patients.
3	Check OPHSS stock for the appropriate item before hiring from an external supplier..
4	Complete an internal requisition form and obtain the signature of a Charge Nurse Manager, or Duty Nurse Manager. Ensure that the mattress type, patient's name and exact location are detailed on the requisition.
5	Telephone external provider and order the mattress (refer to Flowchart for contact details).
6	Reassess the patient using Pressure Area Assessment Form. If the condition of the patient changes, arrange return of the mattress in a timely manner by phoning the external provider.
7	It is the nurse's responsibility to assemble the mattress on arrival and disassemble for collection.

14.16.1 Returning Hired Mattresses

Ring external provider to collect mattress.

Internally supplied mattresses are to be wiped down, reboxed and returned to Sterile Stock Store cupboard.

Note: Therakair mattresses are not currently used within the OPHSS division as they are deemed unsuitable for our patients.

14.17 Visitrak Wound Surveillance Tool

Policy

To ensure the appropriate use of the Visitrak Wound Surveillance Tool.

Purpose

To monitor wound dimensions using the Visitrak Wound Surveillance Tool and gauge effectiveness of wound management techniques.

Rationale

Chronic/slow to heal wounds will be monitored to gauge effectiveness of product selection, use and management.

Scope

- Registered Nurses who have completed recognised Wound Assessment Training as authorised by the Director of Nursing.
- Registered Nurse trained in use of Visitrak Wound Surveillance Tool.

Associated Documents

- Volume 10 – Infection Control Manual
- Volume I – Infection Control local policies
- Visitrak Manufacturer’s Handbook.
- Wound Assessment Form (OPHS 0330)

Types of Wounds

- Pressure areas
- Chronic ulcers
- Surgical wounds
- Amputee wounds
- Skin tears
- Chronic non-healing wounds

Equipment

- Dressing trolley with rubbish bag attached.
- Sterile dressing pack
- Sterile normal saline 0.9% 30-100mL
- Warmed H2O may be used in appropriate cases ie.: leg ulcers
- Visitrak digital – with stylus
- Permanent marker pen
- Visitrak depth probe
- Visitrak grid

Procedure

Step	Action
1.	Explain procedure to patient to ease anxiety, gain co-operation and informed consent.
2.	Administer analgesia as required.
3.	Assemble equipment on trolley with rubbish bag.
4.	Social hand wash as Standard Precautions.
5.	Assemble equipment using ‘no touch’ technique and warm normal saline to maintain sterile field.
6.	Make Visitrak digital ready for use with grid, probe and permanent marker pen.
7.	Place non-sterile gloves on trolley to remove dressing as necessary.
8.	Inspect wound: <ul style="list-style-type: none"> – wound bed – appearance, tissue type – peri-wound skin condition – odour
9.	Procedural social hand wash.
10.	Remove white backing paper from Visitrak Grid.
11.	Place grid over wound, position top of tracing grid in direction of patient’s head.
12.	Trace around edge of wound margin onto grid using a permanent marker pen. Note: Care must be taken to remain in contact with the grid area.
13.	If the wound is too large to fit within the grid area of one tracing grid, overlap second grid and trace across both grids.

Step	Action
14.	Remove contaminated wound contact layer from the tracing grid quickly and carefully dispose of as clinical waste.
15.	Place the tracing grid on the surface of the Visitrak digital unit, fitting holes over the pegs on the unit surface. Place the cover sheet on top of the tracing grid and secure over the pegs of Visitrak digital.
16.	Place the stylus at a point on the wound tracing. Press the switch on the stylus and wait until the tracing symbol appears in the display.
17.	While holding the cover sheet/tracing grid securely on the surface of the unit, trace the wound outline without lifting the stylus. Note: Ensure that tracing is started and finished at the same point.
18.	When processing is complete, the unit will beep and display the measurement in cm ² in the digital display.
19.	Place Visitrak probe into the deepest part of the wound and measure the depth using the scale.
20.	Using your thumb, mark where you would expect the skin surface to be and assess the depth using the scale on the depth indicator.
21.	Record the depth in the box under the wound depth symbol.
22.	Dispose of the depth probe as clinical waste.
23.	Document in patient's clinical record and on Wound Assessment Care Plan (tracing to be retained in clinical record) dated and signed.

Further functions are available. Follow step by step guidelines in user manual..

14.18 Glossary of Common terms in Wound care

30° tilt technique

The positioning of patients so that risk of pressure sore development is decreased. The patient is placed in a laterally inclined position, supported with pillows, with their back making a 30° angle with the support surface.

Abscess

A local collection of necrotic tissue, bacteria and white cells known as pus. This collection of infection is retained within a wall that is formed of phagocytes and strands of fibrin.

Anaerobes

Obligate anaerobes are bacteria that do not tolerate free oxygen and grow where there is no air or where there is a low oxidation-reduction potential. Examples include Clostridium Perfringens, Bacteroides Fragilis.

Angiogenesis

The generation of new blood vessels that are initially seen at the base of a wound.

Ankle brachial pressure index (ABPI)

A Doppler ultrasound test used to determine the presence and degree of peripheral arterial disease in patients with leg ulcers.

Ankle flare

Distension of the small vessels that appears around the ankle and heel and is associated with varicose vein formation, venous hypertension and venous ulceration.

Autolysis

The breakdown of devitalised tissue by leucocytes.

Bacteroides

Anaerobic gram-negative bacillus normally found in the oropharynx and also in faeces. In wound infections it is usually regarded as an opportunist organism.

Callous

A build up of keratinised skin. This is a reaction to persistent pressure.

Cavitation

The generation of a temporary cavity as a result of a high-velocity missile (bullet) entering soft tissue.

Cellulitis

A spreading non-suppurative infection of the soft tissue.

Collagen

A protein generated by fibroblasts that provides the supportive network of connective tissue.

Colonisation

Multiplication of microorganisms without a corresponding host reaction.

Commensals

Microorganisms that do not react with their host, that is, they are non-pathogenic and become part of the host's normal flora

Complement (C)

A complex group of proteins and other factors found in serum and other body fluids that are normally inactive.

Contamination

Presence of microorganisms but without their multiplication.

Contraction

A function of the healing process in granulating wounds where the edges of the wound are drawn towards each other.

Cytokine

A chemical messenger. See also Growth Factors.

Debridement

The removal of devitalised tissue and foreign matter from a wound.

Doppler ultrasound

Used to record the ankle brachial pressure index.

Ecchymosis

Escape of blood into the tissues, producing a large and blotchy area of superficial discoloration (bruise).

Elastin

The main component of elastic tissue. Elastic-fibres are found in the extracellular matrix of skin, blood vessels and lungs, giving them the ability to recoil after transient stretch.

Endothelium

The cells that line the blood vessels.

Endotoxin(s)

Produced mainly by gram-negative organisms e.g. E. coli, Pseudomonas aeruginosa and salmonella. These toxins do not diffuse into the interstitial fluid but are liberated when the cell eventually dies.

Epithelium or epithelial tissue

The tissue that covers the body surface, lines body cavities and forms glands.

Epithelialisation

The final stage of the proliferative phase.

Erythema

A redness of the skin due to hyperaemia.

Eschar

A scab consisting of dried serum and devitalised dermal cells.

Exotoxin(s)

They are produced mainly by gram-positive organisms e.g. Clostridium tetani, Streptococcus pyogenes, Staphylococcus aureus. These toxins diffuse easily into the interstitial fluid and are highly toxic.

Extracellular matrix

Consists of ground substance and fibres. The ground substance is an amorphous gel-like material that fills the space between the cells and contains interstitial fluid and proteoglycans. The fibres consist of collagen, elastin and reticular fibres, the amounts and proportions of which vary depending on the type of tissue being scrutinised.

Fibroblast

The cells that form fibrous tissue.

Gram staining

A staining technique that allows for the differentiation of bacteria into gram-positive and gram-negative.

Granulation

The formation of new tissue filling the defect that takes place during the proliferative phase of healing. The name is derived from the fact that the buds of new tissue take on the appearance of small granules.

Growth factors

Peptides that are sub-set of cytokines vital for cell proliferation.

Healing by first intention

Also called primary intention – wounds in this category are closed, thus leaving a minimal defect.

Healing by second intention

This occurs when a wound is left open and allowed to heal by granulation.

Healing by third intention

Sometimes called tertiary intention or delayed closure. Here the wound is left open often to assist drainage and is then closed surgically at a later date.

Histamine

A protein that causes local dilation of blood vessels. The subsequent increased permeability allows leakage of fluid into the tissues and swelling results.

Hypergranulation

Granulation tissue that is raised above the periwound area.

Hypertrophic scar

Develops soon after injury as a result of wounding from any cause e.g. vaccination, acne or surgery. More common in larger scars/burns. Unlike keloids these scars do not invade the skin beyond the wound margin.

Hypovolaemia

Reduced intravascular fluid volume.

Infection

Microorganisms are not only present but are multiplying and producing an associated host reaction. This reaction may take various forms and identification of infection can prove difficult for the novice. See also contamination and colonisation.

Interleukins

Literally, between leucocytes, are growth factors that accumulate in areas where T-cells have been activated.

Keloid

A thick protuberance of scar tissue. These outgrowths of excessive collagen continue to grow for some considerable time (years) and can invade the healthy periwound skin. Do not confuse keloid with hypergranulation or hypertrophic scar.

Lipodermatosclerosis

A brown staining of the lower limb as a result of the breakdown of haemoglobin. The condition is closely associated with venous hypertension and leg ulceration.

Maceration

A softening or sagginess of the tissue caused by retention of excessive moisture.

Necrosis

The local death of tissue. This tissue is often black/brown in colour and leathery in texture.

Overgranulation

See Hypergranulation

Phagocytosis

The process of engulfing foreign matter by macrophages or neutrophils.

Rubor

Redness

Slough

Devitalised tissue that has a yellow/white/grey hue.

Topical therapy

Any product that is applied topically to a wound.

Vaculitis

Inflammation of small arteries or veins with resulting fibrosis and thrombi formation. It is usually associated with rheumatoid disease.

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14.19.1 Pressure Area Risk Assessment and Prevention

Policy

Pressure ulcer prevention requires collaboration involving the patient, family/whanau and IDT. It is important to identify those at risk of pressure ulcers on admission and throughout the duration of hospitalisation. Therefore, skin integrity of all patients will be assessed on admission and then as appropriate using the Braden Scale assessment tool for assessing pressure risk.

Early intervention is vital for the patient at risk of developing pressure areas.

Purpose

To ensure prevention, early detection intervention is initiated for any patient at risk of pressure ulcer.

Preventive Protocol

- Determine and eliminate the cause of the damage
- Client/carer education regarding risk and preventative factors
- Increase activity and mobilisation
- Discourage smoking
- Promote good nutrition
- Skin hygiene – maintain pH, cleanse and protect from excreta/ body fluids, regular moisturising
- Incontinence management
- Regular repositioning regimes
- Appropriate use of protective devices and clothing
- Appropriate use of lifting equipment
- Appropriate selection of support surfaces

Scope

Registered Nurse

Student Nurse under direct supervision of a Registered Nurse

Enrolled Nurse/Nurse Assistant under direction of a Registered Nurse

IDT

Associated Documents

- Nursing Care Plan and Clinical notes
- Braden Pressure Risk Assessment Tool (OPHSS 0514)
- Mattress Selection Guide
- OPHSS Falls Risk Assessment and Strategies (OPHSS 0297)
- CDHB Quality Initiative and Event Report Form (Ref 1077)
- Carville, K. (2007). Wound Care manual. Western Australia: Silver Chain.
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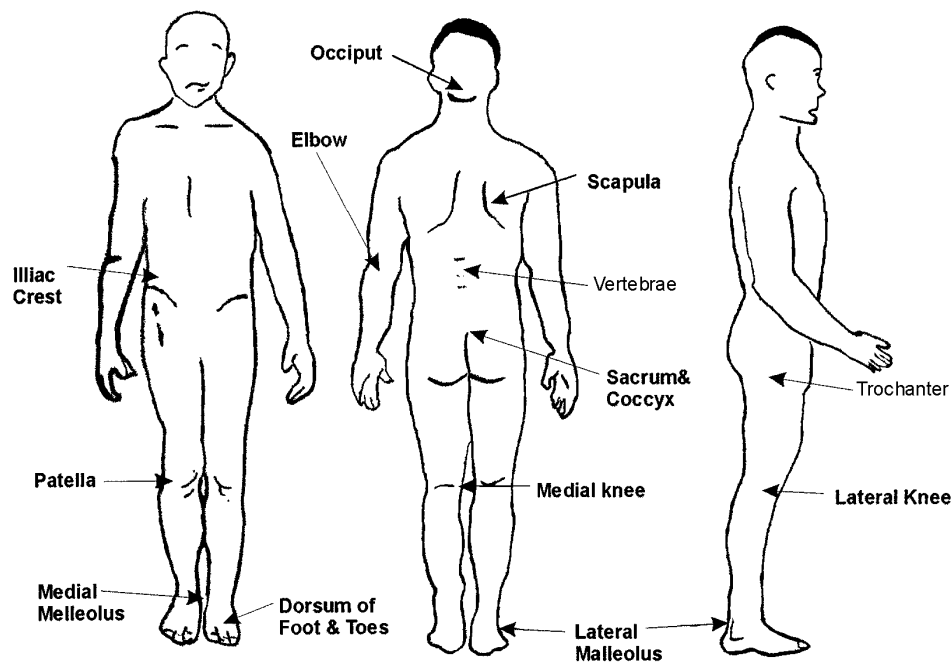
- Australian Wound Management Association. (2001)
Clinical practice guidelines for the prediction and prevention of pressure ulcers (abridged version). Western Australia: Cambridge Publishing

Procedure

Step	Action
1	Early assessment intervention for all patients at risk of altered skin integrity: on admission, if the patient's condition deteriorates, if the patient undergoes prolonged anaesthetic, or if any significant event occurs that would alter the patient's ability to maintain their own skin integrity.
2	If skin integrity is at risk or if the patient already has a pressure ulcer, the patient must then be assessed using the Braden Pressure Assessment Tool. Note: If the patient is admitted with an existing pressure ulcer a Quality Improvement Event Reporting Form (Ref: 1077) should be completed.
3	If the patient is assessed as a high risk, reassess pressure risk daily. Check all the potential pressure points twice each shift and on turns and document skin integrity status in the patient's clinical records.
4	If the patient is assessed as a moderate risk, reassess pressure risk twice weekly. Check skin integrity each shift and document skin integrity status in the patient's clinical records.
5	If the patient is assessed as a low risk, reassess pressure risk weekly and document skin integrity status in the patient's clinical records.
6	Allocate at risk patients the appropriate pressure relieving devices, as per Braden Assessment Tool.

Step	Action
7	Report any redness, blistering, bruising or interruption in skin integrity over pressure sites immediately. Complete documentation indicating action and treatment in the Clinical Notes, Care Plan , Wound Sheet Form and the Quality Improvement Event Reporting Form (Ref: 1077)
8	To protect skin integrity, all at risk patients are encouraged or assisted to change position 2 hourly or less, if there is an assessed need. A 30 degree movement from side is all that is required. The use of a sliding sheet is recommended for turning. Keep susceptible skin sites clean and dry and apply protective barrier creams.
9	Correctly reposition all 'at risk' patients to relieve pressure e.g. no more than a 30 degree angle when in semi-recumbent position. Reduce risk of friction and shear by preventing the patient from slipping down the bed. Position patients with loss of sacral sensation in an upright sitting position.
10	Use foam wedges/pillows to support limbs.
11	A Quality Improvement Event Reporting Form (Ref: 1077) should also be completed for potential or actual development of pressure sores

Figure 10: Areas to check Skin Integrity



14.19.2 Flowchart – Pressure Ulcer Prevention Strategies

