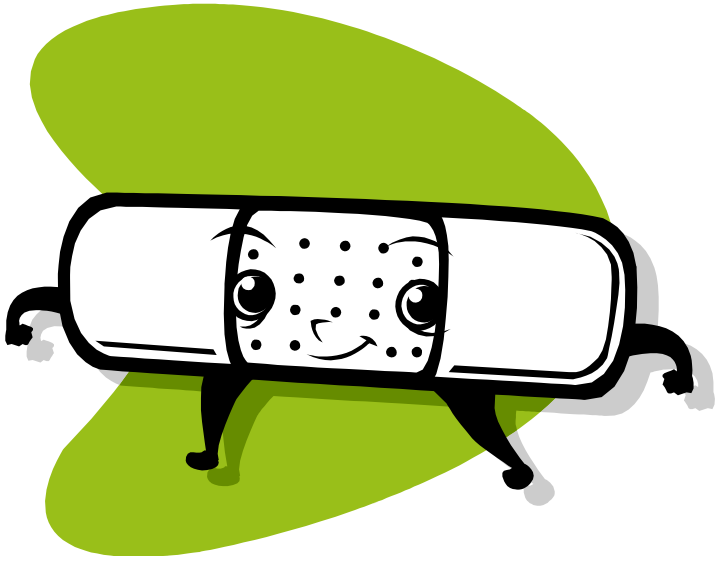
SKIN CARE MANUAL



Originated by Kelly Heron CPM Surgery/Enterostomal Therapist 2005
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ASSESSING PRESSURE ULCERS

Objectives:

1. To identify nursing prevention strategies in relation to pressure ulcer development.
2. To implement ongoing monitoring of patient's integumentary status with the aid of assessment tools i.e. the Braden Score.
3. To identify various stages of pressure ulcers and implement research-based protocols/treatment as ordered.
4. To accurately measure and document pressure ulcer findings.
5. To identify multidisciplinary consults for individual clients and initiate referrals as needed (Clinical Nutritionists, discharge planning, O.T./P.T., Enterostomal Therapy Nurse (E.T.)).

NATURE'S BIOLOGICAL DRESSING – OUR SKIN

The skin of an average adult covers approximately 3000 square inches, it weighs approximately 6 pounds and receives approximately 1/3 of the body's circulating blood volume. The skin forms a protective barrier from the external environment while maintaining a homeostatic internal environment. Major assaults to our skin (through surgical incisions, burns, injuries) can lead to life-threatening consequences without appropriate treatment.

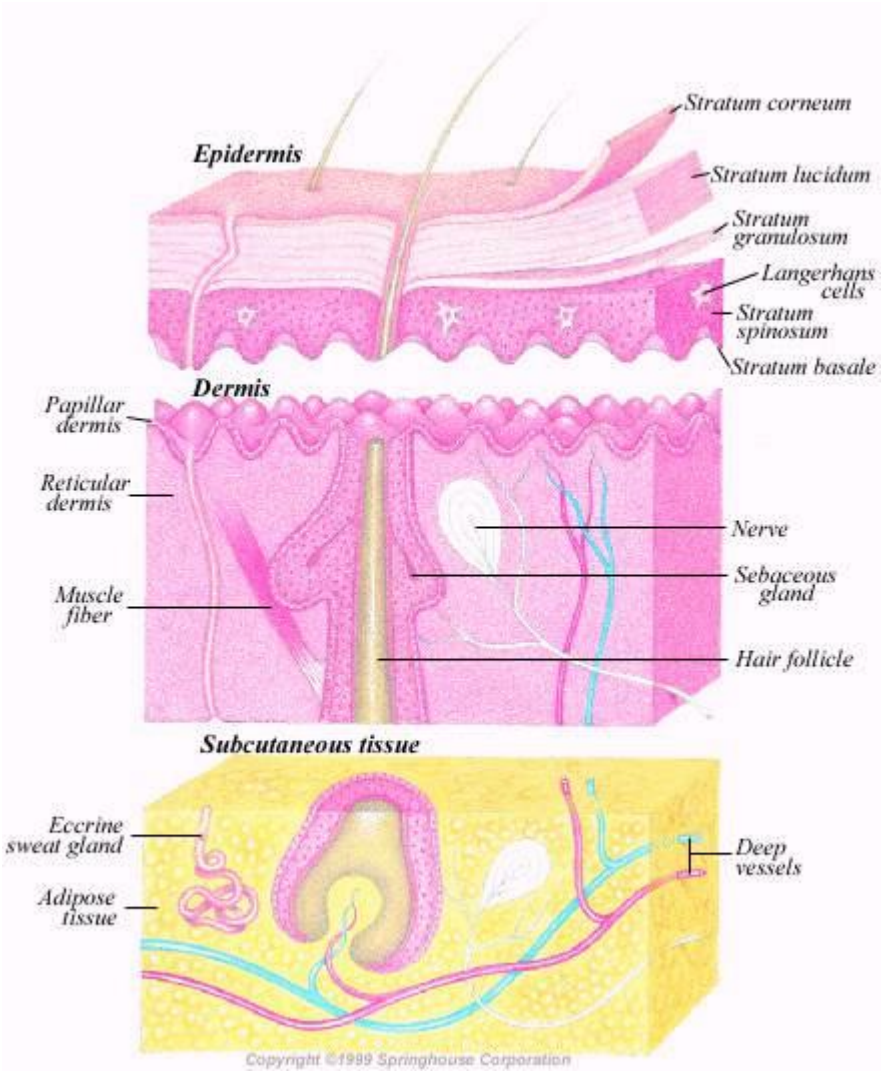
The skin varies in thickness from 0.5mm to 6mm. The thickest areas of skin are located in the palms of our hands and soles of our feet.

Once tissue heals either from pressure ulcers or types of wounds, it never returns to its' full strength. **At best, the tensile strength of scar tissue is never more than 80% of the tensile strength in non-wound tissue.**

There are 5 major functions of skin:

1. Protection
2. Thermoregulation
3. Sensation
4. Metabolism
5. Communication

Anatomy of the Skin



(Reference: Springnet: Skin Care: Keeping the Outside Healthy, May 1999)

Our skin is divided into 2 major layers: epidermis (outermost layer) and dermis (innermost layer).

The epidermis is avascular and composed of stratified squamous epithelial cells and has 5 layers itself. The outermost layer, stratum corneum, contains the cells that are removed by daily activity of handwashing, scratching, bathing, and changing clothes. The rest of the layers (stratum lucidum, stratum granulosum, stratum spinosum, stratum germinativum) contain a

variety of materials including keratin (tough fibrous insoluble protein), keratinocytes, melanocytes (responsible for skin pigmentation).

The dermis is the thickest skin layer and is found below the epidermis. It contains elastin and collagen proteins that are secreted by fibroblasts. The dermis gives our tissue its' strength and elastic recoil.

FACTORS THAT ALTER OUR SKIN

- ***Age*** As we age, our skin characteristics change. Epidermal turnover time increases from every 21 days to every 42 days by age 35. Sensory receptors diminish, vitamin D production decreases, our inflammatory response is weakened and we have fewer sweat glands, vascularity and our epidermal-dermal tissues thin and produce less collagen and elastin. All of these changes increase the risk of skin trauma and decreased healing to open skin.

- ***Sun*** Excessive exposure to ultraviolet radiation can accelerate the aging of the skin and if prolonged, can lead to burns and skin damage.

- ***Hydration*** Application of skin emollients can replace some lost moisture to the skin and prevent drying and cracking therefore serving a protective function.
- ***Soaps*** Use of alkaline soaps increases the skin pH above the body's normal "acid-mantle" of 5.5 and therefore interferes with our bacterial resistance. Normal skin pH of 5.5 provides a protective function against bacteria on the skin and any disruption of this process can cause proliferation of harmful bacteria. You would also want to avoid agents that dry the skin like products containing alcohol and acetone.

- ***Nutrition*** If the skin is damaged, increased dietary intake of some substances such as vitamin C for collagen formation may be beneficial. Fats are broken down into fatty acids which can be used by cells to form a lipid bilayer. Carbohydrates supply energy for cell metabolism. Other vitamins and minerals can be used to maintain healthy skin such as: vitamin B, D and A; iron, zinc and copper. The provision of adequate nutrition is a vital part of pressure ulcer prevention and management.

Wound healing and the immune responses depend on an adequate supply of nutrients (Maklebust and Sieggreen, 1996). In addition, heavily exuding pressure ulcers can lose a large amount of protein without it being detected (Dealey, 1994).

- ***Medications*** Corticosteroids interfere with epidermal regeneration and collagen synthesis. Other categories of medications can cause photosensitive and phototoxic reactions.

TYPES OF SKIN DAMAGE

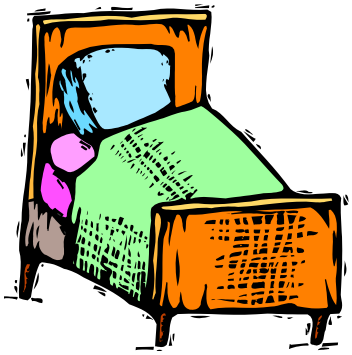
1. Mechanical Damage
   - (a) Pressure
   - (b) Shear
   - (c) Friction
   - (d) Epidermal Stripping
2. Chemical Damage
3. Vascular Damage
4. Infectious Damage

MECHANICAL DAMAGE

Pressure – The most familiar form of mechanical damage. When external pressure forces exceed capillary closing pressure (the amount of force required to close capillaries in tissue), capillary occlusion occurs and if the pressure is unrelieved, tissue ischemia and cell death can occur (necrosis). All bony prominences are at risk of increased pressure because they have a bone-tissue interface. Special attention to heels needs to be done every shift. Because heels have such a small surface area needed to support a patient's legs when lying in bed, they are at increased risk for tissue damage. All bed/chair bound patients should have their heels supported off the bed by a pillow under their calves as long as it is not medically contraindicated. A patient is at risk for tissue damage when there is a high amount of pressure for a short period of time or a mild constant pressure for a long period of time. As nurses, it is imperative that we assist clients who are unable to sense this build up of pressure or who are too weak or unable to relieve this pressure on a regular basis. All bed/chair bound patients should be taught/assisted with turning at least every 2 hours.

People who are wheel-chair bound should be taught to make slight position changes every 15 minutes.

Shear – Shear force is created by the interaction of both gravity and friction against the surface of the skin. Friction is always present when shear force is present. Shear injury is predominately localized at the sacrum or coccyx and is most commonly a consequence of elevating the head of the bed without the knee's gatched or improper transfer technique.



Prevention of shear:

- limit elevating the head of bed to no more than 30 degrees and for limited times
- position feet against foot board
- use knee gatch when the head of bed is elevated
- use lift sheet to reposition patient

*Although sheepskin has been advocated to reduce shear, no research has been conducted to support this as an intervention.

Sheepskin is **not** a pressure-reduction measure.

Friction – Injury occurs from 2 surfaces rubbing together and has the appearance of an abrasion. This type of injury is frequently seen on elbows or heels. Careful repositioning and application of transparent dressings or liquid barrier film (3M No Sting) can help to prevent/minimize this type of injury.

Epidermal Stripping – Epidermal stripping is caused by inadvertent removal of the epidermis through tape removal. These injuries are usually an irregular shape and shallow, involving only the epidermis.

Prevention of Epidermal Stripping:

- Apply tape without tension
- Use porous tape (allows moisture to evapourate)

- To remove tape, slowly peel tape away from anchored skin
- Secure dressings with roll gauze, tubular stockinettes when possible to minimize tape on skin
- Use liquid skin sealants (eg. 3M No Sting) or solid wafer skin barrier (eg. Hollister Premium 4x4 Skin Barrier). Use liquid skin

sealants carefully with clients who have thin fragile skin as they may increase adhesion of tapes and cause skin damage
- Secure dressings with Montgomery Straps
- Use liquid adhesive removers under tapes for non-traumatic removal eg. "Remove"—stocked in Materials Management

As with all products, you must be aware that sensitivities can develop with certain patients and the product should be discontinued if this is noted. Always wash skin thoroughly after using liquid removers to prevent irritation.

Chemical Factors

The presence of chemical on the skin is a common source of skin damage and can result from fecal/urinary incontinence, tube drainage leaking around insertion sites, harsh solutions such as povidone-iodine and improper use of products such as skin sealants. Early manifestations start with erythema and can quickly progress to denudement if exposure continues.

Prevention of Chemical Dermatitis:
- Identifying those at risk and implementing preventative skin care regimen with moisture-barrier ointments (zinc-based), barrier liquid skin sealants, barrier powders etc.
- Prevent drainage around catheters or drains from contacting skin
- Use solvents, skin barriers, soaps, adhesives properly

Vascular Damage

Arterial – Arterial ulcers are most commonly found below the ankle, usually small in size, can be deep with even edges, the wound bed may be dry, pale and/or necrotic, patients may complain about increased pain to leg when elevated and some relief when dangling it towards the floor. Pulses may be weak or not palpable, they may have dry, thick yellow toenails and decreased hair growth on their lower extremities. When an ankle-brachial index is taken (ABI) it is < 0.8, demonstrating poor arterial flow.

When arterial perfusion is jeopardized, care should be taken to prevent the development of arterial ulcerations. Avoid compression, constricting garments, or any type of trauma to the extremity. Arterial

testing/doppler studies should be undertaken and a vascular consult obtained.

It is imperative to monitor these types of ulcers very closely due to the decreased blood supply to the area and the increased risk of infection/sepsis. If the patient is a candidate for surgery, he/she may have revascularization surgery. Health teaching regarding the cessation of smoking (if applicable) and well-balanced diet for these and all patients with ulcers is important. Smoking is of special significance in patients with ischemic arterial ulcers as it exacerbates the arterial constriction.

Debridement is contraindicated in the presence of dry ganrene or a stable, dry ischemic wound until vascular status is evaluated. Removal of eschar results in an open wound, which could easily become infected when the blood supply is diminished.

If your patient demonstrates signs of acute limb ischemia – inability to wiggle extremities, loss of light touch overt the dorsum of the foot, pain on squeezing the calf, colour changes of the limb [marble white (early) to dark mottling (late)] the physician needs to be notified immediately (Callum, K and Bradbury A, 2000).

Venous – Venous ulcers can develop due to venous hypertension caused by incompetent perforator veins that do not permit venous return therefore causing pooling and dilation of vessels. These ulcers are most commonly found in the gaiter area (midcalf to heel), are shallow, irregularily shaped, painless to moderately painful and can be highly exudative. The lower extremity is often edematous, has a reddish-brown discolouration and woody texture. The skin may have a dry scaly dermatitis. An ankle-brachial index should be completed to determine blood flow. A reading of >0.8 will indicate adequate arterial perfusion.

The most common form of treatment is local wound care, absorption of drainage, treatment of surrounding skin and compression to increase venous return. Compression via wraps/stockings should only be done after vascular testing to determine adequate arterial blood flow. **NEVER COMPRESS AN EXTREMITY THAT HAS ARTERIAL BLOOD FLOW COMPROMISE.** Close monitoring of the patient during compression therapy is indicated. Circulation and motion of the wrapped leg needs to be assessed regularly and the compression decreased if any circulatory problems occur. Respiratory-Cardiovascular status also needs to be assessed to monitor the patients' adaptation to the treatment and increased venous load on the heart/lungs.

Once the ulcer has healed (and this may be a long process), the patient needs to be measured for compression stockings (i.e. JOBST stockings). These stockings should be worn to prevent further ulcerations and skin breakdown. Venous ulcers can and do resurface in the same area, therefore preventative skin care and compression stockings are important factors in preventing re-occurance.

Diabetic – Diabetic ulcers are extremely complex to treat due to the triad of contributing factors. These patients may have arterial insufficiency, trauma and peripheral neuropathy. Consultation with the physician to determine appropriate treatment is of utmost importance. **Key preventive strategies to reduce the risk of injury in the neuropathic foot**: Foot soaks are not recommended, well-fitted shoes should always be worn to protect the feet from trauma or thermal injury and the skin should be kept well moisturized.

Infectious Damage

Many skin rashes are indicative of an infectious process and can occur around wounds or be misinterpreted as a result of pressure, shear, friction or chemical irritation.

Candidiasis- Candida albicans is manifested by erythema, maceration, and pustules, which are abraded into papules. Satellite pustular lesions (outside the advancing edge of candidiasis) are an important diagnostic feature. Intact pustules are not always visible because they may be unroofed by apposing skin and clothing.

Predisposing factors include the presence of a moist environment and antibiotic therapy. Skin folds, damp dressings, groin and axilla areas are typical moist areas.

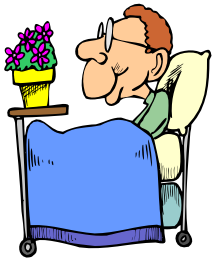
Accurate diagnosis can be determined through skin scrapings prepared in a KOH prep (potassium-hydroxide solution). Treatment is focused around maintaining a clean-dry environment and treatment with an antifungal cream or powder (eg. Clotrimazole cream, Tinactin Powder).

Infection

Since all chronic wounds are colonized by bacteria they should not be routinely swabbed as this is an expensive waste of time and resources. In recent studies, ulcer healing has not been influenced by the presence of bacteria (Skene et al, 1992; Trengrove et al, 1996). **However, if an ulcer deteriorates and there is increased exudate, odour, pain, pyrexia and erythema, then bacteria cultures should be obtained, as it is likely that the ulcer is infected. Physician orders should be obtained for all cultures.**

How Can Pressure Ulcers Be Prevented?

The keys to preventing pressure ulcers are the identification of at-risk individual, routine assessment of skin integrity, and aggressive interventions (Calianno, 2000). At Windsor Regional Hospital, we have implemented the Pressure Ulcer Risk Assessment Tool called The Braden Scale, developed by Barbara Braden and Nancy Bergstrom to assist us in identifying high risk individuals.



The following page illustrates the Braden Scale nursing interventions. Scoring will be **done on all inpatients upon admission. Each patient should then be reassessed every 24 hours.** Recommendations for nursing interventions are located on the back to guide your care. Please note the guidelines for Interdisciplinary consults that may be appropriate for your patient. ***A copy of this form will be kept laminated as a permanent resource guide in each chart.***

BRADEN SCORE INTERVENTIONS

Windsor Regional Hospital Inclusion Criteria

- All patients are assessed every 24 hours.
- If a pressure ulcer formation develops, institute Wound Assessment Record and notify physician.

INTERDISCIPLINARY CONSULTS

Dietician: To evaluate nutritional and fluid support if:
- NPO/clear fluids or IV's >72 hrs. ● Eats < 50% of food on tray in 72 hrs.
- Tube feedings, TPN

Enterostomal Therapist: ● For patients with difficult incontinence needs and/or perineal skin

Occupational Therapist:
- For assistive devices for activities of daily living
- To assess and suggest positioning techniques and devices to aid with limb/body positioning and prevention of contractures/foot drop and skin breakdown

Physiotherapist:
- To assess patient for gait training/ambulation techniques if mobility/activity scores 1-2

Social Work/CCAC ● To assist with discharge planning

Guidelines by Level of Risk

MILD RISK (Score 15 – 18)

1. Assessment of skin integrity daily
2. Maintain skin integrity
3. Establish and follow a turning schedule (turn and re-position every 2 hours), if indicated
4. Maximize activity level, mobility and range of motion
5. Protect heels (off load from mattress surface), if indicated
6. Manage/improve nutritional status
7. If other major risk factors present, advance to next level of risk

MODERATE RISK (Score 13 – 14)

1. Implement all interventions for mild risk
2. Avoid positioning patients directly on bony prominences (hips, ankles, heels, scapula etc.)
3. Prevent contact between bony prominences (e.g. knees)
4. Maintain the head of the bed <30 degrees except for meals/medications or if contraindicated
5. Use assistive devices/techniques to facilitate patient movement (e.g. Turning sheets, trapeze, lifts, transfer boards)
6. Apply protective measures to LIMIT / CONTAIN / PROTECT skin exposure to moisture due to incontinence, perspiration or wound drainage (fecal/urinary collection devices, moisture barrier ointment, pastes).
7. Consider consult to dietician
8. Assess patient for need for support/specialty surface
9. If other major risk factors present, advance to next level of risk

HIGH RISK (Score 10 – 12)

1. Implement all interventions for both mild risk and moderate risk
2. Increase the frequency of turning and facilitate 30 angle lateral turns with devices, unless contraindicated
3. Supplement turning with small shifts in position, unless contraindicated
4. If position changes are contraindicated, assess for proper support surface/specialty bed selection
5. Obtain Dietician consult

VERY HIGH RISK (Score <9)

IMPLEMENT INTERVENTIONS FROM ALL RISK LEVELS

OUTCOME GOALS

- **Achievement/maintenance of intact tissue integrity**
- **Reduction of the incidence of new or recurrent pressure ulcers**

If a pressure ulcer develops on an inpatient unit, institute the Wound Care Assessment Record and notify the physician for topical treatment orders (see algorithm located on each unit for treatment suggestions).

Used appropriately, risk assessment scales can support requests for pressure-relieving systems. Always use clinical judgement in conjunction with a risk assessment tool. These tools were designed as aids and not as substitutes for clinical decision-making (Flanagan, 2000).

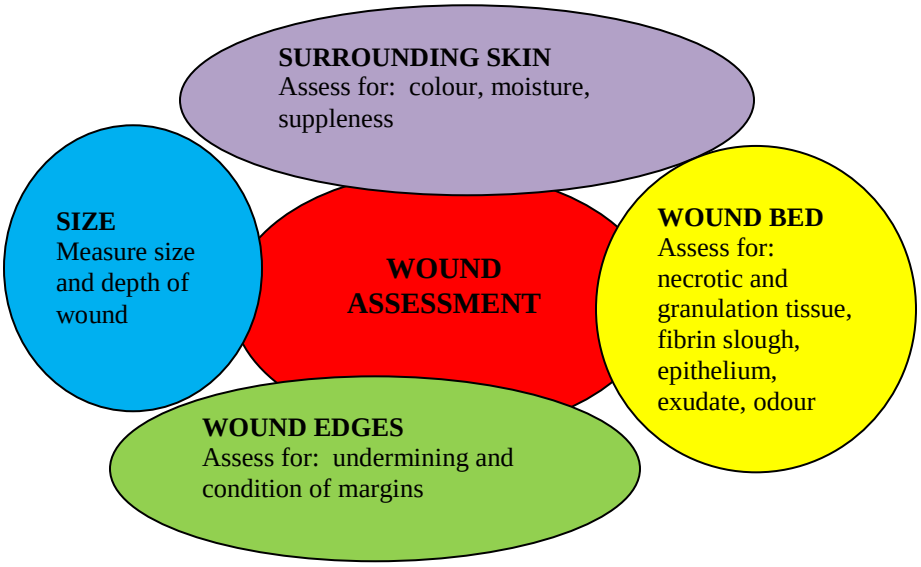
Tips for Preventing Pressure Ulcers

(portions adapted from: Clinical Management: Advances in Skin & Wound Care, 2000)

- Perform a systematic skin assessment daily on all patients at risk for pressure ulcers.
- Cleanse the skin at time of soiling and at routine intervals to minimize skin exposure to moisture and irritants. Avoid hot water and use a mild cleansing agent that minimizes irritation and dryness of the skin. Minimize the force and friction applied to the skin when cleansing.
- Minimize exposure to cold.
- Moisturize dry skin to keep it adequately hydrated.
- **Do not massage bony prominences**. This may lead to deep tissue trauma
- Turn and reposition patients at least every 2 hours, or more if indicated. Post a turning schedule at the bedside.
- Use proper positioning, turning, lifting and transferring techniques to avoid friction and shear. A lift sheet or pad should be used when moving or turning the patient.
- **Do not use doughnut-type devices to relieve pressure**. They can cause venous congestion and pressure ulcers.
- Use pillows or pads to separate skin surfaces and support limbs.
- Position the patient 30 degrees on his/her side, not directly on the trochanter.
- Keep the bed positioned at a 30 degree angle or less to reduce friction and shear (unless contraindicated).
- Have a sitting/wheelchair bound patient shift his or her weight every 15 minutes or reposition the patient in the chair every hour.
- Elevate heels off the bed with appropriate devices (unless contraindicated).
- Improve or maintain activity level, mobility and range of motion, if possible.
- Use pressure-reducing devices on the bed/chair for at-risk patients.
- Provide adequate pain management.
- Promote adequate nutritional intake, implement appropriate referrals when applicable.
- Provide structured and comprehensive education for health care providers, patients and caregivers.

WOUND ASSESSMENT MODEL

Wound assessments provide the foundation of the plan of care and are the only means of determining the effectiveness of the interventions.



An inpatient Wound Care Record will indicate the assessment parameters that should be used when a pressure ulcer is identified.

The stage of the pressure ulcer will influence the treatment plan, so it is important to stage accurately.

- Suspected Deep Tissue Injury = purple or maroon localized area of intact skin or a blood filled blister
- Stage I = reddened area; this stage is frequently misidentified when staging ulcers. It is still a pressure ulcer even if there is no break in the skin.
- Stage II = blister, superficial skin break
- Stage III = Skin break exposing subcutaneous tissue
- Stage IV = Skin break exposing muscle/tendon/bone
- Stage E = Presence of eschar (black, brown or yellow), unable to stage

The Enterostomal Therapy nurse (E.T.) is available for consultation to help determine staging.

Parameters to be assessed include:

- wound location (site)
- wound size – (length, width, depth) in centimeters
- drainage – type, amount, odour
- presence of inflammation, maceration, undermining, sinus tract
- wound bed colour
- presence of granulation and/or epithelialization tissue

Please review the "Guide to Using the Wound Care Record" that is contained on the next pages. It contains definitions for assessment parameters and strategies for making those assessments.

GUIDELINES FOR USING THE WOUND CARE RECORD

Guidelines for Completion of the Wound Care Record

- Initiated for all residents/patients with a wound
- May be completed by RNs or RPNs
- Date and indicate time of each assessment, date as day-month-year or write date in full
- Only use black ink
- Put a line through blank spaces where data is not entered

Completion of Wound Assessment in *Acute Care/ Met Campus*

- To be completed after a dressing change is performed

For All Patient Care Areas

- The guideline is completed by placing a (√) in the each box (where indicated). Each wound is assessed and labeled accordingly.

- Indicate if resident/patient was admitted with a wound

- **Site (see also - back page of form)**

  The site or sites on the front of the record should correspond to the numbered diagram on the back indicating the location of the wound.

♦ **Indicate Stage of Wound for Pressure Ulcers**

Stages

Suspected Deep Tissue Injury - Purple or maroon localized area of intact discoloured skin or blood filled blister. May be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

Stage I - Reddened or discoloured, non-blanchable area
Unbroken skin, does not fade after 20 - 30 minutes of pressure relief.
May be hard, warm or painful.

Stage II - Partial thickness skin loss of the epidermis and/or dermis
May present as blistering, abrasion, or shallow crater – painful.

Stage III - Full thickness skin loss with tissue damage extending through the epidermis and dermis and into the subcutaneous tissue but not throughout underlying fascia.

Stage IV - Full thickness skin loss with tissue damage extending into the muscle, bone, tendon or joint capsule. May present with undermining and sinus tracks.

Unstageable - Wounds covered with eschar that is adherent, black and devitalized. **"E" Eschar** or yellow-brown-grey slough - because it is impossible to visualize. **Slough – covering** the wound bed, this wound cannot be staged until base is visible.

Please Note: **NEVER downgrade pressure ulcers**. If the patient had a stage III ulcer and it is healing, it is not recorded as a stage II or stage I. It should be recorded as a stage III and once healed it is considered "a healed stage III ulcer".

- **Indicate Type of Wound**

Pressure Ulcer	An area of localized tissue damage caused by ischemia due to pressure
Arterial Ulcer	With arterial ulcers the arterial flow is diminished to the lower limbs from arteriosclerotic changes or atherosclerotic occlusion. Will appear punched out with minimal drainage.
Venous Ulcer	Venous Ulcers occur on the lower leg and are caused by valve incompetence in the deep perforating veins. Will have irregular borders and usually found on the medial malleolus and lower leg.
Diabetic Foot Ulcer	Occurs to a diabetic client and results from progressive neuropathic and vascular changes.
Venous/Arterial Ulcer	A combination ulcer that has both a venous and arterial component.
Skin Tear	A break in the external layer of the skin, the epidermis/dermis layer due to mechanical forces
Surgical Wound	Any wound or incision as a result of an operative procedure
Oncological Wound	Any wound that results from cancer and/or its treatment

- *Indicate Wound Thickness for Non-Pressure Wounds*

Partial Thickness	Involving the epidermis and dermis
Full Thickness	Involving the subcutaneous tissue, muscle or bone

- **Size**

Measure the length, width and depth in centimeters. A guide ruler should be used and a sterile saline soaked cotton tipped applicator for measuring. Probe the wound floor ***CAREFULLY*** for openings or tunneling. Probe under the wound edge for undermining. Measurement of wound length is made from head to toe. Undermining/Tunneling depth should be marked in cm. You may choose to mark the extent on the back of the wound record when you diagram it. The assessment should refer to the markings of a clock i.e. 2 cm of undermining between 1 and 3 o'clock.

Undermining –	extension of wound under wound edges, caused by tissue destruction
Tunneling –	a narrow channel or passageway underlying intact skin

- **Exudate**

Note colour:

Sanguinous	-	bloody red, bright or dark
Serosanguinous	-	thin, watery, pink
Serous	-	thin, watery, clear or amber
Purulent	-	thick, beige, yellow, green
Other	-	i.e. green, blue

Note amount: None, scant, moderate, large, heavy/copious

Note odour: Strong/foul, moderate, light/none
For accurate assessement, assess odour after cleansing.

- *Periwound Skin*

Pink/Intact	Skin that has no breaks or openings
Red/Erythema	Redness of skin
Induration	Engorgement of tissue that is hard, elevated and inflamed
Scaling/Dryness	Small, thin dry exfoliation shed from upper layers of skin
Callous	Hardened tissue that is devitalized due to pressure
Maceration	Softened white skin caused by excess contact with fluids. Skin may be white, wrinkled or leathery.

- Wound Colour

Eschar	Contains or may be covered by an area of devitalized tissue that may be gray, brown or black. This necrotic or devitalized tissue may be moist or dry.
Yellow	Slough is decaying collagen or fibrin that may be loose and stringy or firmly attached. It may be yellow, tan, gray or brown, moist or dry.
Pink/White (Epithelialization)	Epithelial tissue which is caused by cell formation in thetop layer of the skin is thin fragile and light pink/white in colour. It occurs as cells migrate across the surface of the wound.
Red (Granulating)	This is the formation or growth of small blood vessels and connective tissue that fills in an open wound bed. May appear bumpy and red.

- ***Estimate the percentage of each type of tissue in wound. Should add up to 100 %.***

- **Sensation**

  Painful Subjective report by the patient/resident or based on observations (grimacing/change in behaviour) observed by the nurse/family if patient/resident unable to express their pain.

  Burning As described by patient/resident, a sensation

  Neuropathic Burning, deep aching that may be accompanied by some sudden sharp lancinating pain. May present as numbness or tingling with absence of feeling to area of skin.

  Throbbing A beat or pulsation

  Itching Irritation of skin, inducing a desire to scratch

- **Treatment Done**
  Indicate protocols according to WRH practice.
  Indicate order(s) as per physician.

- **Nurses Signature** RN or RPN must sign name and professional designation.

- **Diagram (see back page of form)**

  Indicate wound sites by number on diagram on the reverse (i.e. 1 = sacral, 2 = L trochanter, 3 = heel). Diagram wound depth, tunneling and undermining in detail. Rediagram wound as changes occur. Additional wound sites may be added if they arise.

If you have any questions or require a skin/wound care consult, please feel free to contact Eleanor Bardgett – Clinical Practice Manager Surgery/Enterostomal Therapist Met Campus extension 52423 or Jessica Whittal – Enterostomal Therapist Ouellette Campus extension 33254.

Measuring Wound Tunneling

Direction:

1. Gently insert the normal saline moistened cotton-tipped applicator into the sites where tunneling occurs.
2. View the applicator as if it were a hand of a clock (12 o'clock lines up with the patient's head).
3. Progressing in a clockwise fashion, document the deepest sites where the wound tunnels (for example, "3 o'clock").

Depth:

1. Gently insert the cotton-tipped applicator into the tunneling areas.
2. Grasp the applicator where it meets the wound's edges.
3. Pull the applicator out, place it next to a measuring guide, and document the measurement (in centimeters).

Note: The Enterostomal Therapy Nurse is available to consult on wounds with tunneling to assist in determining depth and direction.

Wound/Skin Products Available

The following are categories of common dressings in use, however these are by no means all of the dressing categories available. The comprehensive list of categories/products is available on the WRH Intranet site under programs and services – Enterostomal Therapy Services.

Transparent Adhesive Films:

Film dressings are permeable to oxygen and allow water vapor to pass from inside. They are impermeable to bacteria and environmental contaminates. Maintain moist wound surface, provide some degree of insulation because of the fluid layer retained next to the wound surface.

Indications for use:

- √ Stage I Ulcers, as a protective dressing
- √ Stage II-IV Ulcers with minimal drainage, as a cover dressing

Contraindications for use:

- ∅ Exudative wounds
- ∅ Wounds with sinus tracts (unless used with packing)
- ∅ Friable skin surrounding the lesion

Guidelines for use:

- √ Must have border of intact dry skin.
- √ Frequency of change based on exudate accumulation or loss of secure seal.

Hydrocolloids:

Wafers containing hydroactive/absorptive particles that interact with sound exudate to form a gelatinous mass. It supports autolytic debridement, especially for wounds with slough or a combination of necrosis and exudate.

Indications for use:

- √ Stage I Ulcers, as a protective dressing
- √ Stage II-IV Ulcers with minimal drainage, as a cover dressing
- √ Stage II-IV Ulcers with moderate to heavy drainage, as a secondary dressing covering the wound filler

Contraindications for use:

- ∅ Heavily Exudative wounds
- ∅ Wounds with sinus tracts (unless used with packing)
- ∅ Friable fragile surrounding skin
- ∅ Infected wound
- ∅ Wounds on feet

Guidelines for use:

- √ Edges can be secured with tape or liquid skin prep (we use 3M No Sting) to prevent rolling.
- √ Frequency of change based on amount of exudate; typical frequency every 3-5 days. Dressing should be changed for wrinkling, or if edges loosen or dressing leaks.
- √ Yellowish odorous exudate is normal when dressing is removed.

Hydrogels:

Gel dressing which maintains a clean moist wound surface. Hydrogels are oxygen permeable, and act to cool the skin surface. They may moisten/soften eschar.

Indications for use:

- √ Stage II-IV ulcers with moderate to heavy drainage, as a wound filler dressing
- √ Stage II-IV ulcers minimal to heavy drainage

Contraindications for use:

- ∅ No contraindications; must match appropriate form of gel dressing to wound

Guidelines for use:

- √ Frequency of dressing changes are dependent on the amount of exudate. Usual frequency is once or twice a day.
- √ Cover dressings are selected based on the amount of protection needed.

Calcium Alginates:

A highly absorbent interactive dressing, calcium alginate dressings are non-woven fibrous mats derived from seaweed. They are placed in the wound bed dry and convert to a viscous gel after contact with exudate.

Indications for use:

- √ Wounds with moderate to large amounts of exudate, as a wound filler dressing

Contraindications for use:

- ∅ Wounds with minimal exudate
- ∅ Wounds with dry eschar – they must be debrided before using a calcium alginate
- ∅ Partial thickness wounds (stage I-II)

Guidelines for use:

- √ All required a cover dressing to provide protection from environmental contaminants and some degree of insulation. The cover dressing should be selected based on wound location and amount of exudate.

Semi-Permeable Foam Dressings:

Foam dressings absorb excess wound exudate while maintaining a moist wound environment. They support autolytic debridement in exudative wounds.

Indications for use:

- √ Stage III-IV ulcers with moderate-heavy drainage. For wounds with depth or dead space, use with packing

Contraindications for use:

- ∅ Partial-thickness wounds with no exudate
- ∅ Full-thickness wounds with dry eschar
- ∅ Wounds with sinus tracts, unless used with packing

Guidelines for use:

- √ May need to protect intact skin around wound from maceration with skin sealant, for example.
- √ Must secure with elastic bandage, wrap bandage, or tape. More difficult to use in sacral area.
- √ Dressing change frequency is dependent on exudate; typical frequency is every 2-5 days.

PRESSURE ULCER CLEANSING GUIDELINES

The goals of wound cleansing are: removal of bacteria and surface contaminants (slough, foreign bodies, purulent exudate), and protection of the healing wound.

Clean Proliferating Wounds

- Gentle flushing of wound surface to minimize disruption of new tissue formation.
- Use of noncytotoxic solutions such as saline are recommended. Antiseptics commonly used in wound care (povidone-iodine, chlorhexidine (stanhexidine), acetic acid, hydrogen peroxide, hypochlorite solutions) are ***contraindicated*** in the management of clean proliferating wounds because they damage or destroy the cells required to tissue repair.

Infected or Necrotic Wounds

- Thorough irrigation of the wound surface to remove avascular debris and bacteria. Optimal irrigation force can be obtained with a 35ml syringe and a 19-gauge needle to maximize bacterial removal while minimizing tissue trauma. At Windsor Regional Hospital, we have sterile 100cc 0.9% Normal Saline bottles with irrigation tip to irrigate non-tunneling wounds. For deep and/or tunneling wounds, a syringe and soft rubber catheter may be needed to access all areas appropriately.
- Use of surfactant cleansers, or saline or selective use of topical antiseptics. ****Antiseptic solutions should only be used under the direction of a physician**** Antiseptics exert their effects by damaging cell membranes and can be deleterious to fibroblasts and other cells needed for wound repair (Lineaweaver, Howard, Soucy et al, 1985, Rodeheaver, 1989)

Progress may be slow with any plan of care for dermal ulcer management. The patient may have more than one dermal ulcer, each at different stages. Interventions should be continued for a minimum of **one week** before the plan should be altered. This allows true assessment of the effectiveness of the plan. It also minimizes repetition of steps to manage the ulcer.

GENERAL PRINCIPLES OF WOUND CARE

The goal in wound management is to keep the wound:

- √ Moist
- √ Clean
- √ Free from physical trauma

Removing a dressing:

- Use standard precautions
- Remove the old dressing by carefully lifting the adhesive tape of the surrounding skin by supporting the skin with your fingers. If resistance is met, you may need to use adhesive remover "Remove" (carried in stores) or baby oil to ease removal. If any solvent/solution is used, remember to cleanse skin thoroughly after use
- Note the :
    - Amount of drainage
    - Type of drainage
    - Colour of drainage
    - Odour of drainage

- Remove your gloves by turning them inside out with the dressing in your hand - discard appropriately
- Wash hands and apply new gloves before performing wound care

Key points to report to the physician:

1. Any separation of wound edges
2. Any redness, warmth, swelling
3. Any discharge at a suture line
4. Any purulent drainage from wound or around sutures/staples

Drainage Management:

If a wound is draining ***less than 50cc/day***, gauze dressings are acceptable to absorb drainage and exudate.

If a wound is draining ***more than 50cc/day***, a pouch may be an option to collect the drainage. Pouching provides accurate measurement of drainage and eliminates the need for frequent dressing changes, therefore, protecting the skin around the wound from breakdown.

Please call your E.T. nurse Eleanor, if consultation is required for pouch application.

Specialty Support Surfaces

Specialty support surfaces, when used in conjunction with good skin and wound care, optimal nutrition, appropriate positioning and turning techniques, are useful in preventing the development of new pressure ulcer and will enhance healing of pre-existing conditions. Judicious use of these surfaces can decrease hospitalization time, improve comfort and hasten healing of dermal/pressure ulcers, therefore, justifying the cost of involved with the rental/purchase of the specialty bed.

Each surface or bed should be chosen after careful assessment of patient status and needs. To avoid confusion, an algorithm was developed to guide the clinician in the process of choosing the surface that will meet the patient's needs. Please contact Eleanor, your E.T. nurse to assist you with this process when needed.

All patients on specialty surfaces and beds should be evaluated daily to determine continued need of the surface. It should be discontinued when

the criteria for use are no longer met. Daily documentation by the nurse should support the rationale for ongoing use of the specialty surface. When no longer required, the company should be contacted ASAP to pick-up the specialty surface.
Patients who are wheelchair or chair-bound should be evaluated for the appropriateness of a seating cushion. Staff should obtain a consult for O.T. to evaluate when applicable.

Doughnut-type devices are **contraindicated** to use as studies have shown they actually ***increase the pressure to surrounding areas by increasing venous congestion and edema and ***increase the potential for breakdown in these areas*****

***** PLEASE NOTE*****
ADDITIONAL DETAILED INFORMATION WITH RESPECT TO SKIN CARE MANAGEMENT AND MANAGEMENT OF PRESSURE ULCERS IS AVAILABLE ON THE WRH INTRANET SITE UNDER PROGRAMS AND SERVICES – ENTEROSTOMAL THERAPY SERVICES

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