Northamptonshire Healthcare
NHS Foundation Trust

GUIDELINES FOR THE ASSESSMENT & MANAGEMENT OF WOUNDS

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1. INTRODUCTION

Patients can develop a variety of wound types which may be caused by trauma, surgical intervention or disease processes. Wound Management can be delivered by patients themselves (self-care/shared care), by carers or by Health Care Professionals (HCPs).

In most cases wounds heal as expected, without a need for complex management. However, some wounds are 'hard to heal' and patients may need more specialist interventions.

Guest *et al* the 'Burden of Wounds Study' (2020) found that the NHS looks after 3.8 million people with a wound (71% increase in 5 years). The cost of wound care for the NHS was estimated at £8.3 million – an increase in 48% in 5 years (81% in the community setting). The number of patients with a wound is estimated to increase by 11% per year. The additional impact of the Covid-19 pandemic is also expected to be significant. A chronic, complex or 'hard to heal' wound is a wound that has failed to respond to an evidence-based standard of care.

This guidance considers the processes involved in standard wound healing and measures that can be taken when wounds become complex and hard to heal.

2. PURPOSE

This guidance is to be used by all HCPs involved in wound care delivery within NHFT regardless of employer and describes the minimum standard of care expected.

Following this guidance will ensure that all wound care delivered at within NHFT is based on established, evidence-based care principles to achieve best outcomes for patients.

3. DEFINITIONS

Wound: a break in the continuity of the skin

Chronic / Complex or 'Hard to Heal' Wound: a wound that fails to heal for a reason connected or unconnected to the wound itself (e.g. bacterial burden in the wound or systemic effects of another pathology)

Wound Hygiene: disruption of the biofilm - achieved using the 4-step process of 'cleanse, debride, refashion and dress'

Pressure Ulcer: damage to the skin and the deeper layer of tissue under the skin. This happens when pressure is applied to the same area of skin for a period of time and cuts off its blood supply (NICE, 2014)

Venous Leg Ulcer (VLU): a wound to the lower leg that fails to heal within 2 weeks due to poor venous return

Arterial Leg Ulcer: a wound to the lower leg that fails to heal within 2 weeks due to insufficient arterial circulation

Mixed Aetiology Leg Ulcer: a wound to the lower leg that fails to heal within 2 weeks due to a combination of arterial and venous impairment

Rheumatoid Leg Ulcer: a wound to the lower leg that fails to heal due to the systemic effects of rheumatic disease

Diabetic Foot Ulcer (DFU): a wound to the foot (below the ankle line) of a person with diabetes, that fails to heal due to the systemic effects of diabetes

Dehiscence: the partial or complete separation of a closed surgical incision due to infection or other cause

Malignant Fungating wound: a neoplasm that erupts through the skin surface

Fistula: an opening between 2 organs or (more relevant to this specialty) from an organ to the skin surface - an entero-cutaneous fistula

NPWT: Negative Pressure Wound Therapy e.g. V.A.C. Therapy® or Renasys®

4. GUIDELINE PROCESS

4.1 The Physiological Process of Wound Healing

There are two main types of healing, primary intention and secondary intention.

- **Primary intention** - these are clean, simple wounds that have minimal tissue loss and edges that can be brought closely together and held by sutures, clips, glue etc. They heal relatively quickly with epithelial continuity in 48 hours.

- **Secondary intention** - these are more complicated and have excessive tissue loss. The edges cannot be brought together. The wounds are 'open' and take much longer to heal.

Healing by Secondary Intention

Wound healing can be broken down into four phases. These phases will overlap and the time taken to progress will vary and be dependent on many factors including age and general medical condition. In most cases there are no clearly defined gaps or changeovers from one stage to another with both inflammatory and proliferative processes occurring together at varying levels until the wound is epithelialised (fully closed).

1. **The Vascular Response**

Seconds after injury the damaged ends of the blood vessels constrict, to minimise blood flow and initiate the clotting process. Platelet aggregation and the release of several growth factors needed for wound repair speed this up. A blood clot forms consisting of a fibrin mesh which traps the blood cells and seals the wound. Vasodilatation of the vessels surrounding the wound also begins to occur and growth factors released, which attract white blood cells and inflammatory stage chemicals.

2. **The Inflammatory Phase**

Due to increased blood flow and accumulation of fluid in the soft tissue, there are localised signs of erythema (redness), heat and oedema (swelling). Pressure is exerted on the sensory nerve causing pain and restriction of movement.

Neutrophils (white blood cells) arrive at the wound site within hours of injury and provide initial protection against infection. These are phagocytic and engulf foreign bodies, having a short life being replaced by Monocytes (also phagocytic) but these develop into macrophages and play an important role in the wound healing process.

Clean wounds will spend up to 36 hours in the inflammatory phase, but the process is prolonged if the wound becomes sloughy/necrotic or infected.

The inflammatory response may be suppressed or absent in patients who are immunosuppressed and those receiving immunosuppressive drugs such as NSAIDS, cytotoxics or steroids. Therefore they may fail to activate the normal healing process.

3. The Proliferation Phase

At this stage the wound begins to fill with connective tissue. Granulation is the term given to formation of new capillary growth in the wound bed, which supports the development of new connective tissue. Granulation tissue is identified by its granular and slightly uneven appearance.
Contraction also occurs during connective tissue production. Myofibroblasts congregate around the wound margin and are able to contract; pulling the edges of the wound together and the size of the wound is reduced.

4. The Maturation Phase

Connective tissue and epithelialisation have now closed the wound. A scar appears and is remodelled by stimulation from macrophages, until a stronger scar is formed as collagen deposited under the skin is organised into a stronger structure. As the scar matures, the blood supply decreases and finally results in a flatter scar. At best the scar will only be 80% as strong as uninjured tissue.

4.2 Factors Influencing Wound Healing

Intrinsic (Systemic) factors

• **Hydration** Dehydration with resulting electrolyte imbalance will impair cellular function.

• **Nutrition** A poor nutritional state is a major factor in delaying wound healing as calories and other nutrients are needed for cell proliferation

• **Concurrent disease** Any other disease present that disrupts homeostasis will inhibit healing (e.g. heart failure, coronary artery disease, respiratory failure) and those affecting cell division slow new cell production (e.g. rheumatism, cancer, connective tissue disorders)

• **Vascular insufficiencies** A good blood supply is necessary to deliver oxygen and nutrients to the wound.

• **Age** The elderly tend to heal more slowly because of changes caused by the ageing process.

• **Immunosuppression, drugs and radiation therapy** Suppression may be caused by disease or medication, i.e. anti-inflammatory, anticoagulant and cytotoxic agents all reduce healing rates. Radiation can damage the surrounding tissues.

• **Stress** The physiological effects of stress have been shown to inhibit wound healing whilst motivation of patients and carers can improve both treatment concordance and healing rate.

• **Systemic infection** Infection makes additional demands on both immune and inflammatory processes.

• **Lack of sleep / rest** Tissue repair and rate of cellular division are enhanced by sleep / rest.

• **Substance abuse** Smoking, alcohol and drug dependency can all negatively affect healing.

Extrinsic (local) Factors

• **Pressure** can cause the capillary network to be disrupted, impeding blood flow to surrounding tissues.

• **Micro-environment** Wound healing is most effective in a damp rather than wet or dry microclimate as this allows the growth factors that regulate healing to operate effectively and provides optimal cell proliferation.

• **Temperature** Cooling causes vasoconstriction, limiting capillary circulation so irrigation and dressing changes should be minimised.

• **Duration of wound** Chronic wounds exhibit changes in growth factor production, reducing or blocking healing.

• **Mechanical stress** Shear or friction forces on the skin / wound may be caused by poor manual handling techniques. Wounds on or close to joints are also slower to heal.

• **Bacterial burden** Whilst all wounds have some bacteria present, if high in quantity, a biofilm forms or they are of a virulent strain, healing may be impaired

• **Size of wound** Large or deep wounds with extensive tissue loss will, by default, take longer to heal.

• **Necrotic tissue / slough** Necrotic tissue is dead tissue in response to injury, disease or occlusion of blood flow. Sloughy (devitalised) tissue (dead white cells, bacteria, rehydrated necrotic tissue), has a yellow / white / grey hue. The presence of necrotic / sloughy tissue often prolongs the inflammatory stage for up to several weeks.
Removal (debridement) may occur naturally (by inflammation), or sharp debridement / mechanical debridement should be considered following holistic assessment. **Caution**: if DFU or ischaemia refer to specialist for advice.

• **Skin maceration** Exposure to high volumes of fluid can damage the surrounding skin.

• **Foreign Bodies** Cause tissue irritation and prolong the inflammatory response and can result in infection (e.g. debris in wound or internal sutures in dehisced wound)

4.3 Holistic Wound Assessment

Holistic Assessment is essential when managing a patient with a wound. Factors influencing wound healing should be identified and measures put in place to promote wound healing where possible.

The **TIMES** framework is used in NHFT (Schultz *et al*, 2003). Frameworks such as TIMES (tissue, infection/inflammation, moisture balance, edges, surrounding skin) will empower clinicians to have a structured approach to wound assessment (Atkin *et al*, 2019).

T = Tissue – the colour of the wound bed will indicate whether any devitalised (unhealthy/dead) tissue is present. A healthy wound bed is red in colour. Necrotic tissue is black and sloughy tissue can range from brown to yellow. Devitalised tissue will prolong the inflammatory phase of healing and the proliferation stage will be delayed or inhibited by this.

It is often advisable to actively debride this using sharp debridement, monofilament pads (e.g. Debrisoft or Alprep), larvae or active dressings (e.g. hydrogel or manuka honey). **Debridement is NOT advised for pressure ulcers to heels in the absence of good arterial circulation as the risk of infection in these cases outweighs the delayed healing (Wounds UK, 2013a). This principle applies to any wound on the lower limb or Diabetic Foot Ulceration (refer to TVN, Vascular team or NHFT High Risk Foot Team for advice).**

When assessing the tissue in the wound bed, make note of any exposed bone, muscle, tendon or internal mesh / internal sutures (surgical wounds). Referral to specialist for advice if required.

I = Infection

A 'hard to heal' wound is a wound that has failed to respond to evidence-based standard of care. It is increasingly acknowledged that the majority—if not all—non-healing wounds contain biofilm, which is a key barrier to healing. A biofilm is a community of multispecies microbes. The patient's wound may or may not display symptoms of infection with a biofilm (Murphy *et al,* 2020)

WOUND HYGIENE - traditionally wounds have only been irrigated with saline, water or antiseptic solution. It was thought that wounds should not be cleansed / irrigated unless visible debris was identified. When irrigation took place, the approach was to cause minimal disruption to the wound bed for fear of delaying the wound healing process. If wounds were suspected to have a biofilm, then an attempt to disrupt it was made using antiseptic solution (e.g. Octenilin Irrigation) and Monofilament Pad (e.g. Debrisoft).
The concept of Wound Hygiene (Convatec, 2021) is based on the premise that <u>all</u> hard-to-heal wounds contain a biofilm. Using Wound Hygiene, disruption of the biofilm is achieved using the 4-step process of 'cleanse, debride, refashion and dress'. This process is structured, proactive and should be implemented to achieve a positive outcome. (See Appendix 1 for Wound Hygiene Algorithm).

Step 1 CLEANSE the wound and the peri-wound skin
Cleanse the wound bed to remove devitalised tissue, debris and biofilm. Cleanse the peri-wound skin to remove dead skin scales and callus and to decontaminate it. Cleansing fluid options are water, sterile saline or antiseptic solution (e.g. Octenilin Irrigation). Octenilin Irrigation is the solution of choice, assuming fluid can drain out of wound. Soaking wound with Octenilin soaked gauze for 5 minutes is an alternative option.

Step 2 – DEBRIDE
Remove necrotic tissue, slough, debris and biofilm at every dressing change (based on holistic assessment and method based on skill of clinician).

Step 1 & 2 can be carried out in one action. This can be achieved using saline or antiseptic (e.g. Octenilin) solution with gauze or Monofilament pad (e.g. Debrisoft / Alprep). Cleaning should be considered for up to 3-5 mins and pinpoint bleeding is expected. This process should be reduced / omitted if too painful, or significant risk of bleeding (e.g. malignant wounds). If patient is on anticoagulant medication, assess and progress with caution).

Step 3 REFASHION the wound edges
Remove necrotic, crusty and / or overhanging wound edges that may be harbouring biofilm. Ensure the skin edges align with the wound bed to facilitate epithelial advancement and wound contraction. Method based on skill of clinician.

Step 4 DRESS the wound
Address residual biofilm by preventing or delaying regrowth of biofilm by using dressings containing antibiofilm and / or antimicrobial agents (e.g. Aquacel Ag+ Extra).

Wound Infection
Significant bacterial presence in a wound prolongs the inflammatory stage and causes discomfort for the patient as well as introducing the potential risk of systemic infection. Appropriate action to reduce the bacterial burden must be taken as soon as possible. Assess **NEWS 2** when identifying suspected wound infection.

Signs of clinical infection vary according to type of organism and may include odour, peri-wound redness (erythema), discoloured exudate or increased pain. Peri-wound redness may not be visible on dark skin tone, so ensure to monitor for other symptoms. A patient may be pyrexial and feel generally unwell if there is spreading infection into the body.

The presence of some bacteria in a wound is expected. The important point is whether that is significant, based on two factors:

1. The number of bacteria which can range from:
a. Contaminated – there are bacteria present, but they are essentially inert and pose no threat to wound healing
b. Colonisation – bacteria are present and actively dividing but pose no threat to wound healing or risk of spread into surrounding tissues.
c. Local infection – the bacteria are proliferating and inhibiting wound healing but have not spread into surrounding tissues.
d. Infection – the bacteria are invading surrounding tissues causing local and / or systemic signs of infection.

2. Type of organism or impaired immune response
a. High risk organisms such as haemolytic streptococci, MRSA, ESBL formers etc. should always be treated as infection
b. In patients with a reduced immune response (e.g. receiving chemotherapy, on systemic steroids or post-transplant) the risk of infection spreading is higher so advice on antibiotic use should be sought from a microbiologist and a topical antimicrobial should always be used.

Local Infection –Bacteria/microbes are multiplying at a rate that overwhelms the host response. The microbes move deeper into the wound, local signs of infection start to be displayed but swabbing not required (Mahoney, 2020). Wound can be treated with topical antibiotics rather than systemic antibiotics (Wounds UK, 2020). If patient is immunocompromised, consider elevated risk and treat accordingly.

Spreading and systemic infection - Spreading infection describes the invasion of the surrounding tissue by microorganisms that have spread from the wound to deep tissue, muscle, fascia, organs or body cavities. Micro-organisms spread via the vascular or lymphatic system and can spread to the whole body. If systemic or spreading infection is present, antibiotic therapy must be started immediately while awaiting culture results. A sample/wound swab must be taken to determine the bacteria present and guide appropriate antibiotic use (Lipsky et al, 2016). The therapy should be reviewed and revised based on clinical response and microbiological culture/susceptibility results (Wounds UK, 2020).

M = Moisture – wounds heal properly when they are ‘damp’ so the fluid level in the wound is a critical factor. If they are too dry, growth factors are unable to activate granulation (new tissue) and angiogenesis (blood capillary growth). If a wound is too wet, these growth factors are too dilute to be effective or are simply washed away.
The nature of the wound fluid changes in chronic wounds, having a higher concentration of metalloproteinase, which destroys tissue in the inflammatory phase. These chemicals then damage granulation tissue, slowing or stopping healing (Wounds UK, 2013b)

E = Edge – exposure of skin to wound fluid causes maceration from the skin absorbing excess water, irritation due to the chemicals contained in body fluids and excoriation from the acidity or alkalinity of exudate from some bacteria (e.g. pseudomonas). This will inhibit healing at the wound margin or may increase the size of the wound as bacteria move into the newly damaged areas.

If there is a risk of skin damage from fluid (or it is already present) a barrier, emollient or topical steroid should be considered to prevent or reduce these changes.
It is also important that epithelial cells migrate in from the wound edge so wound assessment should include whether this is happening. Ensure any build up of dry skin plaques are removed using a monofilament pad or forceps. Macerated skin edges can also be improved through the use of monofilament pad / wound hygiene.

S=Surrounding Skin – damage to surrounding skin must be prevented if possible. Too much wound fluid can also damage the peri-wound, causing pain and possible wound deterioration. Increased bacteria levels to the peri-wound can also put the wound at risk of infection. The 'wound hygiene' principle (Murphy *et al,* 2020) promotes regular cleansing of the peri-wound. Ensure skin health is maintained, by preventing maceration (barrier film if required) and using monofilament pads to reduce biofilms and dry skin build up. Emollients should be used if required.

Other factors in wound assessment

Pain – normally healing wounds should not be painful. Pain is an indicator of infection or inflammation. Whether pain is constant or on contact is also important as analgesia may be needed constantly or for dressing changes only.
If touching a wound is painful, the patient will become sensitised to that and the pain level will become more severe due to anxiety at dressing change.
Pain may either be Noiceptor or Neuropathic derived. Because of this, adjunctive treatment for neuropathic pain (e.g. amitryptilline or gabapentin) may be needed in addition to analgesia (EWMA, 2002).

Categorisation – this is a concept that only applies to pressure ulcers. Any pressure ulcers should be assessed to include category, location and size. The categorisation system to be used is that provided by NHSI (2020). (Refer to CLPg003 *NHFT Guidelines for the Prevention & Management of Pressure Ulceration in all Care Settings).*

4.4. Documentation of Wounds
It is essential to keep accurate documentation of the assessment and the wound healing progress This will determine whether progression or deterioration is occurring and monitor the effectiveness of the care plan in place. Use Systmone Wound Management Templates for documentation.

Measuring the wound - wounds can be estimated by measuring the widest and longest parts of the wound with a sterile tape measure. This method is imprecise but does provide a baseline for objective evaluation of healing.
Measuring depth and undermining (tunnelling) – depth and undermining edges should be measured using a sterile plastic probe or if unavailable, use a wound swab and sterile tape measure.
Wound measurements should be done on initial assessment and at least weekly to monitor progress (or sooner if significant change). If measuring the wound is not practical e.g. large number of small wounds in one area, then consider taking weekly wound photos (with patient's verbal consent).

Photographing wounds – Wound photography should be done on initial assessment and at least 4-weekly (or sooner if significant change). Patient's verbal consent should be gained and documented. (Refer to *CLPg011 NHFT Guidelines for Wound Photography).*
If measuring or photographing wounds is not appropriate e.g. progressive malignant fungating wound or wound to genitalia, then document rationale).

Prevention of Cross Contamination
Hand washing has been identified as the single most important factor in preventing the spread of infection and should be carried out before and after all procedures. Alcohol gel does not eliminate the need for hand washing, but allows the healthcare worker to utilise for interim steps in the wound

dressing process. Hands still need to be washed before and after wound care, invasive procedures, after wearing gloves and after contact with a patient with a clinical infection.
Healthcare workers responsible for the management of wounds and other susceptible sites must use an **Aseptic Non-Touch Technique (ANTT)** to prevent the contamination of those sites. (Refer to *ICPr014 NHFT Aseptic Non-Touch Technique (ANTT).*

4.5 Nutrition for Wound Healing

Energy: An inadequate intake (from fat, carbohydrate and protein), will inevitably lead to the loss of subcutaneous tissue and muscle wasting. This in turn may precipitate wound complications and increase the risk of pressure ulcers. An adequate energy intake from fat and carbohydrate is therefore essential in order to:

- Meet energy demands imposed by tissue synthesis and repair
- Preserve subcutaneous tissue providing padding and protection to bony sites of the body
- Prevent proteins in the diet being utilised as an energy source
- However an excessive intake of energy leading to obesity also gives rise to problems with wound healing as a result of decreased mobility and increased weight.

Protein: Protein is perhaps the most important nutrient involved in the healing process, particularly as patients can become deficient in protein due to losses from the wound. It is therefore essential that an adequate supply of protein is provided via the diet. Proteins perform many functions within the body.

- Tissue synthesis and repair – proteins form the major structural components of the body cells e.g. cell membranes, collagen, connective tissue and keratin
- Metabolic function – Nucleic acid, hormones, enzymes
- Immune system – Main components of the immune system - lymphocytes, neutrophils, T cells and macrophages
- Energy Source – In the absence of adequate supplies of carbohydrate, proteins will be utilised as a source of energy, thus leading to muscle wasting and poor healing

Fat: Fatty acids are essential for cell structure and are also involved in the inflammatory process. There is an increased requirement for polyunsaturated fatty acids during healing.

Vitamin C: This is a major vitamin required during the healing process as it is vital for collagen synthesis. Benefits to wound healing process can be gained from the use of vitamin C supplements in deficient individuals.

Zinc: Zinc deficiency inhibits wound healing by reducing the rate of epithelialisation and cellular proliferation. Low zinc levels have been directly associated with poor wound healing and inadequate tissue repair. Supplementation, in deficient individuals has enhanced the healing process.

Nutritional Assessment
Assessment of a patient's requirements should consider the following factors:

- Appearance
- Body weight / weight loss
- Biochemistry
- Appetite and nutritional intake

A number of assessment tools have been developed to identify those patients whose nutritional status may be compromised and therefore be at risk of delayed wound healing or of developing pressure ulcers e.g. **MUST, Waterlow Score**.

Plan of action:

- Ensure availability of food and encourage feeding
- Offer nourishing snacks from the snack menu (creamy yoghurts, milk drinks, ice cream). Try to meet food preferences.
- Seek dietetic advice about available / appropriate supplements (sip feeds, supplementary drinks)
- If necessary, refer patient to dietician.

4.6 Wound Management

The aim of wound assessment is to identify any factors that may delay healing and formulate a plan of care (Wounds UK, 2018).

It is also important to remember that not all wounds will heal, such as fungating tumours or wounds on limbs with severe ischaemia (Grey *et al*, 2006, cited by Mahoney, 2020). However for these patients, the assessment process will assist in goal planning to control symptoms and prevent complications (Grey et al, 2006, cited by Mahoney, 2020).

Findings from the assessment process should be used to inform treatment goals and plan care. Treatment goals should be achievable, measurable and clearly documented within patient records (Wounds UK, 2016, cited by Mahoney, 2020). Patient involvement in the development of wound goals is important and will assist in collaboration with the treatment plan (Lindsay et al, 2017, cited by Mahoney, 2020).

The treatment must be:	**The treatment should be:**
Safe and simple to use	Acceptable to the patient
Non-irritant	Easy to use
Non allergic	Soothing
Non adherent	Pain free on application
Cost effective	Pain free on removal
Absorbent (as appropriate to wound fluid level)	
Supported by clinical evidence	

It is vital to remember that dressings do not heal wounds, but rather provide an environment that promotes wound healing (Browning, 2014, cited by Mahoney, 2020).

The approved Dressing Formulary for Northamptonshire (2023) is available on the NHFT Staff Room (Tissue Viability pages). For guidance on dressing selection, see Appendix 5.

Supported Self Care

There is an increasing focus by the NHS on encouraging supported self-care (NWCSP, 2020). This is to support the reduced capacity of nursing teams as well as to offer the patient the opportunity to maintain control of their care.

For some patients, the prospect of selfcare can be daunting, however for others, it may offer empowerment and improve concordance with treatment (International Consensus, 2012, cited by Mahoney, 2020). NHFT has a guidance document ‘Standard for supporting patients to manage own wound / dressing changes’ see Appendix 2.

4.7 Preventing Accidental Dressing Retainment (Cavity Wounds)

Accidental dressing retainment should be prevented in cavity wounds. Dressing retainment puts the patient at risk of abscess / infection / sepsis, wound breakdown, needing surgery to remove retained dressing.

Prevent accidental dressing retainment by:

- Selecting appropriate dressings to pack the cavity wound e.g. for larger cavity wounds, use larger dressings rather than multiple small ribbons that could be retained. Ensure the packing material can be easily removed and re-counted.
- Document on Systmone the number and type of dressings inserted into a wound cavity e.g. 3 x Aquacel Extra 10x10cm.
- If possible, document directly on to the secondary dressing with a permanent marker e.g. Sharpie (if the size and location of the dressing is appropriate) e.g. “3 x Aquacel”. This is an additional safety measure.
- Do not insert packing into a cavity if you cannot locate the end of the cavity.
- Do not insert packing into a cavity if there is a risk of dressing retainment – seek further advice from a specialist / TVN.

4.8 Types of Dressing Materials and their properties

ACTIVATED CHARCOAL DRESSINGS - For use on malodorous wounds, including faecal fistulae and fungating carcinomas where the activated charcoal component of these dressings absorbs odour but does not resolve the cause of it. For this reason they should only be considered temporarily with attention given to eliminating the cause of the odour (usually infection).

ALGINATE DRESSINGS - Most alginates have haemostatic properties and can be used on friable granulation tissue where fine capillaries are prone to bleeding.

ANTIBIOTICS AND ANTISEPTICS (TOPICAL)

ANTIBIOTICS – Systemic antibiotics are advocated for use only where clinical infection is identified outside the wound. The use of topical antibiotics in wound care is not advocated as topical anti-microbials have broader action and less risk of resistance. Topical antibiotics produce antibiotic resistance more rapidly than those given systemically so should only be used under expert supervision.

ANTIMICROBIAL – There are a variety of active antimicrobial substances available in various presentations.

Iodine – works by infiltrating the bacterial cell and replacing the normal fluid (cytoplasm).

Relatively safe substance in the concentrations found in licensed wound care products but can have adverse side effects and develop contact reactions with long exposure. Absorption can cause elevated protein bound iodine and thyroid abnormalities so caution should be taken with patients who have thyroid or renal problems and patients who are pregnant. Iodine is not appropriate for the routine treatment of chronic wounds. Do not use iodine to treat neonates or the very young as they can absorb the compound very quickly.

Silver – works by physically damaging either the nucleus or mitochondria OR by physically damaging/blocking cell walls and/or receptors, depending on the bacteria.

There are a wide variety of silver-containing products ranging from Silver Sulphadiazine cream (Flamazine) to silver impregnated foams and hydrofibre. The choice of which to use is based on the fluid level in the wound as some are inherently active whilst others need to absorb wound fluid so the sodium in that can react with the silver to release it.
Do not use silver to treat neonates or the very young as they can absorb it leading to systemic argyria. Avoid silver for patients with metal allergies or who are likely to need MRI or CT scans as the metal (silver) can be heated by the magnetic fields within those imaging systems. SSD (e.g. Flamazine) should not be applied without a secondary dressing as it causes argyria skin staining if exposed to sunlight.

Manuka Honey – works by reacting with wound fluid to replicate the peroxidase found in white blood cells.

Available in various presentations and derivations from simple tubes of pure honey to honey-covered alginate to extracted oil impregnated non-adherent sheets. Has an additional function in aiding autolytic debridement.
No adverse reactions to the product have yet been recorded – safe for neonates. However, ensure patient is not allergic to bee venom. Some patients report pain for a short time after application, usually in low exudate wounds.

DACC (i.e. Cutimed Sorbact) – binds bacteria to itself and prevents cell division leading to rapid reduction in burden as the individual bacteria die.

N.B. Anti-microbial products should initially be used for 2 weeks. If there is no significant improvement after that time, stop use and consider an alternative. Reassess to identify other factor impeding healing.

ADHESIVE FILM DRESSINGS – usually used as secondary securing of primary dressings where lower adherence and / or trauma on removal are required.

COMPRESSION THERAPY – improves venous return in a limb to overcome venous or lymphatic insufficiency. May only be used following full holistic assessment from a suitably qualified health care professional. There is a risk of limb damage / loss if compression is wrongly applied to those with arterial insufficiency or another contra-indication to therapy. Refer to Northamptonshire Lower Limb Wound Pathway.

FOAM DRESSINGS – a basic 'sponge' used to absorb exudate and maintain a moist environment to encourage healing. Suitable for moderate to heavily exudating wounds. Available as non-adhesive or silicone adhesive on local formulary.

HYDROCOLLOID DRESSINGS – for use on flat damp or moist wounds
Consist of a semi-permeable outer layer (film) and an inner layer that absorbs exudate to form a gel that balances fluid level at the wound bed. The gel swells, forming a 'blister' under the dressing and applying pressure to the wound base which may improve granulation. They support autolysis to debride wounds that are sloughy or necrotic and can be used on dry or damp wounds regardless of origin / aetiology. May also be used as an alternative to a hydrogel to rehydrate a wound but this will take longer.
Do not use for wounds with a significant bacterial burden, especially if coliforms or anaerobes are present. Use caution and check each patient's cultural / religious beliefs as some products contain animal (pork or beef) derived gelling agents.

HYDROFIBRES – for moderate to high exudate levels. Convert to a gel when wet and promote moist wound healing. Can be used on shallow wounds and for packing cavities.

HYDROGELS – have a single function – to donate fluid to dry tissue. They have no active ingredients to dissolve or remove slough. Pre-mixed, sterile gel made from co-polymer starch. They have a high water content, which aids rehydration of hard eschar and promotes autolysis in necrotic or dry sloughy wounds. Only to be used following full holistic assessment, considering arterial blood supply and medical history.

NON-ADHERENT DRESSINGS – prevent adherence of secondary dressings (i.e. gauze, dressing pads or wadding bandages) but are not needed under foams, hydrogels, films or hydrocolloids.

Designed as primary dressings for granulating or epithelialising wounds and need a secondary dressing to manage exudate. They can also be used as an interface dressing under another type of product (e.g. NPWT) in cavities and may be used as a carrier for a hydrogel or cream (e.g. SSD).

LARVAL THERAPY – used for the management of devitalised and / or infected tissue.
Larvae are used to debride wounds including pressure ulcers, leg ulcers and burns. It is imperative that patients are prepared psychologically before therapy is undertaken. A suitably qualified professional must prescribe and supervise treatment. Do not apply to a patient who cannot give informed consent or to a wound that bleeds easily. Currently only available in acute settings.

SUPER ABSORBENT DRESSINGS – are used for wounds with high fluid output.

These contain particles of expanding absorbent material that actively attract fluid into them and are capable of holding extremely high amounts of fluid. They expand as they absorb and can become heavy as a result.

NEGATIVE PRESSURE WOUND THERAPY (NPWT) – used to accelerate granulation of cavity / hard to heal wounds. A low-pressure vacuum is applied to the wound bed, increasing circulation and cellular nutrition.
Specific training is needed to apply this system and is given when each patient's treatment begins (if the HCPs are not familiar with the therapy).
The indications and contra indications for this product are such that it is only to be used following agreement between the patient, Hospital Consultant or GP and NHFT Tissue Viability Team.
Although there are circumstances where a specialist may use NPWT for complex wounds following specific assessment, the general rules are **not** to apply NPWT if:

- The intention is solely to manage fluid – this is a wound therapy not a drain
- There is untreated osteomyelitis of exposed bone in the wound as NPWT will cause this to fragment
- There is significant devitalised tissue (slough or necrosis) as NPWT will increase this
- There is a fistula that leads to the wound as NPWT will maintain and potentially increase flow through it
- In the presence of exposed blood vessel(s) as they may be damaged by the vacuum
- The wound bleeds freely as NPWT will increase bleeding
- There is any malignancy or tumour in the wound bed as NPWT will accelerate growth of this

4.9 Specific Challenges

Management of malignant wounds (see Appendix 4)

Management of skin graft and donor sites
Dressings should be used and changed as per surgeons' instructions.

Management of Diabetic Foot Ulcers
Diabetic foot ulcers (DFU) are vulnerable and require immediate attention as uncontrolled infection rapidly leads to tissue necrosis and the usual signs and symptoms of infection may be masked. Systemic antibiotics may be required if infection is suspected, so patients with diabetes who have an injury or infection prone feet need regular inspection. A multidisciplinary approach is the key to successful treatment and should always involve a podiatrist for specialist advice.

Diabetic Foot Problems: Prevention and Management (NICE NG 19) advocates that if a person has a limb threatening or life-threatening diabetic foot problem they should be referred immediately to acute services and the diabetic foot team informed. For all other new diabetic foot problems the person should be referred to the NHFT High Risk Foot team within 1 working day.

South - Battle House, Northampton General Hospital (01604 545422)
North - Diabetes Centre, Kettering General Hospital (01536 492207)

Management of external fixators, including pin sites and traction sites
Pin and fixator sites are at an increased risk of infection. These should be managed under the supervision of the surgeon responsible for their insertion.

Management of Pilonidal Sinus wounds (See appendix 3)

Management of overgranulating wounds - Overgranulation prevents epithelial cells from spreading across the wound and is usually caused by oedema or low-level infection in the granulation tissue. Silver nitrate sticks are non-selective and will destroy healthy as well as proud tissue so should be avoided whenever possible. Foam dressings under pressure and topical antimicrobials can both be effective in reducing the level of over-granulating tissue, depending on the cause.

Management of blisters
Any blistering of the skin should be investigated to ascertain the cause which may be shear, infection or a dermatological condition. Blisters should be left intact where possible but may be lanced or aspirated with a sterile needle to prevent the whole of the blister being deroofed which carries a higher risk of infection.
Blisters caused by burns or scalds are best left intact for the first 72 hours. If blister is over a joint or likely to be subject to shearing force it can be aspirated with a sterile needle and syringe.

Referral to Specialist Services
See appendix 6 Referral Guidance for a Patient with a non-healing wound. If a patient's wound is not healing within an expected timeframe, consider referral to the appropriate service for advice and / or specialist assessment.

5. EQUALITY CONSIDERATIONS

The author has considered the needs of the protected characteristics in relation to the operation of this policy and protocol to align with the outcomes with IP&C Assurance Framework. We have identified that ensuring that communication reaches all vulnerable groups. The service has been designed to ensure communication relevant to any wound management issues reaches all sections of the community. This includes taking into consideration communication barriers relating to language or specific needs to reach the whole population. TVN's work closely with multi agency groups and community partners where appropriate we will undertake engagement and outreach activity with targeted action to relevant groups to follow NHS Improvements communication framework. Some groups are particularly vulnerable in relation to their protected characteristics, e.g. age, ethnic minority communities and disability and where we identify that, the expectation is that staff will meet the needs appropriately.

6. REFERENCES & ACKNOWLEDGEMENTS

This document was originally based on the *Guidelines for the Assessment & Management of Wounds (2014)* for Kettering General Hospital Foundation Trust. Reproduced with the kind permission of Colin Iverson, Tissue Viability Nurse.

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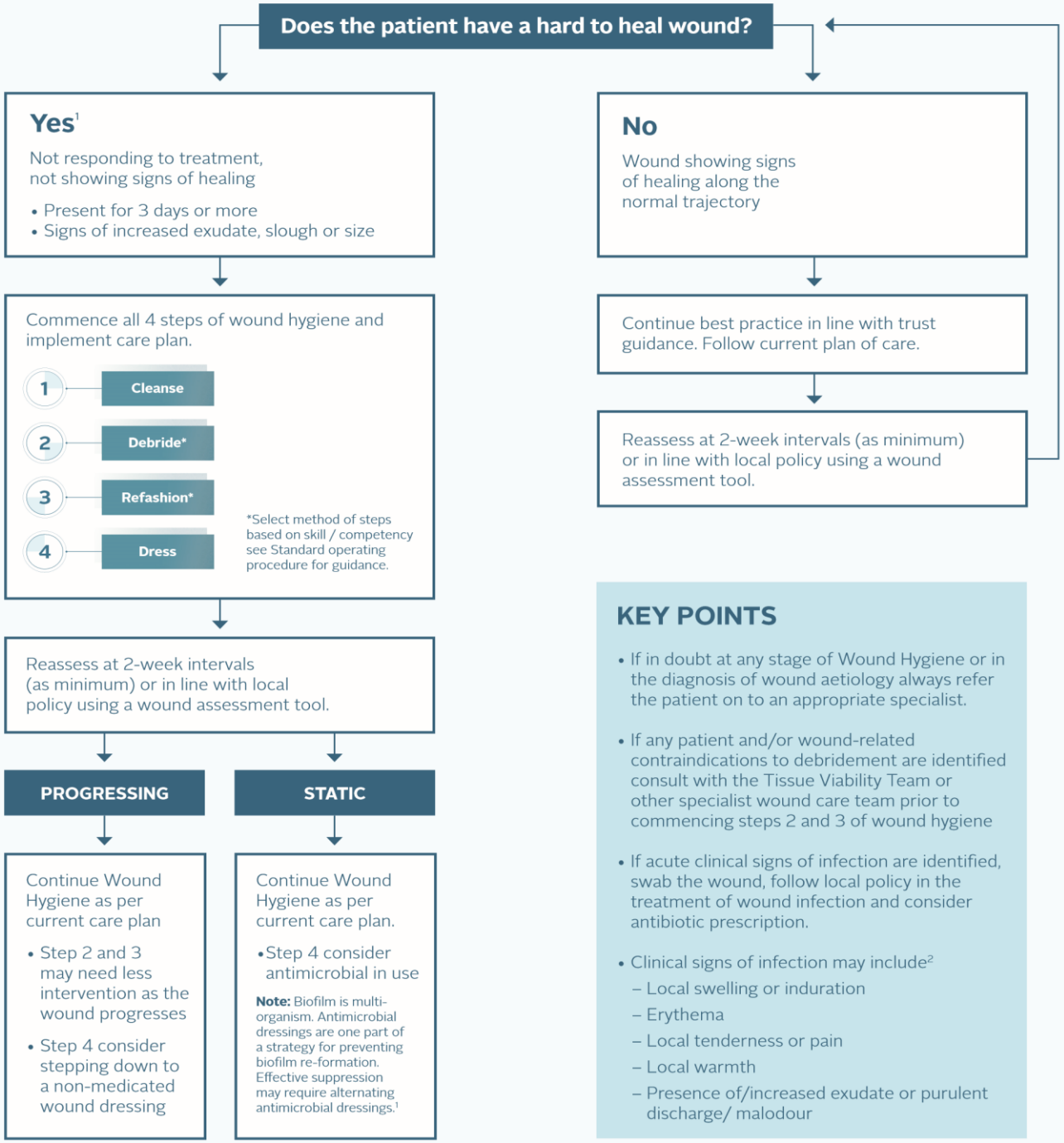
APPENDIX 1 Guide to implementing Wound Hygiene for Hard to Heal wounds; **an early antibiofilm intervention**

Complete a full holistic patient assessment within the first episode of care. Identify any underlying aetiologies and factors affecting wound healing. Manage with best practice care and in line with local policy and guidance.



KEY POINTS

- If in doubt at any stage of Wound Hygiene or in the diagnosis of wound aetiology always refer the patient on to an appropriate specialist.
- If any patient and/or wound-related contraindications to debridement are identified consult with the Tissue Viability Team or other specialist wound care team prior to commencing steps 2 and 3 of wound hygiene
- If acute clinical signs of infection are identified, swab the wound, follow local policy in the treatment of wound infection and consider antibiotic prescription.
- Clinical signs of infection may include[2]
  - Local swelling or induration
  - Erythema
  - Local tenderness or pain
  - Local warmth
  - Presence of/increased exudate or purulent discharge/ malodour

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ConvaTec

Northamptonshire Healthcare NHS
NHS Foundation Trust

Appendix 2 Standard for supporting patients to manage own wound / dressing changes

1. Patient and / or carer assessed as competent to manage wound dressing changes independently or in partnership with Community Nurse Team

2. Risk assessment of patient and / or carer / wound type to ensure patient would be safe to manage own dressings:
    - Check patient / carer understand principles of ANTT / Clean technique (as required)
    - Observe patient / carer changing dressing to check competent
    - Ensure patient / carer has all appropriate equipment (and knows how to obtain further supplies) e.g. dressings, saline, non-sterile gloves, dressings packs etc.
    - Ensure patient / carer knows how to recognise signs of wound infection and or deterioration
    - Ensure patient / carer understands how to contact Community Nurses or GP via SPOA, GP Practice or 111 if concerned about wound infection, wound deterioration or if wound fails to progress
    - Arrange Community Nurse follow up appointment as agreed with patient / carer
    - Refer to Tissue Viability Team if wound is complex, non-healing and further advice is required

3. Document decision outcome on Systmone record (including rationale if self-care not advised)

4. Offer training / verbal & written directions as appropriate (page 2)

5. Ensure patient / carer has received verbal and written contact details to report any concerns (page 2)

NHFT Tissue Viability Team April 2020 V3 This document has been agreed and ratified by NHFT Trust Advisory & Allied Healthcare Professional Committee.

Northamptonshire Healthcare NHS
NHS Foundation Trust

Patient Advice Leaflet: Preparing to dress your wound

You will need:

- Dressing pack - will include gauze, gloves, tray, apron and waste bag
- Wound dressings provided by nursing staff
- Sterile scissors (if required)
- Creams/barrier creams for surrounding skin (if required)
- Tape (if required)
- Sterile saline, antiseptic solution or tap water (to be advised by your nurse)

Procedure:

- Wash hands thoroughly especially between fingers and palms of hands.

- Dry hands with a clean towel/kitchen roll
- Open dressing pack, apply apron provided
- Remove waste bag for dirty dressings
- Open new wound dressings and drop into clean opened dressing pack
- Remove dressing without touching the inside of the dirty dressing or the wound bed
- Place dirty dressing into the bag provided
- Wash hands again
- Apply clean gloves from sterile pack
- Clean wound with solution advised and gauze from dressing pack (if required)
- Ensure skin surrounding wound is dry
- Apply new dressings as directed by the nurse
- Take regular wound photos (with smartphone, if able) this will be a record of your progress and may be useful if you need advice / referral

Please monitor for signs of infection:

- Redness to skin surrounding wound
- Skin surrounding wound is warmer than normal
- Wound has become painful
- Swelling and hardening
- Increased wetness from wound
- Offensive smell
- Yellow or green pus
- If wound deteriorates/gets larger or deeper
- If you suspect a wound infection, please contact your GP Practice or Community Nurse SPOA 0300 777 0002 or 111 out of hours
- NHS UK: Symptoms of sepsis https://www.nhs.uk/conditions/sepsis/

NHFT Tissue Viability Team April 2020 V3 This document has been agreed and ratified by NHFT Trust Advisory & Allied Healthcare Professional Committee.

APPENDIX 3 (Reproduced with kind permission from University Hospitals of Derby & Burton NHS Foundation Trust)

Pilonidal Sinus Disease Management Pathway

(Following primary wound breakdown or need to heal via secondary intention)

Patient Assessment

- History about wound/disease (number and type of surgeries/length of time wound present/current management)
- Ascertain co-morbidities
- Current medications (Is the patient on long-term steroids/immuno-suppressants?)
- Smoking/Alcohol intake
- Nutritional intake
- Pain assessment

Wound Assessment

- Consider size of wound (length/width/depth) and any tunnelling/undermining
- Colour of wound bed (Is it red/pink/black/green/yellow)
- Quality of wound bed tissue (Is it friable?/Is there hair within the wound bed)
- Assess the wound margins (Is there hair ingressing into the wound?)

Wound Management

- **Remove hair from wound bed**
- **Trim hair (very short) to wound margins**
- **Soak with an antiseptic solution (e.g. Octenilin Irrigation) for >15mins**
- **Antimicrobial dressing**
- **Appropriate secondary dressing to secure**
- **Redress daily, as and when required (especially after bowel movements)**

Patient Advice & Information

➢ Manage any co-morbidities well.

➢ If on long term steroids/immune-suppressants discuss with GP/Consultant options to reduce or stop to encourage wound healing.

➢ Stop smoking if possible, limit alcohol and remain active.

➢ Maintain a well-balanced diet, high in protein and supplemented if possible with multi-vitamins/minerals.

➢ If pain is an issue ensure their GP is aware and that the patient is on appropriate analgesia. This however could also be an indicator of infection.

➢ Ensure the patient is shaving/trimming or using hair removal creams to remove the hair surrounding their wound (may require help from a family member). Consider permanent hair removal once wound healed.

- As the majority of these wounds are cared for at home (particularly at the moment) ensure the patient and their carers are aware of how to redress the wound and to reiterate the importance of removing hair from within the wound also.

- Do not sit for long periods.

- Ensure the dressing is done by a healthcare professional at least once a week so that they can monitor its progress.

- Use baby wipes when going to the toilet. As these are not as harsh as toilet paper and always wipe away from the wound after a bowel movement.

- Shower at least daily.

- No reason not to work or continue education. Discuss with your employers/educational institutions about issues surrounding your condition so that solutions can be explored to get you back to work/education.

- Talk about your problem with your family/partner. As often this condition can affect all aspects of life. This is hard but numerous social media groups/charity groups exist to provide support. This is important as patients offer suffer in silence which in turns affects their mental health.

Northamptonshire Healthcare
NHS Foundation Trust

Patient Information

Pilonidal sinus wound care

This advice has been written to help you to take part in the treatment of your wound. Please contact us if you have any queries or concerns.

If you are on long term steroids or immunosuppressants, talk to your GP/consultant about reducing or stopping them. This will encourage the wound to heal. **Do not stop taking any medication without speaking to your GP first.**

If you are in pain, take pain medication such as Paracetamol regularly. If you are still in pain, contact your GP and have your wound checked for infection.

If you smoke, we encourage you to stop as this will help your wound to heal. The NHS website has lots of information to help:
www.nhs.uk/live-well/quit-smoking/nhs-stop-smoking-services-help-you-quit/

If you drink alcohol, please consider reducing your intake.

Remain active, but be aware of possible changes to your wound. Reduce any activity that increases stress and strain to your wound and the surrounding area.

Eat a well-balanced diet, high in protein and supplemented with multi-vitamins/minerals if needed.

Please remove any hair surrounding the wound (shaving/trimming/hair removal cream). Consider permanent hair removal once your wound has healed.

We will ensure that you and your carers know how to change the wound dressing. However, it is advisable that a healthcare professional changes and assesses the wound at least once a week.

Always wipe away from the wound after having a poo (bowel movement).

Shower at least daily.

Do not sit for long periods.

You can return to work/education. Make them aware of your condition, so they can help and support you, and hopefully make reasonable adjustments.

We understand that your wound can affect all aspects of life, this may be hard and we are here to help. There are numerous social media/charity groups that can provide support. Please speak to us about this and any worries or questions you may have.

APPENDIX 4 (Author: Sally Tydings, Community Nurse Practice Educator, NHFT)

Fungating Malignant Wounds

A Fungating wound is 'a cavitating or proliferative primary or secondary cancer in the skin' (Mersey Care NHS 2019). They occur when metastasis infiltrate into the blood and lymph vessels into the skin (St Giles Hospice 2020). The proliferative process leads to lesions that have a nodular cauliflower or fungus appearance whereas the ulcerative process where craters or cavities appear (St Giles Hospice 2020. Mersey Care NHS 2019). The malignant fungating wound indicates an advanced progression of the disease which is likely incurable with a poor prognosis (St Giles Hospice 2020). Therefore, it is important to discuss with the person that healing is unlikely to be a realistic goal and explain that the aim is to maintain or improve their quality of life. Consider:

- Their treatment priorities and, if possible, address these first.
- Their concerns about the ulcer, and its impact on their daily functioning and quality of life. (Mersey Care NHS 2019).

For a holistic approach when planning care think **POISED:**

- **Pain**
- **Odour**
- **Itchiness**
- **Support**
- **Exudate including Bleeding**
- **Dying with Dignity**

Pain

- Analgesia prior to dressing changes can help manage pain. Consider opiates such as Morphine Sulphate 30 minutes prior to dressing changes. Transmucosal fentanyl such as Abstral can be used under

specialist palliative care guidelines it is normally given 5-10 minutes prior to dressing changes and is

- Topical Morphine IR can be used under the guidance of the specialist palliative care team.
- Ensure an appropriate dressing is selected to minimise pain when removed and use adhesive remover prior to removing tape.

Odour- consider infection.

Odour can be very distressing for the patient and their families' symptoms such as loss of appetite, increased anxiety and social isolation may result from mismanagement of odour (St Giles Hospice 2020. NICE 2021).

Debridement of devitalised tissue may help reduce odour; however, care should be taken as this can increase bleeding risk in friable wounds.

Activated Charcoal dressings such as Clinisorb will absorb and filter odour. However, they will become ineffective in high exuding wounds (St Giles Hospice 2020. Mersey Care NHS 2019).

Malodour and purulent exudate may indicate infection. If infection suspected think ***Obs & Swabs****. for treatment, consider*:

- Topical antibiotics such as Metronidazole, however, not suitable for high exuding wounds or over areas of thick necrosis. Oral Metronidazole will be beneficial for deep tissue infection that cause odour (NICE 2021).
- Topical antimicrobials will reduce bacterial load i.e. Silver (Aquacel Ag+ Extra), Cutimed Sorbact, Inadine, Manuka Honey. Manuka honey can be safely used on fungating wounds, it is an effective product as its properties include an anti-inflammatory, anti-microbial and a debriding agent (St Giles Hospice 2020). Manuka honey is effective on yeast, fungal, anaerobic, and aerobic bacterial infections and has shown to achieve a reduction of odour or complete elimination of odour within 24 hours (BNF 2021. St Giles Hospice 2020). However, should be avoided in patients with extreme sensitivity to honey, bee stings or bee products (BNF 2021)

Itchiness

Pruritus or itching is attributed to stretching of the skin, which irritates the nerve endings, with patients often describing the sensation as a creeping, intense itching sensation which can be disabling (St Giles hospice 2020). Exclude other causes such as exudate, irritation from dressings, opiates or infection all can cause itchiness.

Treatment includes:

- Cool compress
- Wearing cotton or silk garments and bed linen
- Dressing selection- Hydrogel sheets to keep the skin cool i.e. Actiform cool.
- Use of barrier preparation peri wound or hydrocolloid strips to protect epidermis from irritation, skin breakdown.
- Mild topical corticosteroids if the surrounding skin is red, scaly. For instance, 1% Hydrocortisone cream
- TENS (transcutaneous electrical nerve stimulation) may be beneficial
- Medication- Gabapentin and Paroxetine may reduce symptoms of neurogenic pruritus. Seek specialist care team for advice.

(St Giles Hospice 2020. Mersey Care NHS 2019. NICE 2021).

Support coping strategies for the patient, family, and carers

- Advanced care planning to ensure the person's wishes are clear
- Open and honest discussions
- Recognise signs of emotional distress
- Interprofessional working i.e. regular contact with the GP, palliative care team other specialist nurses, care agencies or voluntary sector.

Exudate and Bleeding

- Dressing selection to manage volume of exudate. Use of alternative products such as Rugby cap, flexible netting, or tube dressings to secure dressings.
- Plan for major haemorrhage- topical medication to stop bleeding i.e. Adrenaline or Tranexamic, topical solution: 500mg in 5mls injection – soak gauze and apply pressure for 10 mins. However, take caution if history of thrombo-embolism or renal impairment.

- Family and carers informed of bleeding risk and what to do if this occurs. Ensure they have dark towels and know who to contact for support.

Dying with Dignity

- Clear plan for preferred place of care or death
- DNACPR, discussions may not always be appropriate with the patient. Advice can be sought from the specialist palliative care team.
- Ensure a Special Patient Note has been completed and emailed to Marie Curie so that the patient can access their Rapid Response team.
- Anticipatory prescribing for end-of-life medication. Ensure medication, prescription charts and equipment are in the patient's house.
- Complete the Five Priorities of Dying care to ensure an individualised plan of care when they are in the last days of life.

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- *Yorkshire NHS trust guidelines*

A Quick Guide for Professionals

Pain management. Consider**:**

- Analgesia prior to dressing changes such as Morphine Sulphate
- Topical Morphine IR* (policy *MMG029 on the staff room*)
- Dressing selection should include adhesive remover and products that reduce pain on dressing changes.

Odour- consider infection. *Think 'Obs & Swabs'*

- Dressing choices include: Activated charcoal such as Clinisorb
- Anti-microbials such as, Aquacel Ag +Extra, Atrauman Ag, Cutimed Sorbact, Inadine and Manuka Honey*
- Anti-bacterial products, Metronidazole gel or oral Metronidazole
- Debridement of devitalised tissue**

Itchiness- *Exclude causes such as exudate, irritation from dressings, opiates or infection*.

- Surrounding skin; use of barrier preparations or Hydrocolloid strips. 1% Hydrocortisone cream or ointment to treat red, scaly skin.
- Dressing selection; Hydrogel sheets
- Medication such as Gabapentin and Paroxetine*
- Tens (transcutaneous electrical nerve stimulation) *

Support the patients and their families

- Advanced care planning to ensure the person's wishes are clear
- Open and honest discussions. Recognise signs of emotional distress*

Exudate and Bleeding

- Dressing selection to manage volume of exudate. Use of alternative products such as Rugby cap, flexible netting, or tube dressings to secure dressings.

Plan for major haemorrhage

- Topical medication to stop bleeding, Adrenaline or Tranexamic*
- Midazolam- buccal or subcutaneous for major haemorrhage
- Absorbent dressing pads, haemostatic dressings, dark towels.

Dying with Dignity

- Discuss preferred place of care and/or death including DNACPR***
- Anticipatory prescribing for end-of-life. Ensure medication, prescription charts and equipment in patient's house.
- Ensure Patient Special Note completed and emailed to Marie Curie

*advice to be sought from the specialist palliative care team / TVN

**debridement of devitalised tissue can lead to bleeding only consider as part of a full assessment in conjunction with TVN/ palliative care team.

***Discussions may not always be appropriate with the patient. Advice to be sought from the specialist palliative care team.

Staff Guide to Accessing Support

Following a traumatic experience/ event at work a debrief with your line manager/ senior nurse is important to discuss the event and reflect on your experiences. Other members of the team may wish to be included in a group debrief. The palliative care teams can be contacted at **Cynthia Spencer Hospice 03000 271270** or **Cransley Hospice 0300 0274200**

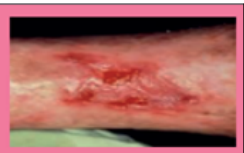
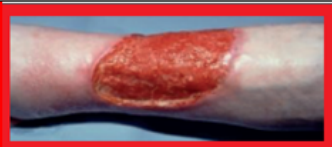
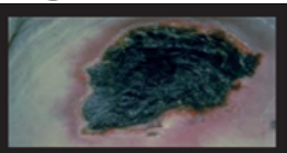
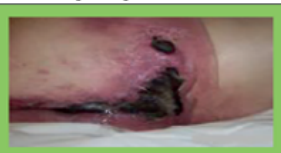
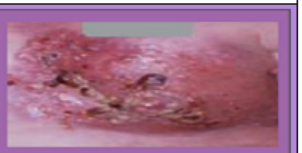
Critical Incident Support (CIS) service provides psychological support for NHFT employees who have been involved in a distressing or traumatising incident at work. It is provided by consultant clinical psychologists working for the Trust. Your manager should contact CIS Admin: **Clare Butcher at St Mary's Hospital on telephone (01536) 452466**

NHFT Psychological Wellbeing service provides a safe place to talk about your own wellbeing. This is a confidential service, so you do not need to tell your manager and we do not report back to your managers if you access this service. **Tel: 01536 452351 / 01536 452343 or Email:** wellbeingcounselling.supportservice@nhft.nhs.uk%20

Mental Health First Aiders (MHFA) empower themselves to help others with the knowledge of how to identify symptoms of mental health issues and equip themselves to give initial help and guidance towards the appropriate support systems for the colleagues and co-workers. Details of how to contact the MHFA's are available on the Staff Room.

NHFT's Counselling service offers staff a free and confidential counselling service and may be able to help you deal with some of the problems you have or will put you in touch with someone who can.
Tel: 01536 452343
Email: WellbeingCounselling.SupportService@nhft.nhs.uk

APPENDIX 5 DRESSING SELECTION

Dressing Selection Guide - This guide should not replace clinical judgement. For further dressings choices, refer to formulary pages or your Tissue Viability team. Complete NHFT Wound Management Education every 3 years.						
Tissue Type	 **Epithelialising**	 **Granulating**	 **Sloughy**	 **Necrotic**	 **Infected**	 **Fungating/ Malodourous**
Treatment Aim	Promote epithelialisation and wound maturation	Promote granulating tissue. Provide a healthy base for epithelialisation	Following holistic assessment, consider debridement. Wounds to feet - consider referral to specialist team e.g. Podiatry, Vascular or TVN	Following holistic assessment, consider debridement. Wounds to feet - consider referral to specialist team e.g. Podiatry, Vascular or TVN.	Manage infection (systemic antibiotics must be considered where signs of spreading infection)	Manage complex wound e.g. Bleeding, exudate, malodour, size
DRESSING OPTIONS						
Low Exudate	Atrauman Softpore Hydrofilm Plus pad Duoderm Thin Suprasorb P Sensitive Border Lite	Atrauman Duoderm Thin Suprasorb P Sensitive Border Lite	Debrisoft Pad Intrasite Gel Medihoney Duoderm Signal	Medihoney Intrasite Gel Duoderm Thin	Atrauman Ag Inadine Medihoney	Atrauman Silflex Atrauman Ag Clinisorb (odour control)
Moderate Exudate	Atrauman Duoderm Signal Suprasorb P Sensitive Border Lite	Atrauman Aquacel Extra Duoderm Signal Suprasorb P Sensitive Border Lite Biatain Silicone Lite	Debrisoft Pad Medihoney Apinate Aquacel Extra Suprasorb P Sensitive Biatain Silicone Lite	Aquacel Extra Medihoney Apinate Suprasorb P Sensitive Biatain Silicone Lite	Atrauman Ag Aquacel Ag+ Extra Medihoney Suprasorb P Sensitive Biatain Silicone Lite	Atrauman Silflex Atrauman Ag Medihoney Clinisorb (odour control) Suprasorb P Sensitive Biatain Silicone Lite
High Exudate	N/A	Atrauman Aquacel Extra Suprasorb P Sensitive Biatain Silicone Zetuvit Plus Kerramax Care	Debrisoft Pad Atrauman Aquacel Extra Suprasorb P Sensitive Biatain Silicone Zetuvit Plus Kerramax Care	Atrauman Aquacel Extra Suprasorb P Sensitive Biatain Silicone Zetuvit Plus Kerramax Care	Atrauman Ag Aquacel Ag+ Extra Cutimed Sorbact Swab Suprasorb P Sensitive Biatain Silicone Zetuvit Plus Kerramax Care	Refer to Tissue Viability

Appendix 6 NHFT Referral Guidance for a Patient with a Non-healing Wound

PATIENT HAS A WOUND WHICH IS NON-HEALING AFTER 2 WEEKS OF TREATMENT

CHECK ALL APPROPRIATE INTERVENTIONS COMPLETED:

- Holistic Assessment / Identify factors which may delay wound healing / Wound Assessment / Wound Measurements / Wound Photo(s)
- Waterlow / SSKIN / MUST / NEWS 2
- Screen for infection e.g. wound swab, bloods
- Wound Hygiene Pathway
- Lower limb wounds: Doppler / Toe Doppler / Compression
- If patient has Diabetes and wound to foot (below ankle), ensure referred to NHFT High Risk Foot Team within 24 hours
  urgentdiabeticfootnorth@nhft.nhs.uk
  urgentdiabeticfootsouth@nhft.nhs.uk
- If patient does not have Diabetes and has a **non-healing** wound to foot (below ankle), consider referral to TVN
- **IDENTIFY CAUSE OF WOUND & POTENTIAL NON-HEALING**

YOU NEED ADVICE on wound management, dressing selection, symptom control, patient compliance, type of referral required, NEW Category 4 Pressure Ulcer etc Refer to TVN
Complete TVN eReferral Form on Systmone Dashboard
Ensure wound photo(s) on Systmone

PATIENT HAS AN UNDIAGNOSED OR DETERIORATING SKIN CONDITION e.g. suspected malignancy, widespread blistering, inflammatory conditions e.g. Pyoderma Gangrenosum, Vasculitis
Advise GP to refer to Dermatology Team

PATIENT HAS ABPI OUT OF NORMAL RANGE (0.8 – 1.3) Refer to Northants Leg ulcer Pathway
ABPI <0.8 - advise GP to make referral to Vascular Team. Ensure GP has access to photo(s), documented wound history and patient symptoms
ABPI >1.3 - with symptoms of arterial disease, a non-healing / deteriorating wound or needs compression therapy, advise GP to make Vascular Referral
If patient's wound / ABPI rapidly deteriorating, advise GP to refer patient to Vascular Team, via HOT CLINIC

PATIENT HAS A WOUND INFECTION
If localised to wound (and patient not immunocompromised), consider Wound Hygiene and antimicrobial dressing
If spreading infection, refer to GP or NMP for antibiotics +/- bloods
Consider analgesia
Refer to TVN if advice required for dressing regime / treatment plan. Complete TVN Referral Form and ensure wound photos on Systmone