

# Barns Medical Practice Service Specification: Wound Management

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## **Introduction**

The purpose of this Barns Medical Practice service specification is to provide the appropriate management strategy for optimum wound healing, patient comfort and cost effectiveness in line with best practice/evidence. It aims to classify the wound, suggest appropriate treatment, and identify a suitable clinician to manage the wound with an appropriate time frame for review and follow-up. There is an emphasis on self-management with the appropriate patient education/guidance. It may be used to inform patients, at induction of new staff or as an ongoing reference document for clinicians where indicated.

A wound is defined as any injury or damage to the integrity of the skin (Dealey, 2012). This damage can be a consequence of traumatic injury by mechanical, physical and/or chemical impact, either intentional, as in a surgical incision, ischaemic due to a lack of sufficient blood supply (e.g. an ischaemic diabetic foot ulcer) and/or pressure, as in a sacral pressure ulcer (Dealey, 2012 )

## **Wound classifications**

Wounds can be classified as either acute or chronic (Worley, 2015). An acute wound is associated with trauma, immediate injury or surgery, with the resulting skin damage progressing through the healing phases. In a chronic wound the skin remains open and does not progress through the normal healing phases as expected

There are four interrelated phases in wound healing and wounds commonly progress in a continuous rather than a discrete manner (Fletcher and Anderson ,2013) Phase I Haemostasis (minutes) Phase II Inflammation (1–5 days) Phase III Proliferation or reconstruction (3–24 days) Phase IV Maturation or remodelling (21 days onwards). Wound healing is however very individual and depends on the patient's nutritional status and overall state of health

## **ACUTE WOUNDS**

Abrasions (grazes) are superficial wounds, generally caused by friction as a result of brief or indirect contact between the skin and a harder or rougher surface. Abrasions are generally confined to the outer layers of the skin.

Lacerations (tears) are more severe than abrasions and involve both the skin and the underlying tissues.

Penetrating wounds maybe caused by knives, bullets or may result from accidental injuries caused by any sharp or pointed object. Internal damage can be considerable depending upon size and depth of penetration, and/or the velocity of the bullet or missile

Bites caused by animals, insects or humans may become infected by a range of pathogenic organisms including Spirochetes, Staphylococci, Streptococci and various gram positive bacilli. If untreated these infections may have serious consequences, involving fascia, tendon and bone.

Cavity wounds may be surgically created as in the incision of pilonidal sinuses, or sebaceous cyst or may result from wound dehiscence or pressure area sore.

## **BURNS AND CHEMICAL INJURIES**

There are several different types of burns: thermal, electrical and radiation. Thermal injuries are the most common. Burns and scalds (thermal) maybe classified into three types depending upon the degree of tissue damage.

### **Superficial**

(first degree) burns involve only the epidermis and superficial layers of the dermis and usually result from exposure to prolonged low intensity heat.

### **Deep dermal**

(second degree) burns, in which most of the surface epithelium is destroyed together with much of the dermal layer beneath. Only some isolated epidermal elements in the deep layer remain visible such as those within hair follicles and sweat glands.

### **Full thickness**

(third degree) burns, in which all the elements of the skin are destroyed

## **CHRONIC WOUNDS**

Chronic wounds are the hard to heal wounds which are often linked to patients with multiple co-morbidities and may never heal such as:

- ☐ Pressure ulcers which are usually caused by the sustained application of surface pressure over a bony prominence, which inhibits capillary blood flow to the skin and underlying tissue. If the pressure is not relieved it will ultimately result in cell death followed by tissue necrosis and breakdown.
- ☐ Leg or foot ulcers, which maybe venous, ischaemic, mixed aetiology or traumatic in origin.
- ☐ Diabetic foot ulcers (require urgent referral to appropriate healthcare professional)
- ☐ Dermatological conditions
- ☐ Malignant/fungating wounds

## **Methods and criteria for assessment of wounds**

Wound assessment helps determine baseline wound information to support decision making on the selection of appropriate dressings (Worley, 2015) The initial assessment of a wound should be carried out by a competent registered health care professional who will undertake a comprehensive assessment of the wound (site, size, surface, grade and appearance, exudates type and volume, state of surrounding skin and level of wound pain). Any concerning features should be highlighted and a management plan developed with referral to specialist tissue viability services if deemed necessary. The management plan needs to be agreed with the patient and, where relevant, consideration also given to appropriate nutrition for wound healing and pain management.

### **Administration**

Dressing appointments are not subject to any formal recall process and the clinician should make the patient aware that it is his/her responsibility to attend for review as planned. If a current mobile number is provided the patient should receive a text reminder, on the day of the scheduled appointment, once the appointment has been booked into the computer system. If home visiting by the District Nursing Service is necessary this must be requested either directly by the clinician or via the administrative staff ensuring that the patient has the contact number of the District Nursing Service in case of a need for out of hours contacts. The surgery has no direct influence on the district nursing appointment system.

### **Treatment**

The Ayrshire and Arran Primary Care wound management dressing formulary is a collaborative effort from nurses, Podiatrists, Prescribing advisers and the Clinical Improvement nurse and can be found within the Athena site of NHS Ayrshire and Arran intranet. It recommends cost-effective choices of dressings that maintain a high level of quality. To that end it is recommended that the clinician uses the formulary choices as a first line dressing selection guide. Justification for an alternative dressing that does not appear on formulary should be giving within the consultation documentation. Dressing choices may be subject to audit.

Dressings form a barrier to bacteria, maintain a consistent temperature and ensure stable wound pH, while allowing gaseous exchange A dressing must be able to stay in place for a sufficient period of time to avoid unnecessary disturbance to the wound bed, so absorbance is an important factor when caring for an exuding wound It is

important to consider patient comfort when wearing, and on removal of, a dressing. On removal the dressing should not cause damage to the surrounding skin. The wound-care product should reflect the wound assessment and treatment plan and wound healing stage, e.g. whether or not there is a requirement for debridement, treatment of localised infection ( Worley, 2015)

There are four classifications of wound tissue type namely , necrotic, sloughy granulating and epithelialising and management of the wound should be determined by a suitable dressing or intervention .

- 1.Necrotic wounds : the removal of devitalised tissue is essential to facilitate wound healing and hydrogel ,hydrocolloid dressings or even surgical debridement is advocated
2. Sloughy wounds: the removal of devitalised tissue is necessary to facilitate wound healing and a debridement pad, iodine dressings or pastes, hydrocolloid dressings, hydrofibre, alginate or honey dressings are advocated
3. Granulating wounds: the protection of the wound bed is necessary and alginates, hydrocolloid or foam dressings are advocated
4. Epithelialising wounds: the protection of the wound bed is necessary and hydrocolloid foam or film dressings are advocated

(Nazarko,2018)

## **Medicines/ Prescriptions for wound management**

Ideally a prescription should be issued where dressing/ topical treatments are indicated. The nurse who does not a non- medical prescriber may arrange a prescription via the acute prescription tab within Vision software and in the short term issue dressing pieces from stock. Where oral or topical medications are required for wound management these should be prescribed by a GP or non-medical prescriber and the patient should bring topical medications to dressing appointments were necessary. In an effort to manage antibiotic resistance antibiotics should ideally be prescribed in response to a positive swab. A positive swab result does not necessarily mean that a wound is infected. The wound may simply be colonised. If a wound shows any of the following then the presence of infection requiring intervention should be considered:

- ☐ Cellulitis
- ☐ Abscess/pus
- ☐ Increased pain
- ☐ Increased exudate
- ☐ Malodour
- ☐ Delayed healing/deterioration
- ☐ Friable granulation tissue/bleeds easily
- ☐ Evidence of tracking

#### ☐ Temperature

Empirical antibiotic prescribing as per primary care formulary may be necessary if clinical judgement dictates, this but documentation should be robust as may be subject to audit. Sundries as far as possible should be prescribed on a named patient only but small stocks are available for everyone's convenience.

## **Review Management**

Education and support should be offered to facilitate wound self – management with appropriate safety netting. If the wound is not suitable for self –management the Registered General Nurse (RGN) should make an assessment of the suitability of this wound to be delegated to the treatment room nurse or Health Care Assistant (HCA) The RGN has the responsibility for the initial wound assessment. The RGN is responsible for devising the wound care plan and for reviewing the progress of wound healing or deterioration .When a patient attends for a follow up dressing the RGN is responsible for reviewing the wound, amending the care plan (if needed) and completing the dressing for every fourth attendance if the patient has not been seen by a RGN in previous attendances.

The HCA is responsible for patients wound management only following initial assessment by the RGN. With the appropriate training they can undertake the follow up dressing of an individual patient's wound on three sequential occasions, after which a RGN must re-assess the wound. In all situations where they or the patient is concerned about the wound or the patient's general condition they must seek advice of a RGN.

## **Special wounds**

### **Leg ulcer**

Management is the responsibility of the RGN : chronic venous leg ulcer has been defined as 'an open lesion between the knee and the ankle joint that remains unhealed for at least four weeks and occurs in the presence of venous disease' (Scottish Intercollegiate Guidelines Network [SIGN], 2010). Venous leg ulcers mainly arise as a result of chronic venous insufficiency (CVI) and treatment should aim to improve venous circulation

ABPI measurement enables nurses to determine if the patient's blood flow is normal or reduced. The latter is indicative of arterial disease and may require specialist vascular review. Although ABPI measurement will not diagnose venous leg ulceration it will determine if the wound has been caused by venous or arterial problems, or both, and so guide treatment choice. (Nazakro, 2018) Compression therapy is the treatment of choice depending on ABPI result.

## Diabetic foot ulcers

These arise because of nerve damage (neuropathy), reduced blood flow to the lower limb (ischaemia), or a combination of both (neuroischaemia). Due to a risk of rapid deterioration and subsequent amputation, patients with diabetic foot ulcers should be referred to a multidisciplinary foot care team within 24 hours of diagnosis National Institute of Health and care excellence ( NICE, 2016).

## Tetanus prone wounds

Tetanus-prone wounds include:

- puncture-type injuries acquired in a contaminated environment and likely therefore to contain tetanus spores e.g. gardening injuries
- wounds containing foreign bodies such as wound splinters
- compound fractures
- wounds or burns with systemic sepsis
- certain animal bites and scratches

Individual assessment is required with these wounds and a reinforcing dose of tetanus-containing vaccine should also be considered based on the immunisation status ( See table 1) Public Health England, 2018

Immunisation Status	Immediate treatment			Later treatment
	Clean wound <sup>1</sup>	Tetanus Prone	High risk tetanus prone	
Those aged 11 years and over, who have received an adequate priming course of tetanus vaccine <sup>1</sup> with the last dose within 10 years	None required	None required	None required	Further doses as required to complete the recommended schedule (to ensure future immunity)
Children aged 5-10 years who have received priming course and pre-school booster				
Children under 5 years who have received an adequate priming course				
Received adequate priming course of tetanus vaccine <sup>2</sup> but last dose more than 10 years ago	None required	Immediate reinforcing dose of vaccine	Immediate reinforcing dose of vaccine  One dose of human tetanus immunoglobulin <sup>3</sup> in a different site	Further doses as required to complete the recommended schedule (to ensure future immunity)
Children aged 5-10 years who have received an adequate priming course but no preschool booster				
<i>Includes UK born after 1961 with history of accepting vaccinations</i>				
Not received adequate priming course of tetanus vaccine <sup>2</sup>	Immediate reinforcing dose of vaccine	Immediate reinforcing dose of vaccine  One dose of human tetanus immunoglobulin <sup>3</sup> in a different site	Immediate reinforcing dose of vaccine  One dose of human tetanus immunoglobulin <sup>3</sup> in a different site	
<i>Includes uncertain immunisation status and/or born before 1961</i>				

1. Clean wound is defined as wounds less than 6 hours old, non penetrating with negligible tissue damage 2. At least three doses of tetanus vaccine. This definition of "adequate course" is for the risk assessment of tetanus-prone wounds only. The full UK schedule is five doses of tetanus containing vaccine at appropriate intervals 3. If TIG is not available, HNIG may be used as an alternative.

## Wound cleansing

Wound cleansing is not indicated for all wounds and should only be performed with a specific aim unnecessary cleansing can damage fragile healing tissue and can delay wound healing :

- ☐ to remove excess exudate, slough or necrotic tissue.
- ☐ to remove remnants of old dressing material.
- ☐ to remove dirt and debris from traumatic wounds which could cause wound infection.
- ☐ to allow inspection and assessment of dirty traumatic wound.

Surrounding skin:

The skin surrounding a wound may require care including washing at dressing change to remove wound exudate and skin debris or for patient comfort.

## Types of cleansing fluids

Traditionally, sterile saline has been used as the cleansing solution of choice, as it is isotonic and will not disrupt the normal healing process (Flanagan, 2013). However, more recently, a Cochrane review concluded that tap water, when used for wound cleansing, is equally effective as normal saline and does not increase wound infection rates (Fernandez and Griffiths, 2012) Sterile saline is also recommended for cleaning surgical wounds up to 48 hours post-surgery (NICE, 2013). If using tap water, Flanagan (2013) advises running a tap or shower for a few seconds before use to avoid the water being contaminated by bacteria on the taps or shower head. It should be noted that the application of cold solutions can reduce wound healing therefore warm solutions are advocated. Antiseptic solutions are not generally advised, but could be considered with persisting sloughy wounds or wounds with delayed healing (Brown, 2018)

## REFERRAL CRITERIA TO A/E DEPARTMENT

- ☐ Wound caused by glass or possibility of foreign body in wound
- ☐ Facial Lacerations
- ☐ Laceration to the eyelid
- ☐ Deep lacerations of the ear
- ☐ Deep Wounds which may require deep sutures
- ☐ Suspected tendon or nerve damage
- ☐ Penetrating stab wounds that need probing
- ☐ Wounds that have been caused by a significant crush injury
- ☐ Neurovascular deficit
- ☐ Electrical burns

- ☐ Circumferential burns
- ☐ Full thickness or deep partial thickness burns
- ☐ Burns to the genitalia or perineum
- ☐ Burns to the sole of feet
- ☐ Electrical burns
- ☐ Burns covering 10 % surface or 5% surface of children
- ☐ Burns to face
- ☐ Chemical burns
- ☐ Concerns over consistence of injury and history in a child or vulnerable adult
- ☐ Injury caused by alleged assault
- ☐ Tetanus Prone wounds

## Resources for Staff and or Patients

Wound management-<http://www.patient.co.uk/doctor/Simple-Wound-Management-and-Suturing.htm>

Burns -<http://www.patient.co.uk/doctor/Burns-Assessment-and-Management.htm>

Varicose ulcers-<http://www.sign.ac.uk/pdf/sign120.pdf>

How do I clean a wound- <http://www.nhs.uk/chq/Pages/1054.aspx?CategoryID=72&>

Cuts and Grazes- <http://www.nhs.uk/conditions/cuts-and-grazes/Pages/Introduction.aspx>

Insect bites-<http://www.patient.co.uk/health/insect-bites-and-stings-leaflet>

Leg ulcers-<http://www.patient.co.uk/health/venous-leg-ulcers-leaflet>

Human bites-<http://www.patient.co.uk/health/human-bites>

Tick bites-<http://www.patient.co.uk/directory/tick-bites>

## Staff involved and training required

See HCA protocols



## **Advertising of service to patients**

Details of this service will be available on the practice website.

Patients will be advised of the service at the point of diagnosis.

## References

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