



DONCASTER DISTRICT WOUNDCARE FORMULARY 2015-2017

ASSOCIATED POLICIES

This Formulary should be used in conjunction with organisations'

- 'Wound Care Policy'
- 'Aseptic Technique & Aseptic Non-Touch Technique Policy'
- 'Hand Hygiene Policy'
- 'Standard Infection Prevention and Control Precautions Policy'
- 'Waste Management Policy'

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NOTE:

This formulary is to be used to inform the initiation of dressings in the community and guide dressing selection when a patient has moved from secondary care to primary care. Particular dressings may be initiated in secondary care however they may be swapped to an equivalent in primary care (these equivalences are identified through the formulary).

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Practitioners should refer to The Wound Care Handbook for specific product characteristics www.woundcarehandbook.com/

WOUND ASSESSMENT

Holistic wound assessment should be:-

- Patient centred.
- Accurate and precise.
- Detect the presence of complications e.g. infection
- Detect general patient factors which may delay healing e.g. nutritional status, diabetes, chronic infection and concomitant medication e.g. steroids.
- Able to provide a framework to monitor the stages of wound healing.
- Evaluate the effectiveness of any treatment.

Local wound assessment Must take into account:-

- Type and location of wound
- Stage of healing – using recognised scale e.g. pressure ulcer category 1 to 4, including ungraded
- Wound dimensions – length, width, depth, position/extent of sinuses, undermining of surrounding skin, using one of the following methods.
- Measurement should be carried out at intervals in line with organisational policy
- Cover the wound with a sterile transparent film and measure the maximum length and width
- Use a disposal paper tape to record maximum length and width
- Use a tracing chart to draw and record the entire wound area
- Use a sterile measuring probe to measure depth and extent of undermining
- Photography is a useful way of measuring when incorporating a ruler or tape into the photograph so scale can be provided (rulers are available in dressing packs)
- Guidance for obtaining consent and storage of photographs are available in the Trust Policy on Consent.
- Wounds should be assessed for any local barriers to healing, and the results documented at each dressing change using the following assessment tool:

The **T.I.M.E** acronym is a summary of the principles of wound bed preparation. It can be used as an aide-memoir to guide practice, heal wounds quickly and help your patients have a more comfortable path to healing.

	Wound Factors	Clinical Action	Wound Healing Outcome
T	Tissue non-viable necrotic tissue or slough present	Remove defective tissue debride if indicated (and competent to do so)	Viable (vascularised) wound bed
I	Inflammation and/or infection increased exudates, surface discolouration or increased odour	Remove or reduce bacterial load antimicrobial dressings debridement of devitalised tissue	Reduced bacterial burden and inflammation
M	Moisture imbalance Heavy exudate – risk of maceration. Dry wound bed – risk of desiccation	Restore moisture balance absorb exudate, or add moisture to dry wounds	Optimal moisture balance
E	Edge of wound non-advancing / Or undermining e.g. chronic wound with prolonged inflammation	Reassess T, I and M if no longer an issue consider alternative therapies to promote healing	Restoration of appropriate pH level and cell migration to advance wound edge if wound continues to be static after 2-4 weeks reassess intervention or refer for specialist treatment

WARNING: Do not attempt to re-hydrate dry necrosis in a diabetic or ischaemic wound or where the underlying aetiology is unknown, as this may encourage a 'wet spreading' gangrene. Keep the wound dry and appropriately dressed. Refer urgently to

- Podiatry where there is a diabetic origin
- Vascular specialist where there is an ischaemic origin
- Tissue Viability and Lymphoedema Services (TVAL) for unknown aetiology

For healthy wounds, irrigation with either a sterile solution of 0.9% sodium chloride or tap water close to body temperature is appropriate. For some wounds, showering is appropriate. **Foot ulcers should be kept dry until fully healed. Dependent on clinical condition a waterproof occlusive dressing or a waterproof protector may be used.**

DIABETIC FOOT ULCERS

Diabetic patients with foot ulcers should be referred to the diabetic foot ulcer clinic at East Laith Gate House for assessment as per Doncaster Diabetic guidelines, unless presenting with critical ischaemia / necrosis where urgent referral to vascular / hospital admission is required. The podiatry clinic is for all patients with diabetes with any foot problems and includes regular debridement, dressings, offloading and insole therapy.

Assessment of the Diabetic Foot Ulcers

For successful treatment, all foot ulcers need to be assessed for the underlying cause and where possible, that cause removed or modified. Diabetic foot ulcers are commonly neuropathic or ischaemic however can be a mixture of both.

Neuropathic ulcers are usually associated with trauma from excess pressure from footwear, deformity, callus and gait. The treatment of neuropathic ulcers requires the off-loading of pressure, debridement, prevention and /or control of infection and specialist foot wear. The treatment for ischaemic ulcers should involve vascular intervention where appropriate off-loading when needed, specialist foot wear, very judicious debridement and prevention and/or control of infection

The differences between neuropathic and ischaemic ulcers:

SIGNS & SYMPTOMS	NEUROPATHIC	ISHCHAEMIC
Appearance	Commonly found on pressure points on the toes and plantar surface. Often irregular with heavy callus around ulcer site with sloping edges. Can be sloughy	Punched-out, undercutting, sloughy surrounded by thin glassy callus and devitalised tissue
Deformity	Clawed toes, Charcot foot, high arch	No deformity
Pain	Painless	Agony
Skin temperature	Warm	Cool
Colour	Normal	Pale, cyanotic or rubour
Tests	Insensitive/diminished response to 10mg monofilament. Neurotip, temperature discrimination and reduced or absent reflexes	Doppler assessment for wave formation. ABPI for vascular status
Pulses	Palpable	Not palpable or weak
Callus formation	Commonly found on pressure weight bearing areas	Commonly found on the pressure points e.g., bony prominences of toes and borders of feet
Ulcer sites	Usually associated with high pressure points on the toes and planter surfaces	Commonly found on the pressure points, bony prominences of toes and feet

Management of Diabetic Foot Ulcers

To optimise chances of ulcer healing, treatment will be directed at the following areas: -

- Multi-disciplinary management
- Debridement
- Prevention and/or control of Infection
- Pressure relief
- Vascular control
- Glycaemic control
- Education
- Secondary ulcer prevention

Healthcare associated infection may cause increased morbidity and mortality. Healthcare resources are finite. Antimicrobial resistance continues to increase, therefore the management of any wound must be optimal.

For more extant guidance refer to organisational policies and NMC Minimum Professional Standards

WOUND CLEANSING





The aim of wound cleansing is the removal of gross contamination with minimal pain to the patient and minimal trauma to the tissue.

- Wound cleansing will:-
- Remove excess exudate
- Remove slough and/or necrotic tissue
- Remove remnants of previous dressings
- Facilitate accurate assessment of the wound/wound bed
- Promote patient comfort
- For healthy wounds irrigation with either a sterile solution of 0.9% sodium chloride or tap water is appropriate. For some wounds, showering is appropriate. **Foot ulcers should be kept dry until fully healed. Dependent on clinical condition a waterproof occlusive dressing or waterproof protector may be used.**
- The irrigation fluid should be close to body temperature. Care should be taken to avoid trauma to the wound or splash back.
- Repeated cleansing may do more harm than good by causing trauma to newly produced delicate tissue by reducing the surface temperature of the wound and removing exudates which may have bactericidal properties.
- If wiping of the peri-wound area is necessary, a non-filamented swab must be used. The wound bed itself should not be dried. Wiping the wound bed may leave fibres that could be a focal point for infection or may damage newly formed tissue.
- The general use of antiseptics/disinfectants is not recommended, as these solutions have been shown to kill fibroblasts and therefore hamper the healing matrix.
- A waterproof protector may be used to keep dressings dry when showering or bathing. They should be removed and the exposed skin cleansed and if appropriate dried with the cool setting of a hair dryer.

WOUND INFECTION

Wound infection is one of the commonest healthcare associated infections. Nursing staff must recognise the distinction between contamination, colonisation and infection.

- **All clinical staff must recognise when the normal inflammatory process becomes abnormal and when it is due to infection.**
- **Contamination** is when small numbers of bacteria may be detected in a wound but their presence is transient and they are not multiplying.
- In the **colonised** wound the levels of organisms not only increase but they have become established. An intermediate stage between colonisation and infection is also sometimes referred to as critical colonisation. This is because at the point at which an impact on wound healing may occur, there is evidence that heavy bacterial load infection may delay healing.
- True **clinical infection** however is defined as the process by which organisms bind to, multiply and then invade viable tissue. These responses are visible as clinical signs/symptoms and include; localised heat, pain, swelling and erythema. There may also be purulent discharge and uncharacteristic odour. The patient may also feel unwell and have a raised or even lowered body temperature.

The infection continuum (adapted from Kingsley, 2001; WUWHS, 2008)					
		Description	Presenting Symptoms	Intervention required	Antimicrobial dressing
	Contaminated	Presence of non-multiplying bacteria in the wound	Patient has no symptoms and the wound is healing normally	Standard wound management	No
	Colonised	Presence of multiplying bacteria in the wound but no immune response	The patient has no symptoms and the wound is healing normally	Standard wound management	No
	Critically colonised/localised infection	The immune system has been compromised and the patient is no longer able to control the multiplying bacteria	<ul style="list-style-type: none"> • Slight odour increased/new pain excessive or increased serous exudate • Localised erythema • Delayed healing • No fever 	Topical antimicrobial dressing	Yes
	Spreading/systemic infection	The multiplying of bacteria overwhelm the immune response, resulting in clinical signs and symptoms	<ul style="list-style-type: none"> • Severe/increasing pain • Increasing erythema • Increasing oedema • Increasing wound size • Localised heat • Excessive purulent discharge • Wound breakdown • Pocketing at the base of the wound • Epithelial bridging • Friable granulation tissue • Discolouration of wound bed • Abscess forming • Malodour • Fever • Visible devitalising tissue 	Systemic antibiotics plus topical antimicrobial dressing	Yes

Critically colonised/localised wound - management pathway	Spreading/systemic wound infection - management pathway
<ol style="list-style-type: none"> 1. Is the wound critically colonised/locally infected (see table above) 2. Use a topical antimicrobial dressing 3. Review process <ul style="list-style-type: none"> • Review the wound at each dressing change and after 2 weeks. Provide a full rationale in the patient's records as to why you have continued/ discontinued treatment • If the wound fails to progress or deteriorates, refer for specialist advice and consider the pathway for spreading/ systemic infection 4. Discontinue treatment Consider this, if there has been: <ul style="list-style-type: none"> • A reduction in wound dimensions? • A reduction in exudate levels? • A reduction in pain? 5. Once bio-burden is under control and the wound is improving, a non-antimicrobial dressing should be considered. 6. Document the full rationale in the patient's record 	<ol style="list-style-type: none"> 1. Is the wound showing signs of spreading/ systemic infection (see table above) 2. Use a topical antimicrobial dressing <ul style="list-style-type: none"> • Follow the protocol for wound swabbing • Ensure antibiotic therapy complies with the local formulary [see page 9]. If not, seek advice from a medical microbiologist. 3. Review process <ul style="list-style-type: none"> • Review the wound at each dressing change and at 7 days post antibiotic initiation. Is the wound still showing two or more signs of infection? • If yes, check the following: <ul style="list-style-type: none"> ○ Review the wound using TIME or another appropriate framework ○ Is there an appropriate level of compression? ○ Is the wound management appropriate? • If yes, document the full rationale in the nursing notes and consider a further 7 days of antibiotics. 4. If, after 10 days of antibiotic treatment, there is no improvement, refer to the tissue viability team/Microbiologist

OBTAINING A BACTERIAL SPECIMEN

Swabbing should only be done in exceptional circumstances, where there are signs and symptoms that may indicate an infection and only after referral to an experienced colleague.

When obtaining a specimen

- The healthcare worker must ensure that they wash their hands prior to and following the procedure
- The healthcare worker must carry out a risk assessment on the appropriateness of personal protective equipment required, and ensure that they use the **correct** PPE
- If there is pus present where possible obtain a sample by aspirating the wound with a syringe.
- If the wound is dry and a dry swab is being used then it should be moistened with sterile saline; the swab should be wiped over the wound using a zig-zag motion.
- The specimen should be carefully labeled with all relevant information.
- The specimen should be sent to the laboratory as soon as possible in order to yield a good result.

DEBRIDEMENT

Debridement is thought to be essential for optimal healing. Callus surrounding an ulcer, together with non-viable tissue, should be removed with a sterile scalpel using an aseptic technique by an appropriately skilled / knowledgeable healthcare professional.

NB: The debridement of ulcers using scalpel technique may not be appropriate treatment in the ischaemic foot as any trauma caused may not heal.

Debridement may also be undertaken using larvae, Debrisoft or appropriate dressings that promote debridement.

WARNING: Do not attempt sharp or surgical debridement unless you have successfully completed the necessary course(s) and are qualified and competent in this skill.

RESTRICTED PRODUCTS

Initiation of the following products is RESTRICTED.

These products may be initiated under specialist advice ONLY from the Tissue Viability Nursing Service.

- Kendall AMD Antimicrobial Foam
- Actilite
- Debrisoft
- Flaminal (**Forte and Hydro**)
- Larvae therapy
- Promogran / Prisma
- T.N.P. Therapy (Venturi / VAC / PICO)
- Vibropulse

COLONISATION & CLINICAL INFECTION

Symptom	Product	Comment
Exudate	Acticoat Flex 3 or 7 Allevyn Life (except plantar ulcers) Biatain (Plantar ulcers ONLY)	Change dressing at strike through
Heavy Exudate	Durafiber Allevyn Life	Change dressing at strike through
Odour	Acticoat Flex 3 or 7 Allevyn Life	
Pain	Acticoat Flex 3 or 7 Allevyn Life	Use of analgesia prior to dressing change + usual pain management.
Foot	Acticoat Flex 3 or 7 Allevyn Life (except plantar ulcers) Biatain (Plantar ulcers ONLY)	

Oral antibiotics

Ulcers are always colonised and antibiotics do not improve healing unless there is an active infection (see page 7).

If there are signs of an active infection, send pre-treatment swab (see page 8) and ALWAYS review antibiotics after culture results.

Compliance with antibiotics should be confirmed at each dressing change.

	Product and adult dose	Comment
Non-MRSA	1 st line Flucloxacillin - 500mg four times a day <i>Beware penicillin allergy</i>	Course length is usually 7 days. Re-assess for progress at 7 days and the need to continue for a further 7 days.
	<i>If penicillin allergy</i> Clarithromycin 500mg twice a day	
MRSA colonised <i>MRSA confirmed by lab results, infection not severe and admission not required</i>	Doxycycline 100mg twice a day	Use antibiotic sensitivities to guide treatment. Course length is 7 days. Stop if diarrhoea. If severe infection or no response to monotherapy after 24-48 hours, seek advice from microbiologist.
	Clindamycin 300mg four times a day	

Source data: Doncaster and Bassetlaw Antimicrobial Guidance for Primary Care 2013
Health Protection Agency Management of infection guidance for primary care

Other considerations

Refer to a tissue viability team or consultant medical microbiologist if there is no resolution in

- Infected wound – after 10 days post antibiotic initiation or
- Critically colonised wound – after 14 days treatment

MRSA infected wounds - consider Larvae therapy

NECROTIC WOUNDS

Characterised by:	<ul style="list-style-type: none"> • Presence of dead or de-vitalised tissue Black/Brown colouration • Wound will not heal until necrotic tissue is removed 	
Aim of treatment:	<ul style="list-style-type: none"> • Hydration of wound. • DO NOT HYDRATE BELOW KNEE WOUNDS UNLESS CIRCULATION HAS BEEN DETERMINED • Removal of necrotic tissue 	


The dressings listed below are the preferred dressings for each of their respective type. This is not to say that choice is restricted to these only, however they should be considered and discounted before an alternative is used

	SHALLOW	CAVITY	COMMENT
Debridement	Primary dressing Hydrogel: Intrasite Gel Intrasite Conformable Purilon ¹ Secondary dressing Film: C-view (hospital) Tegaderm (community)	Primary dressing Hydrogel: Intrasite Gel Intrasite Conformable Purilon ¹ Secondary dressing Film: C-view (hospital) Tegaderm (community)	Incontinence Where continence is a concern consider a hydrocolloid [eg Comfeel Plus Contour]. Hydrocolloids should be 2cm larger than the wound Aterial component No – use a hydrogel + a film combination changed daily Yes – use a hydrocolloid
Exudate Management	Primary dressing As above Secondary dressing Foam : Allevyn Life	Primary dressing As above Secondary dressing Foam : Allevyn Life	
Colonisation / infection	See page 10		

- Mixed wounds should be treated as per predominant wound type.
- Failure of the wound to respond to treatment within 7 days should lead to referral to a more experienced colleague.

1. **Purilon** should only be used as a preparatory treatment for larvae therapy

SLOUGHY WOUNDS


Characterised by:	<ul style="list-style-type: none"> • Slough - soft necrotic tissue / dead phagocytes. Yellow colouration • Wound will not heal until slough is removed 	
Aim of treatment:	<ul style="list-style-type: none"> • To lift slough from wound • To manage exudate 	

The dressings listed below are the preferred dressings for each of their respective type. This is not to say that choice is restricted to these only, however they should be considered and discounted before an alternative is used

	SHALLOW	CAVITY	COMMENT
Debridement	Primary dressing Alginate ¹ : Aquacel Durafiber Hydrocolloid: Comfeel Granuflex	Primary dressing Alginate: Aquacel Durafiber	Aquacel ribbon : this should be pleated and folded in the cavity. DO NOT PACK Foam dressings: for easy removal of adhering dressings from surrounding skin – use water between skin and dressing. Logical Combinations: Light exudate: Alginate and film Moderate exudate: Alginate and hydrocolloid Heavier exudate: Alginate and foam
Exudate Management	Primary dressing As above Secondary dressing Foam : Allevyn Life Versiva XC	Primary dressing As above Secondary dressing Foam : Allevyn Life	
Colonisation / infection	See page 10		
<ul style="list-style-type: none"> • Mixed wounds should be treated as per predominant wound type. • Failure of the wound to respond to treatment within 7 days should lead to referral to a more experienced colleague. 			

1. Alginate dressing: Secondary care may initiate Sorbsan however this should be changed to Aquacel or Durafiber in community unless there are overriding clinical considerations

GRANULATING WOUNDS


Characterised by:	<ul style="list-style-type: none"> • Shiny granulation tissue • Connective tissue and capillary loops • Bright red colouration 	
Aim of treatment:	<ul style="list-style-type: none"> • Promote granulation (distinguishing between healthy and uncontrolled granulation) • Manage exudate 	

The dressings listed below are the preferred dressings for each of their respective type. This is not to say that choice is restricted to these only, however they should be considered and discounted before an alternative is used

	SHALLOW	CAVITY	COMMENT
Debridement	Primary dressing Alginate ¹ : Aquacel Durafiber Hydrocolloid: Comfeel Granuflex	Primary dressing Alginate ribbon/rope: Aquacel Durafiber	Aquacel ribbon : this should be pleated and folded in the cavity. DO NOT PACK Foam dressings: for easy removal of sticking dressings from surrounding skin – use water between skin and dressing. Logical Combinations: Light exudate: Alginate and film Moderate exudate: Alginate and hydrocolloid Heavier exudate: Alginate and foam
Exudate Management	Primary dressing As above Secondary dressing Foam : Allevyn Life Versiva XC	Primary dressing As above Secondary dressing Foam : Allevyn Life	
Colonisation / infection	See page 10		
<ul style="list-style-type: none"> • Mixed wounds should be treated as per predominant wound type. • Failure of the wound to respond to treatment within 7 days should lead to referral to a more experienced colleague. 			

1. Alginate dressing: Secondary care may initiate Sorbsan however this should be changed to Aquacel or Durafiber in community unless there are overriding clinical considerations


EPITHELIALISING WOUNDS

Characterised by:	<ul style="list-style-type: none"> • Epithelial cells migrating from wound edge to fill deficit, plus islands of epithelial cells in the wound bed originating from hair follicle and sweat glands • Lilac-pink colouration • Shallow with low exudate 	
Aim of treatment:	<ul style="list-style-type: none"> • Protect wound 	

The dressings listed below are the preferred dressings for each of their respective type. This is not to say that choice is restricted to these only, however they should be considered and discounted before an alternative is used

	SHALLOW	CAVITY	COMMENT
Debridement	NOT APPLICABLE		Dressing selection is based entirely on the degree of exudate Hydrocolloids may be left in place for 2-7 days.
Exudate Management	Primary dressing Thin hydrocolloid: DuoDERM Hydrocolloid: Comfeel Foam: Allevyn Life	Primary dressing Thin hydrocolloid: DuoDERM Hydrocolloid: Comfeel Foam: Allevyn Life	
Colonisation / infection	NOT APPLICABLE		
<ul style="list-style-type: none"> • Mixed wounds should be treated as per predominant wound type. • Failure of the wound to respond to treatment within 7 days should lead to referral to a more experienced colleague. 			

MALODOROUS and FUNGATING WOUNDS

Characterised by:	<ul style="list-style-type: none"> • Offensive smell • Variable exudate • Painful 	
Aim of treatment:	<ul style="list-style-type: none"> • Determine the patient's priorities regarding treatment. • Address analgesic needs. • Palliative management. • Minimise disturbance to wound 	

The dressings listed below are the preferred dressings for each of their respective type. This is not to say that choice is restricted to these only, however they should be considered and discounted before an alternative is used

	SHALLOW	CAVITY	COMMENT
Debridement	GENERALLY TO BE UNDERTAKEN BY A WOUND SPECIALIST ONLY		Silflex: Used as primary to minimise disturbance - may be left in place for up to 14 days
Exudate Management	Primary Dressing Silflex Secondary Dressing Carboflex Tertiary Dressing KerraMax Care	Primary Dressing Silflex Secondary Dressing Carboflex Tertiary Dressing KerraMax Care	Carboflex: Will treat colonising organism which might be causing odour, exudate and pain KerraMax Care: Useful when heavy exudate - additionally can be shaped for comfort and ease of application.
Colonisation / infection	NOT APPLICABLE		

- Mixed wounds should be treated as per predominant wound type.
- Failure of the wound to respond to treatment within 7 days should lead to referral to a more experienced colleague.

OTHER WOUND CARE PRODUCTS

PRESENTATION	PACK SIZE	COMMENT
BANDAGES		
Easifix K	singles	Retention
Clinilite	singles	Support Bandage
COMPRESSION SYSTEMS		
Layer 1: Flexi-Ban or K-Soft Layer 2: K-lite Layer 3: K-plus Layer 4: Ko-Flex	singles	Ankle circumference: less than 18cm; 18 - 25cm; 25 - 30cm; greater than 30cm
Tensopress	Multilayer Compression	Available as a kit or singles. For legs >28cm
Actico	singles	Short stretch - Use only if suitably trained
TUBULAR BANDAGES		
Clinifast	1m singles	retention
TAPES		
Clinipore	5m x 2.5cm singles	
DRESSING PACKS [PRESCRIBE BY BRAND]		
DRESSIT	singles	DBHFT and Community
Soft Drape	singles	Tickhill Road Hospital

Practitioners should refer to The Wound Care Handbook for specific product characteristics
www.woundcarehandbook.com/