



County Durham and Darlington
Community Health Services

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**Tissue Viability Information
and Wound Management
Dressing Formulary for use
in Community Services**

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Acknowledgements

This work was undertaken by the Tissue Viability Steering Group and is an update of work undertaken in 2008. Decisions about which dressings to be included in the 2011 formulary were taken by the Tissue Viability Service after examination of any available, credible evidence and in discussion with Medicines Management and specialist representatives. The majority of advice uses generic dressing types in order that this booklet can be used for longer than the life of an individual dressings formulary naming specific products.

Special thanks to those who contributed:

Medicines Management Podiatry Services Dietetics
Home Equipment Loans Service Adult Services

Caution:

- ◆ Needs to be plugged in to work.
- ◆ Can increase the height of the chair significantly.

Electric bed frames

- Four section electric profiling bed.
- Facilitates moving and handling.
- Helps prevent shear and friction with use of knee brake and reverse Trendelenburg.
- Allows the patient to control some positioning.

Caution:

- ◆ Need more space than divan bed.

Remember assessment for equipment also requires regular reassessment as need can change.

See Home Loans Catalogue for range of equipment available and requisitioners responsibilities.

Static air flotation cushion (Repose)

- Medium to high risk patients.
- Restrict sitting as much as possible.
- This is a bag of air that spreads the patients weight and exaggerates the slightest movement to relieve pressure therefore the patient should have some movement.
- Covers and tight pads can reduce any effect.
- Weight limit 21st.

Caution:

- ◆ Bare skin can stick to the surface.
- ◆ Regular inspection is needed to re-inflate to correct pressure.

Gel cushion

- Foam cushion covered with gel to spread the weight out.
- For high risk patients with limited mobility.
- May have pressure damage.
- Restrict sitting as much as possible.
- Only 3 inches deep so less effect on increasing height of chair.

Caution:

- ◆ Long term use requires 6 monthly inspection as gel or foam will 'wear out' over time.
- ◆ Home made covers will reduce effectiveness.

Dynamic pressure relief cushion

- Alternating pressure seat cushion with pump.
- High risk patients.
- May have pressure damage.
- Very restricted mobility when seated.
- Spends significant amounts of time seated.
- Weight limit 19st.

Introduction

The prevention and management of wounds can be simple or complex, involve any age group and many different care providers. The purpose of this booklet is to focus on wound management but it will also provide guidance on many other aspects of tissue viability. A full policy and guideline is available for both Pressure Ulcers and Wound Management.

Wound management philosophy

The two most important factors in wound healing are the health of the patient and the skills and knowledge of the practitioner. It is recognised that, given the right circumstances, the body will heal itself and therefore the majority of patients will not require a specialist wound management practitioner. However every person with a wound healing problem has the right to be assessed by a specialist. Any person who has a wound for 26 weeks must be referred to the Tissue Viability Service.

Choice of therapy depends on an holistic assessment of the patient, their environment and then the wound. Practitioners should approach dressing choice with a clear view of what they expect in terms of patient acceptance, wound healing potential and effectiveness.

Wound healing

Normal wound healing follows a set path, the body is programmed to heal itself; dressings just provide the right environment. As an estimate, 60% of wounds will heal with minimum intervention, 20% may never heal and therefore require palliative care and 20% require specialist intervention. Wound healing is both time consuming and costly to the NHS and there is little evidence to support the use of one product over another. In addition there is no one dressing that is suitable for all patients and wound types. A practitioner must be able to assess the stage a wound is at and plan care accordingly.

The correct dressing for wound management depends not only on the type of wound but also on the stage of the healing process. The stages of healing may overlap. The principle stages of healing are:

Cleansing and removal of debris

During this stage inflammation will occur as the body transports the necessary cells and chemicals required to liquefy and remove any devitalised or foreign tissue. The wound may smell and look inflamed but is not necessarily infected, exudate levels will usually be high requiring the wound to be dressed more often. The colour of the wound would be black/green/yellow.

Granulation, vascularisation

This is new tissue, the body is growing new blood vessels and closing the gap left by the removal of the dead tissue. The wound will be red and healthy, exudate levels will decrease and the time between dressing changes increases.

Epithelialisation

New skin needs to migrate across the wound surface and close the wound. The wound should be pink with minimal exudate and require as few dressing changes as possible.

The ideal dressing needs to address the stage the wound is at, the exudate produced and be acceptable to the patient.

Practitioners need to be aware of the challenges posed by patients with diabetes or vascular disease who require specific care.

If in doubt advice should be sought from the Tissue Viability Service.

- Goes straight onto bed frame – needs to be secured

Caution:

- ◆ Power cuts mean mattress will deflate leaving patient on hard surface.
- ◆ Softness of surface inhibits patient mobility so improvement in patient should result in a reassessment.
- ◆ Long term use may mean ‘swapping out’ products to allow for cleaning and maintenance as ingress of fluids will occur over time.
- ◆ Those with a sensor pad may not work if patient under 6 stones.

For the chair:

Prolonged sitting significantly increases the risk of pressure ulceration. So ordering a cushion is vital. No evidence to say one is better than another. Need to assess the patient seating for suitability of height, width and depth. A patient with pressure damage on their sacrum or over their ischial tuberosities should sit out as little as possible as it is likely sitting is the cause.

Static pressure reducing foam cushions

- Spread the patients weight thereby reducing the pressure
- Patients at low to medium risk.
- May have low grade pressure damage – advise re restricting time spent in chair as much as possible.
- Able to relieve own pressure areas by standing or rocking side to side.
- Weight limit 17st.

Caution:

- ◆ Increases the height of the chair by 4inches so need to make sure this does not effect patient mobility and position.
- ◆ Long term use requires 6 monthly checks of cover and foam.
- ◆ Tight pads or covering the cushion may reduce its effect.

Alternating pressure overlay

- Medium to high risk.
- May have a pressure ulcer.
- Gives pressure relief.
- For patients who are in bed for a significant amount of time and/or have poor ability to change their own position when in bed.
- Go on top of a base mattress – foam or sprung.
- Weight limit depends on type 22-32 stones.
- Can come in double bed size where one side is static and one alternating.

Caution:

- ◆ Patients weight can 'bottom-out' mattress reducing it's effectiveness.
- ◆ If control by a dial need to teach carers etc to turn it up when patient sits up and turn it down when lying down.
- ◆ Height may also be an issue particularly if using side rails.
- ◆ Needs to be secured to the mattress beneath so does not slip.

Alternating pressure mattress replacement

- High risk but no evidence to say more effective than using an overlay.
- With or without a pressure ulcer.
- Use if person unsafe to be on an overlay because of weight or falling risk.
- Patient spends majority of time in bed and movement is minimal
- 'basic' model relies on you to set the pressure of the bed using a dial setting. It would probably suit the majority of needs (with education around changing settings).
- 'top of the range' Built for very high risk patients. Has a sensor pad and a 'heel guard' section – claims to help wound healing but no real evidence for this.
- Weight limit depends on product – anyone over 22st needs an accurate weight recording.

Patient assessment

With appropriate management a wound should heal at a steady rate identifiable through regular planned assessment.

Assessment should include information from different sources. It should bring together general and specific information on the patient, the skin, the circulation and the wound itself, only in this way can an accurate diagnosis be made, risk factors evaluated and effective treatment commenced.

Assessment may necessitate referral to other members of the multi-disciplinary team such as Tissue Viability Nurse, Clinical Nurse Specialists, Dieticians, Physiotherapists, Podiatry, Vascular Team or Dermatology

Assessment has four levels:

1. General patient factors that could delay healing – Patient assessment.
2. Immediate causes of the wound and any underlying pathophysiology- patient and event/enviromental assessment.
3. Local conditions at the wound site – wound assessment.
4. Potential consequences of the wound for the individual – assessment of possible outcomes.

This should allow the practitioner to identify and record:

- The healing potential of the individual.
- Factors that will help formulate a treatment plan such as the general appearance of the skin, wound pain or allergies.
- Factors that will delay healing such as general health, nutritional status, underlying disease, medication or incontinence.

- The cause of the wound, so that further problems can be prevented, such as; immobility resulting in pressure sores, venous hypertension resulting in a venous ulcer or diabetes giving rise to a neuropathic ulcer.
- Functional and psychological factors that will result from the wound or its treatment that may delay healing.
- The effect on carers and family.

Wound assessment

Following an assessment of the person the practitioner should assess the wound. The aim of any assessment is to give a description of the wound appearance.

Measurement forms an important part of documentation and can be achieved simply by the use of a tracing map or a wound care ruler.

This information will enable the healthcare practitioner to select the correct type of dressing and allow the progress of the wound to be monitored.

Assessment should include:

- The general appearance and anatomical site of the wound.
- The size of the wound.
- The shape of the wound.
- The depth of the wound.
- The colour of the wound.
- Only pressure ulcers can be categorised / graded.
- The amount, type and colour of exudate.
- The presence of odour and/or malodour.
- The presence/absence of infection.
- Wound related pain.
- The condition of the surrounding skin.

Static Air Flotation Overlay Mattress (Repose)

- Medium to high risk patients.
- May have pressure damage – claims that this mattress can help in healing are questionable.
- This is a bag of air that spreads the patients weight and exaggerates the slightest movement to relieve pressure therefore the patient should have some movement.
- Bedcovers and tight pads can reduce any effect.
- Short term use only.
- Weight limit 21 stones but reduces if patient 'sits up' in bed.

Caution:

- ◆ Mattress depth is only 2 inches so need to have a good base mattress beneath as it will conform to the lower surface and the patient.
- ◆ Bare skin can stick to the surface.
- ◆ Regular inspection and inflation is needed to maintain the correct pressure.

Foam Mattress Replacement

- Low to high risk patients.
- Patient able to move around the bed (low to medium risk) or
- An electric bed frame is in use (medium to high risk).
- Mattress will reduce pressure but when used with an electric bed shear and friction are also reduced.
- Patient may have grade 1-2 pressure damage but are able to reposition themselves and are either stable or improving in condition.

Caution:

- ◆ Will wear out over time.
- ◆ Long term use requires mattress check at 6 monthly intervals to ensure cover is intact and foam is OK.
- ◆ Mattress may require turning.
- ◆ Weight limit 19st.

- ◆ Cost considerations (NICE Clinical Guideline quick reference guide 2005).
- All surfaces used by the patient should be considered including armchair, wheelchair, toilet.
- Changes of device should reflect changes in risk status.
- Equipment for prevention should be reviewed as part of the risk assessment process taking into account that equipment can be down graded as well as upgraded.
- Patients may choose not to use any therapy products because of their personal circumstances, in particular those that wish to continue sleeping with their partner. A double mattress (one side alternating) is available from HELS – personal choice should be recorded and respected, and full information about the dangers should be given and recorded.
- Bariatric and specialist equipment needs specialist and often multidisciplinary assessment .
- As a requisitioner of equipment you are responsible for assessment and reassessment of need, training for users such as the patient, carers and family and for return when no longer required (full requisitioner responsibilities are given in the HELS catalogue).

Standard equipment – For the bed:

Mattress topper - foam

- Low to medium risk.
- No pressure damage – for prevention only.
- Patient is able to move themselves in bed and has a good base mattress or
- Patient choice e.g. so can stay in double bed.

Cautions: Will wear out over time so if in long term use should be checked every six months for integrity of cover and foam. Weight limit 17st.

This information should be recorded on the wound care assessment chart with the size and shape recorded as a traced diagram or drawing. Photography of wounds (if available) should be done with the patient's documented consent and all photographs labelled and securely stored.

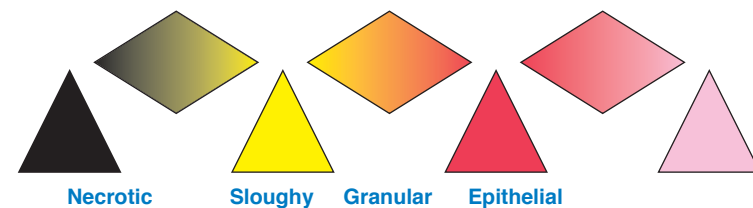
The assessment chart should be available to all members of the multidisciplinary team. A date should be set for the formal re-evaluation of the wound, and any changes in the care plan following re-assessment should be recorded.

Wound observations will be recorded at each dressing change to allow communication between practitioners and give an indication that the wound healing plan is working as expected. To allow ease of communication Applied Wound Management will be used.

Applied Wound Management ¹

This system gives the practitioner 3 continuums to assess a wound:

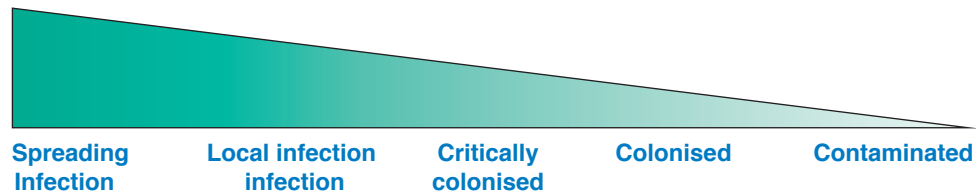
1. The wound healing continuum – uses colour to show the tissue present in the wound and how the wound should progress.



The normal progression of a wound is to move from black to pink. Estimates of the amount of each colour can be given to indicate an improving wound. Exact amounts are not required as long as the general movement is from left to right and in an expected time given in the care plan.

¹ The wound continuums have been adapted from the work carried out by David Gray his team at Wounds UK (Aberdeen & London)

2. The wound infection continuum – uses 4 criteria to assess the level of bacteria in a wound. Lower levels of bacteria increase healing potential.



Assessing levels of bacteria requires assessment of several factors; those given in the following table as well as your knowledge of the patient and their environment.

3. The wound exudate continuum – aids in assessing both viscosity and volume of exudate.

	VISCOSITY		
VOLUME	High 5	Medium 3	Low 1
High 5			
Medium 3			
Low 1			

Levels and thickness of exudate give key indication of the presence of bacteria and wound healing. Thick exudate in high volumes usually indicates a wound in the first stage of healing and you would expect large amounts of necrotic sloughy tissue to be present. As the wound progresses exudate should become thin and reduce in amount moving to the green zone. If you are presented with a wound that has high exudate levels but the exudate is thin then this is likely to be oedema leaking through the wound and other methods of control such as elevation should be employed.

Pressure ulcer reporting

Pressure ulcers have been identified as largely avoidable events. The occurrence of all pressure ulcers classified as grade 2 and above should be reported using the incident reporting system (Safeguard). Pressure ulcers are linked to a CQUIN (Commission for Quality and Innovation) target to improve the quality of care we give.

To that end patients who develop a pressure ulcer whilst under the care of community services and those with pressure damage who develop further damage require reporting and a corresponding route cause analysis completed. As part of the process staff should consider whether the pressure damage is caused by neglect and therefore a separate alert under the Protection of Vulnerable Adults policies is required. Grade 3 and 4 incidents are reported to the Department of Health via STEIS (Strategic Executive Information System)

Equipment provision

Equipment provision is only one part of a pressure ulcer prevention plan these are local guidelines on choosing equipment from the Home Loans Service. Each one of your patients is an individual therefore this is for guidance only.

- Assessment should be on-going throughout an individual's episode of care and the type of pressure relief changed to suit any alteration in risk.
- Choice of device should be based on:
 - ◆ Patient choice.
 - ◆ Risk assessment.
 - ◆ Skin assessment.
 - ◆ General health.
 - ◆ Lifestyle and abilities.
 - ◆ Care needs.
 - ◆ Acceptability and comfort.
 - ◆ Availability of carer/healthcare professional to reposition
 - ◆ Patient weight

Continence lesions – not caused by pressure, shear or friction but the effect of urine and faeces.



- Decisions about which pressure redistributing device to use should be based on an overall assessment of the individual and not solely on the basis of scores from risk assessment scales.
- The benefits of a pressure redistributing device should not be undermined by prolonged chair sitting.
- Individuals who are at risk of pressure ulcer development should be repositioned and the frequency of repositioning determined by the results of skin inspection and individual needs not by a ritualistic schedule.
- Patients who are able and willing should be informed and educated about risk assessment and resulting prevention strategies. This should, where appropriate, include carers.

Critically Colonised and Infected Wounds

Very few wounds will be completely sterile. The practitioner needs to be aware of the signs and symptoms of colonisation and infection. Infection requires antibiotic therapy. Antimicrobial dressings reduce bacterial burden on the surface of wounds and can therefore reduce infection risk and odour. Care needs to be taken when using antimicrobials. They have the potential to inhibit cell growth and there is potential that resistant strains may develop.

There are many different types of antimicrobial dressing, differing in mode and length of action, some are more potentially toxic than others and so should only be used for a maximum of 14 days, other 'new' antimicrobials can be used for longer periods as they have been shown to be much safer in use. These are particularly useful in compromised patients who become repeatedly infected.

During the use of any antimicrobial:

- The antimicrobial should be discontinued at the earliest opportunity.
- Potential allergic reaction is possible.
- Pain levels may increase.
- **Short term antimicrobials should not be used for longer than 14 days.**
- **Longer term antimicrobials should not be used for longer than 4 weeks of treatment without a clear rationale.**
- Wounds should only be swabbed if there are clinical signs of infection and to determine the microbiology of a wound prior to antibiotic therapy. A wound should be cleaned with saline to remove any debris then the process is to move the swab in a zigzag motion across the wound whilst rotating the swab between your fingers. Larger wounds may require more than one swab. Do not refrigerate swabs. Ensure the request form is completed and the date and time of the swab is recorded in the patient records.

Wound Categories and System1

Community nursing have adopted a single wound assessment chart and wound observation chart that are reflected in the electronic document System1. Episodes of care for the different categories reflect both the complexity of the wound and the patient themselves and give an indication of expected healing times:

Simple wounds – high healing potential in 4 weeks

These wounds are expected to heal quickly, the patient is well with no indications that wound healing maybe protracted. E.g. closed surgical wounds, superficial lacerations, burns or scalds.

Complex wounds – Medium healing potential in 12 weeks

A wound where problems and risks have been identified which may delay healing or where more complex treatment is required such as Topical Negative Pressure. E.g. open surgical wounds or were the patient presents with a medical condition that may delay healing. These cases may require specialist advice and input.

Chronic wounds – Low healing potential in 12 weeks

A wound which has failed to heal or progresses slowly over 12 weeks due to a multiple of factors such as the patients underlying co-morbidities or past history becomes a chronic wound. Specialist advice and input may be required.

Non-healing wounds – very low healing potential, ongoing 26 weeks

These are static wounds which may fluctuate slightly but rarely go on to heal due to underlying pathology, poor general health, multiple co-morbidities or lifestyle choices. The objective of care is palliation / prevention of symptoms such as pain, infection and malodour.

Specific wound types

Leg ulcers; arterial, venous, mixed and wet legs have specific Episodes of Care as do Pressure Ulcers stage 1/2 and 3/4.

Category 4: Full thickness tissue loss



Full thickness tissue loss with exposed bone, tendon or muscle. Exposed bone/muscle is visible or directly palpable.

Slough or eschar may be present. Often includes undermining and tunnelling. The depth of a category 4 ulcer varies with anatomical position as with category 3.

In those ulcers which extend through supporting structures (eg fascia, tendon, joint capsule) osteomyelitis is likely to occur.

- Pressure ulcer grading should not be used for other wound types
- Pressure ulcers should not be retro-graded, a healing grade 4 ulcer does not become a grade 3 then grade 2 etc but should always be described as a healing grade 4 ulcer as an indication of the extent of damage that has occurred. Scar tissue is never as strong as 'normal' tissue.

Category 3: Full thickness skin loss



Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed.

Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling.

The depth of a Category 3 pressure ulcer varies by anatomical location.

The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and so may be shallow in contrast to areas with significant adiposity which can develop deep grade 3 ulcers.

Signs and symptoms of wound infection

Signs and symptoms	Systemic infection	Local infection	Colonisation	Normal wound
Key local characteristics	> 2cm redness with pain (unless insensate).	2cm or less redness with pain Sudden necrosis on wound bed (red inflammatory zone may not be present)	Static (despite appropriate therapy) No cellulitis	Expected progression towards healing No cellulitis (but may be small degree of inflammation in the early stages consistent with inflammatory phase – generally not more painful to pressure than background wound pain).
Other local characteristics	Heat Swelling	Heat and swelling (can be difficult to identify in small red inflammatory zone)		
Additional local characteristics that may be present in addition to key ones	Extension to main wound at skin level Blistering (fluid filled) New satellite wounds in red inflammatory zone Increased wetness Haemorrhagic patching or spotting in surrounding skin Purulent exudate Maceration if control of exudate is inadequate Extensive necrotic and/or sloughing necrotic tissue Neutrophilia Rising C-reactive protein Fever Rigors Confusion (in the elderly) Bacteraemia Tachycardia Tachypnoea Lymphangiitis Lymphadenitis	Extension to main wound at skin level Extension to wound at its base (pocketing) Increased wetness Purulent exudate Maceration if control of exudate not good Extensive necrotic and/or sloughing necrotic tissue Discolouration of granulation tissue (darkening) Friable bleeding granulation tissue (possibly with very bright red tissue) Foul odour	Thick slough not responding to standard debridement techniques Fast returning thick slough after sharp or maggot debridement Purulent exudate Wet wound Maceration Blue/green exudate (Pseudomonas aeruginosa) Foul odour Discolouration of granulation tissue (darkening) Friable bleeding granulation tissue (possibly with very bright red tissue)	Debride damaged tissue under standard therapeutic approaches Gently moist wound surface Slough but light and mobile in consistency Inflammation from initial wounding consistent with expectation for inflammation phase of wound healing but fading away or gone if wound older Granulation tissue a healthy red colour Epithelial tissue with colour different from but relevant to normal skin tone Reducing wound size in last 1-2 weeks
Suggested treatment	Systemic antibiotics – if redness increasing IV if not oral Topical antiseptic dressings	Systemic antibiotics oral Topical antiseptics ◆ Iodine ◆ Silver	Topical antiseptic Rapid debridement Consider larvae	Standard wound management

(adapted from Kinsley, White and Gray 2004, *The wound infection continuum: a revised perspective*)

Choosing a dressing:

A dressing comes in 2 parts: the wound contact layer (primary dressing) and the secondary dressing. The first layer provides the wound with the right environment for healing the second layer may simply hold this in place or absorb exudate.

In some products both layers are in the same dressing for example an adhesive foam dressing. In some wound types such as leg ulcers it is the secondary dressing; compression bandage that is healing the wound the primary dressing is there to prevent adherence and therefore damage on removal.

Below are some suggestions which can inform your choice. They do not negate the first rule to first assess the patient holistically.

- Without the agreement of the patient you will not achieve your outcome, compliance issues need to be addressed.
- If the wound is black/yellow then part of the healing process is to remove this tissue – during this stage the wound will get bigger so you need to prepare your patient.
- Every wound and dressing has an odour; an odour does not by itself indicate infection.
- Swabbing of a wound should not be done unless there is a clinical indication.
- Hard black necrotic ulcers and toes can be left dry if there are no signs of them breaking away or beginning to auto-debride.
- Granulating and epithelial wounds should be dressed as infrequently as possible.
- Any wet dressing should be changed immediately.
- Level of exudate will most often dictate number of dressing changes.
- Patients with Diabetes or Vascular Disease need to be treated with caution.

Category 2: Partial thickness



Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough.

May also present as an intact or open/ruptured serum filled or sero-sanguinous filled blister.

Presents as a shiny or dry shallow ulcer without slough or bruising (bruising indicates deep tissue injury).

This category should not be used to describe skin tears, tape burns, incontinence associated dermatitis, maceration or excoriation.

- Skin inspection should occur regularly and the frequency determined in response to changes in the individual's condition, in relation to either deterioration or recovery.
- Skin changes should be documented / recorded immediately.

Any area of persistent redness should be recorded including site and size.

Pressure ulcers will be graded using the following grading system (European and American Pressure Ulcer Advisory Panel 2010):

Category 1: Non-blanchable erythema



Intact skin with non-blanchable redness of a localised area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; it's colour may differ from the surrounding area. The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Category 1 may be difficult to detect in individuals with dark skin tones.

This the first sign that the individual is at high risk and preventative measures should be taken. Discolouration of the skin, warmth, oedema, induration or hardness may also be used as indicators, particularly those individuals with a darker skin.

- Size does matter – the cost of a dressing increases with size therefore choosing the correct size is important.
- Consider what stage the wound is at and how often you need to change the dressing; a wet wound requires frequent changes therefore a simple pad should be preferred over a foam dressing.

Types of dressings available

Dressings change all the time, this is a current list of types.

Alginate

Made from seaweed, these dressings absorb exudate, trap bacteria and act as a haemostat. Dressing should not sit on peri-wound skin as this will cause maceration or skin reaction. They can be used to help the debridement process and promote a moist atmosphere to allow granulation.

Secondary dressing required.

Hydrocolloid

Provide moist wound healing environment to promote autolysis or epithelising skin. Over hard necrotic black tissue they will promote autolysis to soften and debride when left in place. Provide a moist warm atmosphere for skin re-epithelising.

No secondary dressing required.

Dry wounds only as do not absorb large amounts of exudate.

Foams

Non-adherent wound contact layer, absorb small amount exudate, used instead of Hydrocolloid on superficial, low exuding wounds. Can have an adhesive border or will require securing.

Can be primary or secondary dressing.

Should not be used on a medium/high exuding wound.

Film

Water proof, vapour permeable, do not handle exudate – can cause maceration. Primary or secondary dressing. Can be used to protect skin from friction but do cause skin stripping if changed frequently.

Antimicrobials (see infection guide)

Kill bacteria and therefore odours. Mode and length of action different. Use should be restricted to short periods of time when bacteria thought to be present.

Need to be in contact with wound bed, may need an absorbent dressing if wound exudate very high such as an alginate and a simple secondary absorbent dressing on the top.

Low adherence

Superficial wounds with low exudate. Can be used as a primary or secondary dressing.

Non-adherent / Atraumatic

Where wounds are painful to touch or skin is very friable, this type of wound requires a dressing that needs to be changed as least often as possible as it is the dressing change that is causing the pain and/or trauma.

These dressings are wound contact layers and can often be left in place whilst the outer dressing is renewed to avoid pain.

Skin protectants

Add a layer of silicon on the peri-wound skin can protect it from the wound exudate and adhesive damage as well as help dressings adhere.

Pressure ulcer prevention

NICE Guidance

As with wound assessment pressure ulcer prevention starts with an holistic assessment of the person and their environment. A full policy is available. Some of it's key recommendations are:

- Risk assessment should be carried out by personnel who have undergone appropriate training to recognise the risk factors that contribute to the development of pressure ulcers and know how to initiate and maintain correct and suitable preventative measures.
- The timing of risk assessment should be based on each individual case. However, it should take place within six hours of the start of admission to the episode of care.
- Risk assessment tools should only be used as an aide memoire and should not replace clinical judgement.
- An individual's potential to develop pressure ulcers may be influenced by the following intrinsic factors which therefore should be considered when performing a risk assessment:
 - ◆ reduced mobility or immobility;
 - ◆ sensory impairment;
 - ◆ acute illness;
 - ◆ level of consciousness;
 - ◆ extremes of age;
 - ◆ vascular disease;
 - ◆ severe chronic or terminal illness;
 - ◆ previous history of pressure damage;
 - ◆ malnutrition and dehydration.

General skin care

The skin is the largest organ we have. Unlike other organs we can see it and it can be damaged from the outside and from the inside. Skin naturally deteriorates as we get older, it becomes: thinner, drier, less elastic and generally less effective. Many co-morbidities, drugs and lifestyle choices also affect skin health. Fragile, itchy skin may indicate problems such as eczema, scabies, continence lesions or pressure damage.

What can we do to help?

- Use soap substitutes and emollients, not soap it damages skin.
- Apply creams properly and frequently.
- Keep hydrated.
- Be aware of the effect of dry heat.
- Don't scratch.
- Bathe frequently, more than twice a week with bath oils.
- Pat, don't rub skin dry.
- Use a soap substitute for washing.
- Inform and share knowledge with carers and family.

Emollients

Help to maintain supple healthy skin and come in 3 types:

Lotions – have a high water content so easier to spread but less effective.

Creams – mix of oil and water so less greasy and therefore more readily accepted.

Ointments – most effective, made from paraffin's and oil therefore the greasiest.

Patients with leg ulcers

Legs should be washed in a dish/bucket of warm water lined with a plastic bag that is changed at each dressing change. Aqueous cream or an emollient can be used.

Compression therapy

Bandages or specialist stockings support blood vessels in the leg therefore improving blood supply and increasing healing potential. Require specialist assessment and skills before application, as can cause harm.

Wound cleansers

Consider if cleansing is required (see guideline) Saline is recommended but tap water can be used safely.

Absorbent pad.

Used to absorb exudate when levels are medium to high.

Super absorbents

Able to handle very high levels of exudate and lock it away from the skin thus reducing risk of skin damage and infection from exudate.

Can reduce number of nursing visits.

Medicated bandages

Paste bandages are available in various forms and are suitable for use on some patients with leg ulcer and or associated skin conditions.

Wound dressing formulary:

A wound dressing formulary is used to standardise practice. Decisions about what is included in the formulary are made by first examining any evidence available (including exception forms), where there is no evidence, expert opinion is used, where there is no/mixed opinion, cost is used.

It is expected that the formulary be used in 80% of cases and if not used an exception report is completed and returned to the Tissue Viability Service (TVS). Advice can be sought from the TVS and other specialists on different or difficult wound types. The TVS must be contacted where specialist dressings may be required. Such as:

Interactive wound dressings

Protease modulating dressings can stimulate wound healing. Wounds must be free from any necrotic tissue.

Larvae therapy

For wounds that contain slough or necrotic tissue. Consent must be given by the patient for this treatment. Practitioners must have been trained in the use of larvae therapy.

Topical Negative Pressure

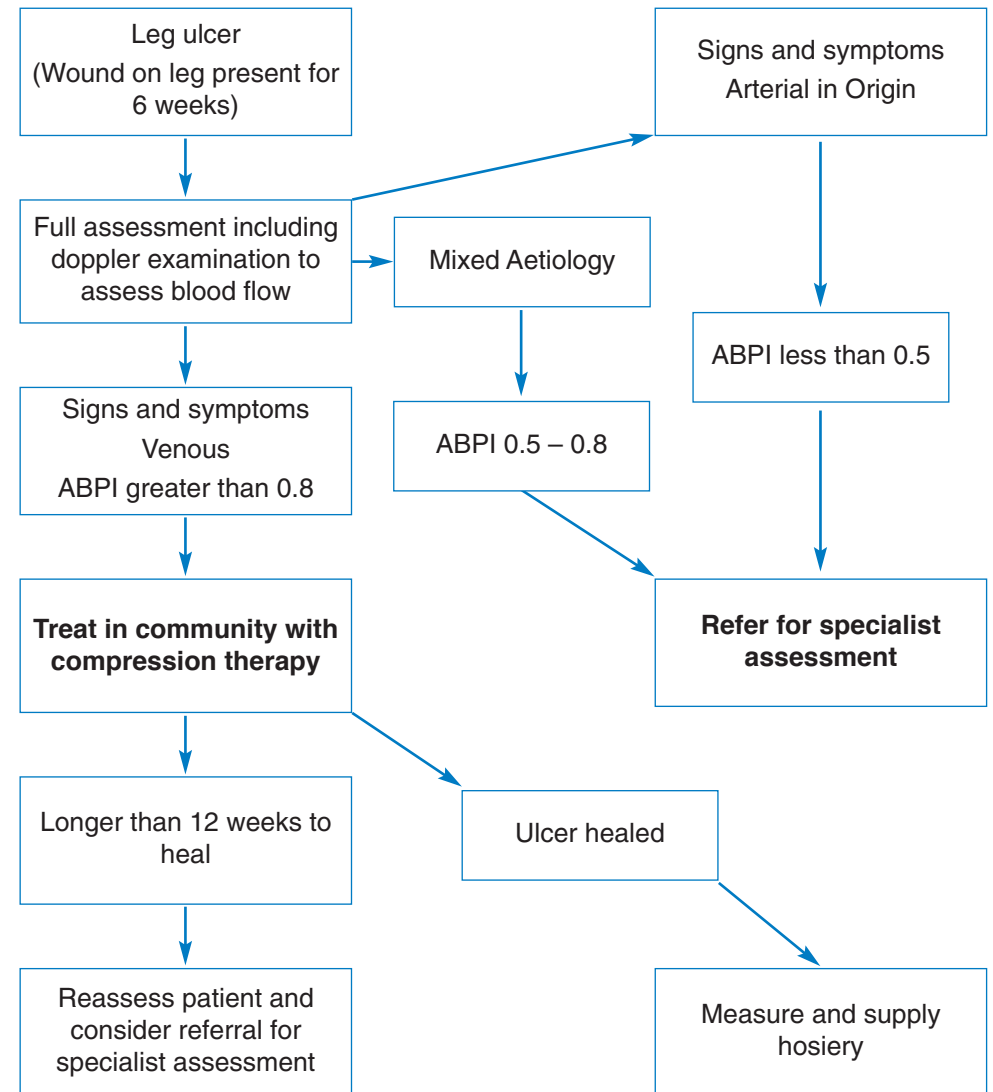
An advanced wound care system that promotes healing by applying controlled sub atmospheric pressure to the wound site. (see separate protocol).

Lymphoedema garments

These should be used only following specific training by a specialist practitioner.

Care of individuals with leg ulcers

Individuals with leg ulcers require specific care. Practitioners should be trained and updated in leg ulcer care before treating patients. Successful treatment depends on accurate diagnosis, treatment and compliance.



Guidelines for prescribing nutritional supplements for adults in County Durham & Darlington

The cost of prescribing nutritional supplements contribute to the overall prescribing cost for County Durham and Darlington.

Nutritional advice:

Before any prescription for a nutritional supplement is considered, a fortified diet should be advised for one month. This includes: **two nourishing snacks daily, fortified diet, fortified drinks** or use "Complan"* or "Build Up" available from pharmacies & supermarkets.

* Complan and Complan® Shake are different products.

- Provide Focus on Undernutrition information leaflets for further details on nutritional medication and recipe ideas. Free leaflets can be ordered from www.focusonundernutrition.

Evidence base for prescribing nutritional supplements:

- Evidence indicates that nutritional supplements improve clinical outcomes in patients who are at HIGH RISK of undernutrition when they supplement their nutritional intake by 600kcal daily.
- Appropriate identification and treatment of undernutrition reduces the clinical complications associated with undernutrition by 70% and mortality by 40%.

Non compliance: Where an alternative to Complan® Shake is required, the following nutritional supplements may be prescribed. These are listed in price order, with the least expensive first.

Milk based	Powdered	High fibre (for use in diabetics)
Complan Complete bd	Complan® Shake bd	Clinutren 1.5 fibre bd
Resource Shake bd	Enshake od	Resource 2.0 Fibre bd
Resource Energy	Calshake od	Ensure Plus Fibre bd
Fresubin Energy bd	Scandishake od	Fresubin Energy Fibre bd
Ensure Plus Milkshake Style bd	Juice based	Fortisip Multi Fibre bd
Fortisip bottle bd	Resource Fruit flavour drink bd	
Fortisip compact bd	Provide Extra bd	
Yoghurt based	Resource Fruit bd	
Ensure Plus yoghurt bd	Ensure Plus Juice bd	
Fortisip yoghurt style bd	Fortijuice bd	

Specialist nutritional supplements:

It is recommended that the following products are only prescribed on the advice of a registered dietitian.

Calogen	Fortimel	Polycose powder
Calogen Xtra	Fortisip Extra	Pro-cal powder
Caloreen Powder	Fresubin 2 cal	Pro-cal shot
Duocal powder	Fresubin Thickened	Pro-sure
Elemental 028	Maxijul powder	Resource Dessert energy
Ensure cans	Modulen IBD	Resource protein
Forticare	Peptamen	Two-cal HN
Forticreme Complete	Polycal powder	

Further information: Contact Focus on Undernutrition for further advice, training and patient information leaflets on high calorie/ high protein diets on (01388) 455712 www.focusonundernutrition.co.uk

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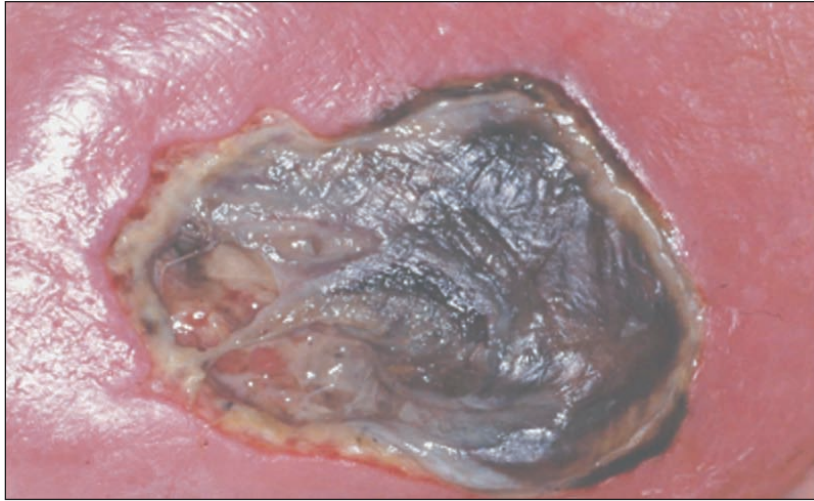
Wound types and treatment

Hard black eschar



Leave dry and intact until body begins autolytic debridement process.

Black necrotic wet wound

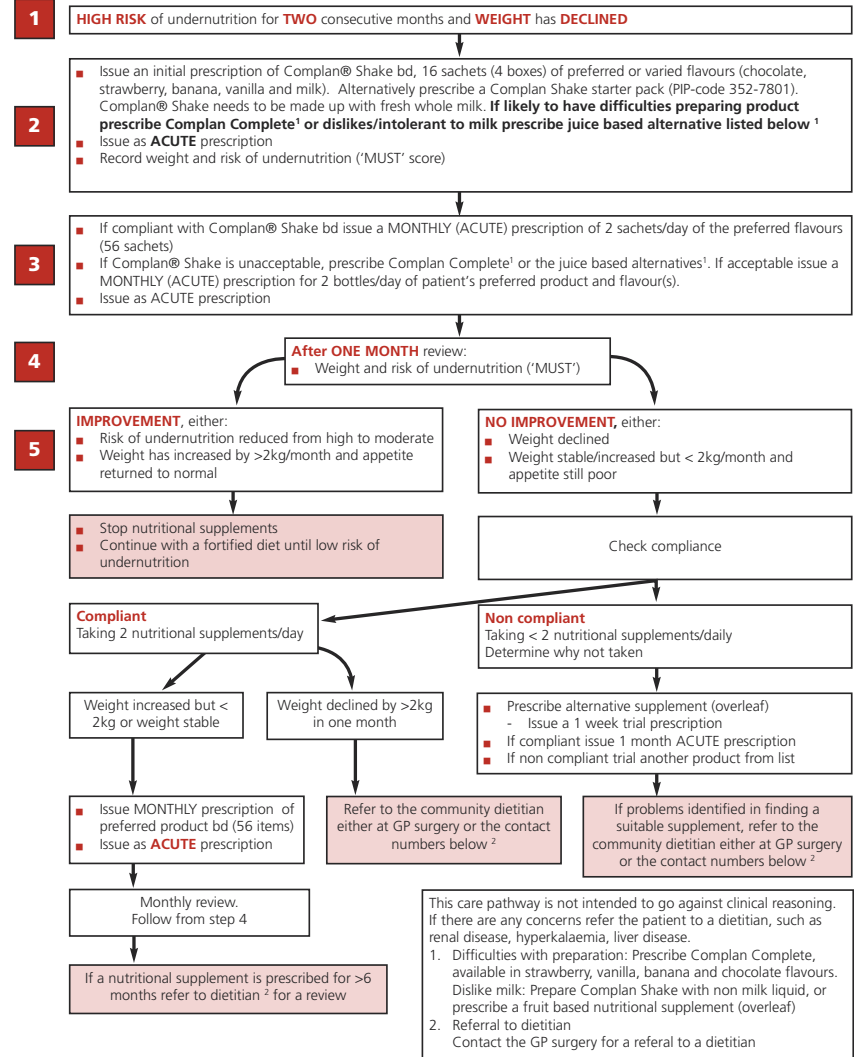


Wound Type	Aim of Treatment	Suggested Treatment
<p>Necrotic</p> <ul style="list-style-type: none"> ● Black in colour ● If on the foot care should be taken if patient is a diabetic or has vascular disease these wounds are often best left dry ● A referral to podiatry colleagues should be considered 	<ul style="list-style-type: none"> ● Debridement ● Reducing odour ● Reducing infection risk 	<ul style="list-style-type: none"> ● Hydrocolloid to provide moist environment to soften eschar ● If wet and malodorous consider using an antimicrobial dressing ● Physical removal

Care pathway for the prescribing of nutritional supplements for adults in County Durham & Darlington

Nutritional supplements should not be prescribed without:

- trialling a fortified diet for at least one month (see overleaf)
- being identified as high risk of undernutrition according to 'MUST' (Malnutrition Universal Screening Tool) and having ongoing weight loss despite following a fortified diet for one month



The service will also see patients or give advice on:

- Those not responding to current treatment.
- Where a second opinion would be beneficial.
- Where the patient has complex needs.

Contact and referral details for County Durham and Darlington but not for the Easington Area:

AHP Central Referral and booking department

First Floor

Merrington House

Spennymoor DL16 7UT

Tel: 01388 825700 Safehaven Fax 01388 819718

e-mail dar-pct.centralbooking@nhs.net

Nutrition

Good nutrition is vital for wound healing. During the wound healing process the body needs increased amounts of the raw ingredients in order to support the multiple functions required to ‘grow’ new tissue. Many patients will be or become undernourished and therefore have greatly reduced healing potential.

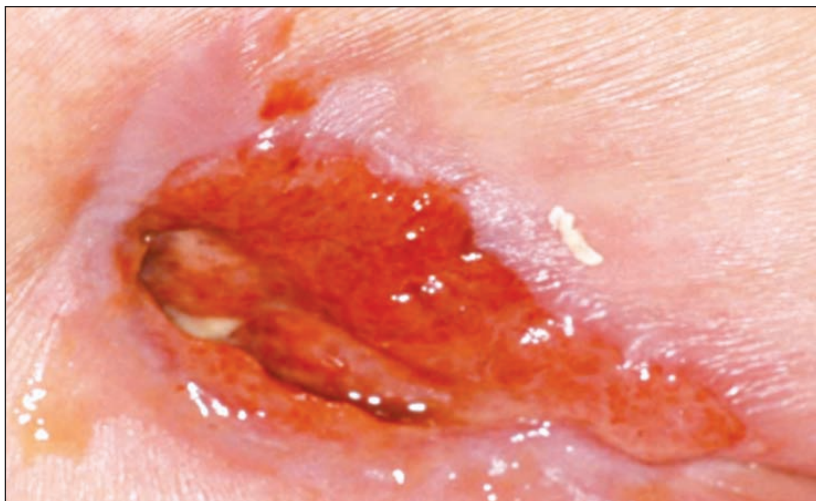
For this reason practitioners should monitor nutritional intake and undertake regular assessment and treatment as set out in the ‘Protocol for prescribing nutritional supplements’ .

Yellow sloughy wound



Wound Type	Aim of Treatment	Suggested Treatment
<p><i>Slough</i></p> <ul style="list-style-type: none"> ● Yellow / green in colour ● Adheres to base of wound ● A collection of dead tissue and white cells ● Usually medium to high levels exudate 	<ul style="list-style-type: none"> ● Debridement ● Prevention of infection ● Odour and exudate management ● Protection of outer skin 	<ul style="list-style-type: none"> ● Alginate ● Antimicrobial ● Skin protector ● Absorbent outer layer

Red granulating wound



Wound Type	Aim of Treatment	Suggested Treatment
Granulating <ul style="list-style-type: none">● Healthy red tissue often in buds	<ul style="list-style-type: none">● Promote healing● Maintain a moist wound environment● Maintain temperature● Protect wound	<ul style="list-style-type: none">● Alginate if wet● Foam● Hydrocolloid

Training Needs

Use of TNP, although increasing overall remains sporadic, as application is very practical skills are lost without continuous use therefore training will be constantly required to update staff. TNP use will be part of the Wound Management Study days for qualified staff but the majority of training will be practical during use. Training will be led by the TVS with the back up of the manufacturers clinical advisor.

Podiatry

Podiatry offers practitioners the opportunity to get specialist advice and treatment/prevention for patients with potential and actual wounds on the foot.

They have dedicated wound clinics and as well as offering dressing advice can give specialist advice on:

- Sharp debridement.
- Off loading and pressure relief.
- Provision of insoles.
- Provision of footwear including onward referral to the Orthotist service.

It is particularly important for patients who have the following conditions to be reviewed by podiatry:

- Type 1 and 2 diabetic patients with neuropathy, ischaemia or foot deformity.
- Rheumatoid disease or other inflammatory disease.
- Neuropathic disorders affecting the foot such as spina bifida.
- Any foot deformity resulting in increased risk of pressure damage.

Special requests to continue other treatment should be directed to the TVS.

For hospitals in the Durham and Darlington Foundation Trust group no transfer of therapy is required just funding: the patient is discharged with the pump and 2 dressing changes, arrangements are made between District Nurses, the ward and the TVS.

For all other Trusts the transfer needs to be fully planned so that the hospital stop their therapy on the day of discharge and the community restart it at home on the same day with the agreed therapy for the PCT.

Transfer of funding for TNP therapy

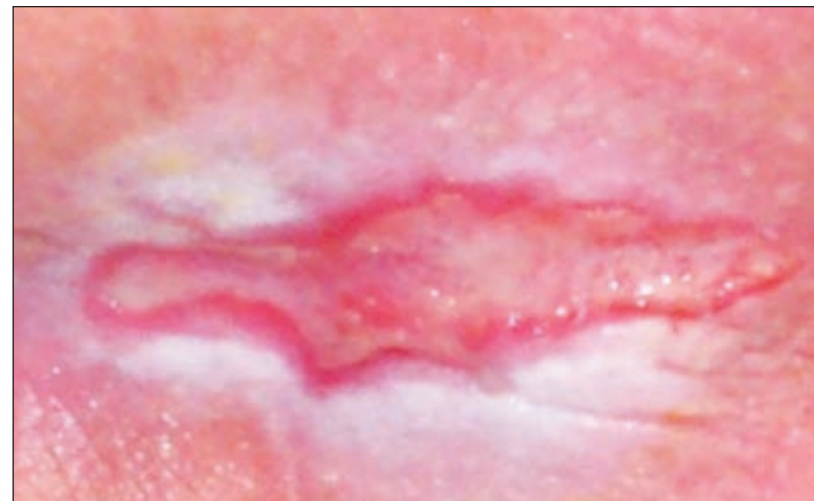
Community Services will fund appropriate therapy for a patient under their care. Funding and use of the therapy should be agreed by the Tissue Viability Service who will, where possible, attend first dressing changes.

Where the patient remains under the care of the hospital consultant ie the hospital staff are reviewing the patient and deciding on when to stop the therapy then funding will stay with the Hospital.

The information required for funding transfer includes the device number, date of transfer/commencement and details of the patient. When the therapy is stopped the Tissue Viability Team should be contacted with details of the machine, where it can be collected and date to stop funding.

Staff are reminded that although the therapy is very effective it is very expensive so it is vital that it is used appropriately and that the supplier of the equipment is kept up to date with when transfers of care and finance are taking place.

Epithelialising pink wound



Wound Type	Aim of Treatment	Suggested Treatment
<p><i>Epithelialising</i></p> <ul style="list-style-type: none"> ● Red / pink in appearance ● Shallow 	Promote healing	<p>Treatment follows a pathway:</p> <ul style="list-style-type: none"> ● Foam dressing ● Antimicrobial ● Topical steroid

Wound classification – specific

Wound Type	Aim of Treatment	Suggested Treatment
<p>Overgranulation</p> <ul style="list-style-type: none"> ● PEG site ● Wound site <p>Cause can be excessive movement at the wound bed, presence of low levels of bacteria or a foreign body</p>	<p>Reduce over granulated tissue</p> <ul style="list-style-type: none"> ● For PEG wounds see separate protocol 	<p>Treatment follows a pathway:</p> <ul style="list-style-type: none"> ● Foam dressing ● Antimicrobial ● Topical steroid

Wound Type	Aim of Treatment	Suggested Treatment
<p>Open abdominal wounds requiring Topical Negative Pressure</p>	<ul style="list-style-type: none"> ● Removal excess exudate ● Removal infection risk ● Granulation at wound bed 	<p>Topical Negative Pressure</p>

Wound Type	Aim of Treatment	Suggested Treatment
<p>Skin Tears</p> <p>See protocol</p>	<p>Wound healing</p>	<ul style="list-style-type: none"> ● Non-adherent dressing ● Adjunctive therapy may be required

Management of TNP therapy

TNP therapy is a specialist wound management therapy and therefore not standard treatment. Patients undergoing the therapy can be transferred under the care of Community Services from any organisation or it can be initiated by the organisation. The therapy has two components; the pump and the consumables. The pump is rented and the consumables (dressings and drains) are available on prescription.

Obtaining TNP consumables

Consumables are obtained through prescription. As well as the consumables for the therapy patients will also need:

- Sterile saline.
- Sterile scissors.
- Dressing packs.
- Cavilon spray.
- Thin Hydrocolloid.

TNP therapy initiated by Community Services

If a healthcare practitioner feels their patient would benefit from TNP therapy then they should contact the Tissue Viability Service (TVS). The TVS will arrange a joint visit to assess the patient and apply the therapy as appropriate. The TVS will give support to those Nurses as required and will arrange transfer of funding.

TNP therapy initiated in hospital

There are several different manufacturers used by the different hospitals that care for patients in Community Services. There is no evidence that one companies therapy is better than another at this time and they all follow the same principle of applying suction to the wound.

Where possible a Community Services machine should be used.

Using Topical Negative Pressure Therapy

Background

Topical Negative Pressure (TNP), is a specialist wound treatment technique that uses suction to decrease healing time markedly by stimulating healing, controlling exudate and preventing infection. Like other wound management therapies it needs to be used appropriately to be effective.

The PCT and Durham and Darlington Foundation Trust now have a contracted supplier for this therapy. Other organisations may use different manufacturers.

Patients being treated with therapy can move between care settings and organisations requiring transfer of the equipment and funding arrangements. (A full guideline is available for the use of Topical Negative Pressure Therapy in Community Services)

Clinical indications for the use of TNP

The main use of TNP is to treat large open acute wounds around the abdomen, for exudate management or prevention of infection prior to plastic surgery.

Indications for removal

Non-compliance, pain and when the wound it as the end stage of healing (TNP encourages granulation tissue only).

Wound Type	Aim of Treatment	Suggested Treatment
<p>Wound sinus</p> <p>There may be a foreign body in the wound such as suture material or mesh which is causing an inflammatory response and preventing healing therefore thorough examination and knowledge of operative procedure is required</p>	<ul style="list-style-type: none"> ● Heal the wound ● Prevent formation of abscess ● Exudate control – Copious exudate would indicate either a foreign body, infection or dead tissue at the base 	<ul style="list-style-type: none"> ● Ensure sinus is blind ● Antimicrobial soaks for 10 minutes ● Loosely pack with alginate if able ● If heavy colonisation suspected apply antimicrobial gel into wound ● Maintain external drainage hole at all times so heals from bottom up ● Consider drainage bag if exudate levels high ● If the wound ‘gushes’ suggests cavity is positional and fluid is collecting before movement allows for release

Wound Type	Aim of Treatment	Suggested Treatment
<p>Wet Legs</p>	<ul style="list-style-type: none"> ● Management exudate ● Improve patients quality of life ● Reduce infection 	<ul style="list-style-type: none"> ● Elevation of limbs if possible ● Compression therapy if possible ● Superabsorbent pads

Wound Type	Aim of Treatment	Suggested Treatment
<p>Venous leg ulcers</p> <p>The key to achieve healing is accurate diagnosis and support of the venous system through the use of compression therapy</p>	<p>Reduce oedema</p> <p>Heal wound</p> <p>Prevent reoccurrence</p>	<p>NA dressing to wound bed if no infection</p> <p>If infection short term antimicrobial</p> <p>Compression bandages</p>

Wound Type	Aim of Treatment	Suggested Treatment
<p>Pressure ulcer stage 1/2</p>	<p>Reduce deterioration risk</p> <p>Reduce pain</p> <p>Heal wound</p>	<ul style="list-style-type: none"> ● Skin protectant ● Antimicrobial spray ● Good Hygiene ● Pressure relief

Wound Type	Aim of Treatment	Suggested Treatment
<p>Arterial leg ulcers</p> <p>These are often non-healing ulcers</p> <p>A Vascular opinion should be requested not sort</p>	<p>Symptom management</p> <p>Improve patients quality of life</p> <p>Reduce infection risk</p> <p>Reduce pain</p>	<p>NA dressing</p> <p>Antimicrobials long term</p> <p>Dress as little as possible</p>

Wound Type	Aim of Treatment	Suggested Treatment
<p>Pressure ulcer stage 3/4</p>	<p>Reduce deterioration risk</p> <p>Reduce pain</p> <p>Heal wound</p>	<ul style="list-style-type: none"> ● Treat wound depending on tissue at wound bed ● Good Hygiene ● Pressure relief

Wound Type	Aim of Treatment	Suggested Treatment
<p>Mixed ulcers</p> <p>Accurate diagnosis and regular reassessment is essential to safely manage these patients</p> <p>May benefit from a Vascular opinion</p> <p>Reduced compression</p> <p>Healing will be slow</p>	<p>Symptom management</p> <p>Healing</p> <p>Improved quality of life</p> <p>Reduced infection</p>	<p>Depending on level of disease</p> <p>Mixture of treatment for venous and arterial ulcers</p>