Health Improvement Scotland published their 13th Health Technology Assessment (HTA 13) in December 2015 entitled, Antimicrobial Wound Dressings (AWDs) for Chronic Wounds. This report found that the evidence to support the use of AWDs was insufficient in terms of quality and quantity. This identified the need for a nationally agreed management algorithm to guide the use of AWDs in NHS Scotland. The Effective Prescribing and Therapeutics Branch, at Scottish Government supported the formation of a multidisciplinary short life working group (SLWG) consisting of wound specialists, podiatrists and Prescribing Advisors from across Scottish Health Boards. The group developed the following resources using best practice and expert consensus.

These resources are provided for Boards to review, as necessary, to fit with their local guidance, e.g. sepsis screening tool, local formularies for dressings and antibiotics. These resources aim to standardise a clinician’s approach to wound care, reduce variance in practice, and reduce any inappropriate use of antimicrobial dressings.

Appendices: 1. Algorithm for Assessment and Management of Chronic Wounds  
2. Scottish Ropper Ladder for Infected Wounds  
3. AWD considerations to support best practice  
4. PIL: Understanding your Chronic Wound

Algorithm for Assessment and Management of Chronic Wounds signposts to current guidance on the management of different wound types and gives advice on important considerations to be made when providing wound care. This algorithm should be used alongside any local guidance.

Scottish Ropper Ladder for Infected Wounds should be used when wound infection is suspected. The key points from HTA 13 and the SLWG are:

- Antimicrobial dressings are indicated for the short term treatment of localised infection; and in combination with systemic antibiotics for the treatment of spreading or systemic infection
- Antimicrobial dressings should not be used to heal wounds or where symptoms of infection are not present
- Where antimicrobial dressings are used, they should be reviewed after two weeks and should not normally be used longer than recommended by local policies or product information.

AWD considerations to support best practice has been developed as a decision making tool. All AWD on Scottish formularies have been included, and it is intended that NHS Boards will complete the blank template in line with their local formulary. The table should guide users to the most appropriate AWD based on the characteristics of the wound they are treating. Cost should be considered alongside patient and wound-specific factors to ensure a cost effective treatment course is selected.

Understanding Your Chronic Wound Patient Information Leaflet has been developed to provide information to patients about how they can expect their wound to be managed and information about wound infection.
Algorithm for Assessment and Management of Chronic Wounds (adult)

A holistic assessment and application of best practice will support improved outcomes for patients.

Key - Process  Guidance  * refer to local guidance and pathways

1) Identify type of wound:
   Diabetic Foot Ulcer refer to diabetic podiatry/MDT
   Venous Leg Ulcer
   Pressure Ulcers
   All other wounds

2) Holistic Assessment
   • Patient: co-morbidities
   • Wound: exudate, viscosity
   • Consider other aetiology.

3) Identify if non-viable tissue present:
   • Reduces effectiveness of topical agents
   • Increases signs of inflammation, odour and infection.

4) Identify if infection present
   Using Scottish Ropper Ladder for Infected Wounds (see appendix 2)

5) Choose dressing, cleansing and treatment options-
   based on holistic assessment above

6) Formal review of patient and wound at regular intervals
   Minimum of every two weeks*

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**Diabetic Foot Ulcer**
- Refer to diabetic podiatry/MDT

**Venous Leg Ulcer**
- Refer to vascular or other relevant specialist service

**Pressure Ulcers**
- Consider blood supply to wound
  - Is it suitable for debridement?
    - Yes
      - Debridement Options*:
        - Autolytic
        - Mechanical
        - Enzymatic
        - Surgical
    - Don't debride
      - Keep dry
      - Refer to vascular or other relevant specialist service*
    - Refer to:
      - Local wound formulary

**All other wounds**

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*Healed*
- Monitor and prevention strategies

*Not healed*
- Return to 2) Holistic assessment
  - If no signs of healing after 6 weeks refer to relevant specialist service*

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*SIGN 116 - Management of Diabetes (Revised 2014)*
- International Consensus

*SIGN 120 - Management of Chronic Venous Leg Ulcers (August 2010)*
- Best Practice Statement: Holistic Management of Venous Leg Ulceration (2016)

*Best Practice Statement (March 2009) Prevention and Management of Pressure Ulcers*
- Pressure Ulcer Prevention and Management Standards (September 2016)

*General Wound Assessment Chart*
- Scottish Wound Assessment and Action Guide (SWAAG)
- Local guidelines/pathways

*Effective Debridement in a Changing NHS, Wounds UK (2013)*
### Scottish Ropper Ladder for Infected Wounds

Guidelines for identifying infected wounds and when to start and stop using topical Antimicrobial Wound Dressings (AWD)

Each stage builds on the previous treatment

*Refer to local guidance*

#### Stage 4 - Treatment

1. Swab wound*.  
2. Consider: SEPSIS 6*; other source; blood cultures.  
3. Start systemic antibiotics* and monitor patient.  
4. If rapid deterioration immediate referral for urgent medical advice.  
5. Consider topical AWD*.  
6. Monitor wound progress*, review at 2 weeks – see Stage 2, point 4, for actions.

#### Stage 3 - Treatment

1. Swab wound*.  
2. Start topical AWD*.  
3. Consider starting systemic antibiotics*.  
4. Monitor wound progress*, review at 2 weeks – see Stage 2, point 4, for actions.  
5. If signs of systemic infection, go to Stage 4.

#### Stage 2 - Treatment

1. DO NOT SWAB.  
2. Consider biofilm disrupting cleansing solution.  
3. Consider topical AWD*.  
4. Monitor wound progress*, review at 2 weeks:  
   a. If no signs of infection, STOP and return to Stage 1, point 4 for actions  
   b. If improving, continue and review weekly until no signs of infection  
   c. If static, review AWD* choice.  
5. If signs of spreading infection, go to Stage 3.

#### Stage 1 - Treatment

1. DO NOT SWAB.  
2. Identify aetiology of the wound and refer if any concerns e.g. vascular, lymphoedema.  
3. Refer all diabetic wounds to diabetic podiatry/MDT.  
4. Optimise wound healing with debridement and dressings*.  
5. If no progress after 2 weeks review wound management plan.  
6. If signs of local infection go to Stage 2.

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In certain patients, some signs and symptoms of infection might be masked e.g. diabetes, vascular, immunocompromised. Clinical judgement should be used to determine when AWDs should be used.

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**References:**


Care of deteriorating patients. Edinburgh: SIGN; 2014.

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Ruth Ropper  
Lead Nurse, Tissue Viability, NHS Lothian  
Email: ruth.ropper@nhslothian.scot.nhs.uk

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Medical Photography Service, NHS Lothian; October 2017

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Appendix 2
Antimicrobial Wound Dressing (AWD): Considerations to Support Best Practice

Wound product considerations – The presence of slough and necrosis delays healing. The longer a wound is present the greater the risk of biofilm production. Best practice in wound management is to prepare the wound bed for healing and reduce biofilm formation. This includes regular good wound hygiene (cleansing and ongoing debridement) and ensuring that the dressing properties do not contribute to symptoms of odour, maceration to wound bed and surrounding skin, pain or impair healing.

The overleaf table highlights the current antimicrobial wound dressing preferred choices in Scottish NHS Boards’ Wound Formularies. This is intended to guide clinicians to suitable, safe and cost effective dressing choices by categorising AWDs and their suitability based on: viscosity, exudate levels, and circulation at the wound bed. A template is included to allow each Board to complete with preferred choices for local use. These considerations should be taken into account when choosing any dressing for chronic wounds.

For optimum effectiveness and interaction of the active antimicrobial, the dressing should provide maximum coverage of the wound bed, with an appropriate absorbent secondary retention dressing, e.g. superabsorbent dressing.

Once dressing choice has been made, based on wound and patient factors, consider applying SIMPLE acronym i.e. is the dressing choice Safe with no contraindications or cautions, Indicated for wound type and symptoms, Measureable with expectations achieved, Patient advantage, Longevity, how long is dressing expected to remain in situ, End point when product is no longer required.

NB: The following dressing characteristics are based on the clinical expertise of the working group, rather than on any evidence review and should be used with clinical judgement and reference to your current wound formulary preferred choices.

Key to Table:

<table>
<thead>
<tr>
<th>Symbols in boxes dressing: = suitable; C = use with caution/may require further specialist advice; blocked out = not suitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Viscosity</strong> is the state of being thick, sticky and semi fluid consistency</td>
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<tr>
<td>• <strong>Low viscosity</strong> - will be clearer in colour (nearer to serous exudate) and would not be indicative of infection</td>
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<tr>
<td>• <strong>Medium viscosity</strong> - will be changing to yellow brown in appearance and could still have ability to gel hydrofibre/ alginate; can be an indicator that biofilm production is occurring</td>
</tr>
<tr>
<td>• <strong>High viscosity</strong> - adherent sticky yellow/brown in appearance - more difficult to remove and can require hydration/ use or debridement pad etc to facilitate removal; indicating presence of a biofilm.</td>
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<tr>
<td>• <strong>Exudate</strong>: contact layer dressings should allow exudate to pass through to outer secondary absorbant dressing. Always “read” the inside of you dressing on removal - the wound exudate may appear low in volume and wound surface appears to be granulating (may be dark red) but inside of dressing reveals yellow brown sticky exudate - this tends to be apparent in chronic wounds with presence of biofilm. Consider use of debridement pads or surfactant soaks in first instance to facilitate removal.</td>
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<tr>
<td>• <strong>Blood flow</strong>: dressings which create a moist warm environment tend to be safe to use on wounds with good circulation; when blood flow is compromised there is a risk of anaerobic infection. Products which create a moist warm environment should be avoided or used with caution if blood flow is compromised e.g. patients with vascular disease, diabetes.</td>
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</tbody>
</table>

Based on recommendations from Health Technology Assessment on antimicrobial wound dressings in chronic wounds, Health Improvement Scotland (2015) and expert opinion of NHS Scotland Working Group.

SLWG for Antimicrobial Wound Dressings consisting of Health board and speciality representatives.

1st Edition: September 2017; Review: September 2020
Please complete accompanying excel sheet with formulary choices and insert into toolkit prior to cascading.
Understanding your Chronic Wound
Dressings, management and wound infection

In this leaflet Health Care Professional (HCP) refers to any member of the team involved in your wound care. This can include treatment room or practice nurse, community, ward or clinic nurse, GP or hospital doctor, podiatrist etc.

Chronic Wounds and Dressings

What is a Chronic wound?

A wound with slow progress towards healing or shows delayed healing. This may be due to underlying issues such as:

- Poor blood flow and less oxygen getting to the wound
- Other health conditions
- Poor diet, smoking, pressure on the wound e.g. footwear/seating.

Can my wound be left open to the air?

No, the evidence shows that wounds heal better when the surface is kept moist (not too wet or dry). The moisture provides the correct environment to aid your wound to heal.

Does my dressing need changed daily?

Not usually, your HCP will explain how often it needs changed. This will depend on the level of fluid leaking from your wound. Some dressings can be left in place up to a week. Most wounds have a slight odour, but if a wound smells bad it could be a sign that something is wrong. See section on wound infection.

Your dressing may indicate that it needs changed when the dark area in the centre gets close to the edge of the dressing pad. The dark area is fluid from your wound, this is normal. It will be dry to touch. Let your HCP know if your dressing needs changed before your next visit or appointment is due.

Does my wound need cleaned when the dressing is changed?

Only wounds with dead tissue and excess fluid need to be cleaned at each dressing change. Occasionally, if dressings stick they may be soaked off. Wounds that have healthy tissue or new skin do not need cleaned as this removes the nutrients and growth factors needed for healing. Surrounding skin may need cleaned.
Can I shower or have a bath with the dressing in place?

You can shower if your dressing is shower proof. **Do not** put your dressing under water as this will cause it to fall off. Check with your HCP first who may advise on a cover to keep your dressing dry.

What do I do if my dressing falls off?

Your HCP will explain what to do if this happens. They may give you spare dressings which you or a family member/carer can apply.

Always wash your hands **before** and **after** doing anything with your wound to reduce the risk of infection.

**Wound Infection and Antimicrobial Dressings**

How can I tell if my wound is infected?

If you have one or more of the following signs this may indicate infection:

- Increased swelling
- More redness around the wound than normal
- Pain worse than normal
- Skin around the wound feels hot to touch
- Increased fluid leaking from the wound
- Changes to wound fluid e.g. green, thicker, cloudy, foul smelling
- Feeling feverish/generally unwell/high temperature.

Some conditions will make you more likely to develop a wound infection, e.g. diabetes, poor circulation etc.

If you are concerned or symptoms develop quickly contact your HCP, or out of hours service, as soon as possible (refer to last page of leaflet).

Will I need antibiotics?

Not all wound infections will need antibiotics, your doctor or other HCP will make this decision. They may decide to use a specialist wound cleansing product or an antimicrobial wound dressing to reduce the level of bacteria instead of, or as well as, antibiotics.

What is an antimicrobial wound dressing?

Antimicrobials are agents that kill bacteria or stop their spread. Some have the active ingredient within the dressing and some come as creams, gels, ointments or powders. Your HCP will decide on the most appropriate form of dressing for your wound.

How long will I need the antimicrobial dressing for?

The HCP will monitor the wound at each dressing change to check for signs it is improving with treatment. The effect of the antimicrobial dressing will be reviewed after two weeks and future treatment will depend on:

1. If there are no signs of infection, your HCP will stop using the antimicrobial dressings and change to a standard dressing.
2. If the wound is improving, treatment will continue and be checked at least weekly.
3. If the wound is not improving, your HCP may change to another antimicrobial dressing, will continue to monitor closely and review health conditions, and/or refer to a specialist service.

Is there anything else I can do to help my wound heal?

1) Rest and Exercise
To encourage healing you need a balance of rest and exercise. Walking encourages the blood flow to your wound. Resting with your leg/arm up will reduce the risk of swelling to the area.

2) Pain relief
Remember to take painkillers as prescribed or directed by your HCP. This will allow you to move more easily.

3) Nutrition
A healthy and varied diet helps wound healing. This should include vegetables and fruit and proteins such as nuts, fish, meat, pulses, cheese or eggs.

4) Stop smoking
Even one cigarette reduces the blood flow and oxygen to the wound and stops nutrients being absorbed. It can also increase your risk of infection. You are four times more likely to be successful giving up smoking with professional help. Ask your HCP about ‘stop smoking’ services or you can contact Smokeline free by phoning an advisor on 0800 84 84 84.

Who do I contact if I have questions or concerns?

<table>
<thead>
<tr>
<th>During working hours contact</th>
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<tbody>
<tr>
<td>Name:</td>
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<tr>
<th>Out-of-hours or weekends contact</th>
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<tr>
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If you have urgent concerns and are unable to contact your HCP
Phone NHS 24 on 111

Keeping your Appointment

If you cannot keep your appointment, or have been given one that is unsuitable, please change it by phoning the number on your appointment letter. Your call will give someone else the chance to be seen and will help us keep waiting times to a minimum.

Interpretation and Translation

This leaflet may be made available in a larger print, Braille or your community language.
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Adapted from Ruth Ropper Lothian Ladder Version 2 by SLWG for Antimicrobial Wound Dressings consisting of Health board and speciality representatives.
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