Is the management appropriate based on your assessment?

Dressing Selection

- Wound type
- Wound size and depth
- Tissue type
- Amount of exudate
- Location of the wound
- Skin condition of the patient
- Presence/absence of infection
- Characteristics of dressings available (size, wear time, showerproof etc)
- Treatment goals
- Cost effectiveness
- Patients' acceptance/tolerance

Benefits of a Wound Formulary

- Promoting evidence-based practice by providing a framework within which it is safe to practice
- Promoting continuity of care
- Promoting rational prescribing
- Encouraging safe, effective and appropriate use of dressings
- Promoting cost effectiveness

ACCESS THE FORMULARY

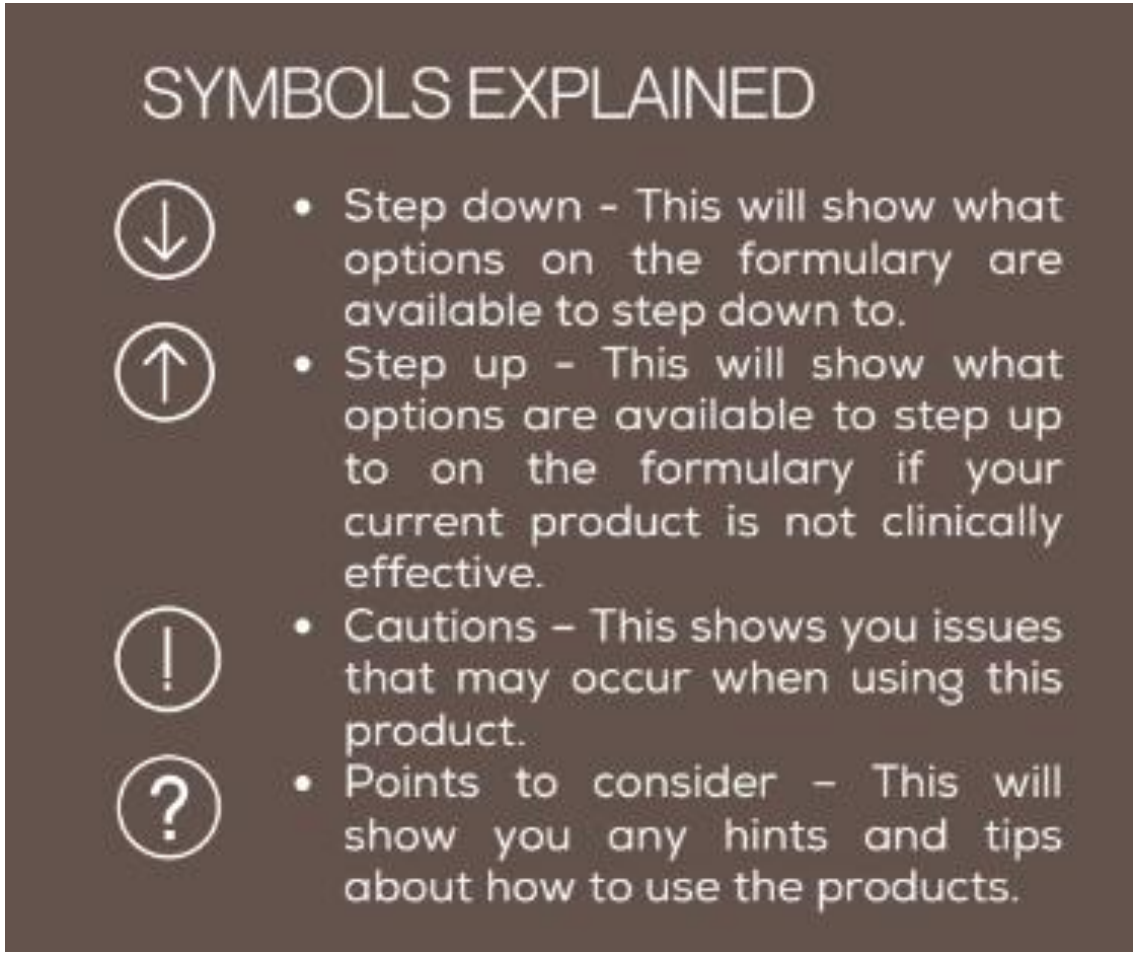
Dressing Supply Categories

GREEN - Non-restricted dressings ordered via Halo (or E-Procurement). Orders should reflect the teams clinical case load/wound types.

AMBER - Patient specific dressings ordered via Halo (or E-Procurement) using patient NHS number and rationale for use.

RED - Dressings available from Tissue Viability following assessment from the team. We arrange supply via order platform.

Using the Wound Formulary



Wound Assessment Checklist

- Type of wound/aetiology.
- Wound duration.
- Location of wound.
- Size of wound – include surface area in cm^2 (using Opsite
- Flexigrid mapping) and depth. Undermining should be measured with a probe and documented using the clock face method.
- Assessment of surrounding skin (dry, moist, fragile, eczematous, oedematous).
- Wound photograph - refer to wound photography guidance.
- TIMES assessment.

The TIMES Framework

Tissue

Infection

Moisture

Edges

Skin

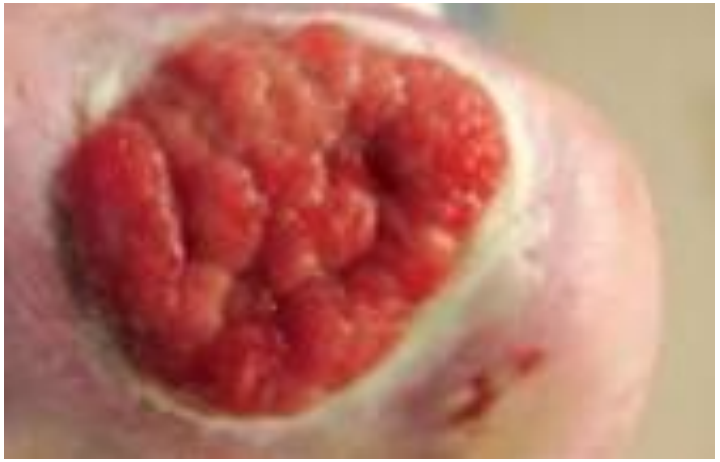
Tissue

- Assessing the tissue in the wound bed allows us to determine whether there is presence of viable or non-viable tissue, thus informing treatment aims.
- Generally, viable tissue is to be protected whilst maintaining moisture balance, whilst non-viable tissue should be debrided.

Tissue - Types

Hyper-granulation

- Often associated with:
  - Infection
  - Inflammation
  - Unmanaged exudate
  - Friction
- Follow the Hyper-granulation Pathway

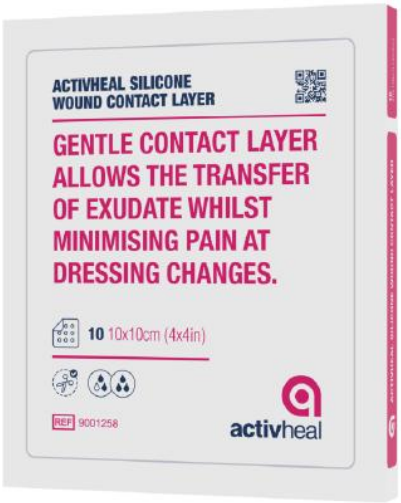


Fungating Wounds

- Infiltration of the skin from a local tumour, haematological malignancy, or metastatic spread from a primary tumour.
- Healing likely not a realistic option but management should focus on symptom control

Tissue – Basic Dressings

- Contact layers: Atrauman, Activheal Silicone
- Films: Hydrofilm/Leukomed-T
- Softpore or Cosmopore Transparent: secondary dressing for low-exuding wounds (not for lower legs)



Tissue - Debridement

Wound debridement is a critical component of wound care involving removal of devitalised tissue to promote healing.

- Autolytic
- Enzymatic
- Mechanical
- Sharp
- Biological (larval therapy)

Tissue – Debridement Dressings

When Not to Debride?

- If the patient has impaired arterial supply, dry necrosis with no autolysis must remain in situ to feet or lower limbs, unless advised by the vascular team.
- Holistic assessment – doppler & lower limb assessment – should be carried out to determine arterial supply.

Tissue

- What are you documenting?
- What are your management objectives for Wound **Tissue**?

Infection

The diagnosis of wound infection should be based on clinical assessment using the AMBL2 tool.

The Assessment and Management of Bacterial Loading in Wounds (AMBL2) Tool

NHS
Oxford Health
NHS Foundation Trust

	Treat Topically (See Overleaf)		**Treat Topically + Systemically** (See Overleaf)		
	Local Wound Bed Infection *Microorganisms present and multiplying.* *Patient immune response compromised with delayed healing*		***+ Spreading Infection (Cellulitis)***	***+ Systemic Patient Infection***	***STAY ALERT to: Wound Biofilm***
	Primary (Covert) Symptoms	***Progressive (Overt) Symptoms***			
Tissue	• Friable Hyper/granulation tissue • Pocketing in granulation • Wound Static (<40cm² reduction in 6 weeks)	• Necrosis/Slough may be present • Wound deterioration	• Wound breakdown/ dehiscence	• Assess for SEPSIS • Malaise • General deterioration • Loss of appetite • Fever/Pyrexia	Wound not responding as expected with two or more cycles of the AMBL2 treatment plan (overleaf). Progress to **Biofilm Wound Management Pathway.**
Moisture	• Increasing exudate	• Purulent exudate • Increasing malodour			
Peri-wound edges	• [1]Erythema associated with inflammation may or may not be present	• [1]Erythema <2cm around wound margin • Swelling • Warmth	• [1]Spreading erythema >2cm peri wound margins		
Pain/Systemic Factors	• New or increasing Pain	• New or increasing Pain	• Swollen lymph glands • Skin blistering/ breakdown • Oedema		

1. Consider varying clinical presentations in individuals of different skin tones i.e., skin discoloration; skin temperature; tenderness or hardening of the skin.
2. Note high risk patients (including those with Diabetes or compromised immune/circulatory systems) may not display symptoms of local wound bed and/or progressive infection described and may present with more subtle signs.

The Assessment and Management of Bacterial Loading in Wounds (AMBL2) Tool

NHS
Oxford Health
NHS Foundation Trust

The following should be achieved as part of the overall wound bed preparation strategy:

- Treat/optimise co-existing morbidities and Patient
- Debride sloughy/necrotic tissue if safe to do so as part of a holistic assessment
- Manage exudates effectively: see Exudate Management Pathway for guidance
- Re-assess wound site at each dressing change, recording outcomes
- Optimise peri-wound margin/skin care
- Wound Cleansing/ANNT Surgical Technique at every dressing change

LOCAL WOUND BED INFECTION

Two Week Therapy:

- Routine Wound swab not indicated here
- Vigorous cleansing of the wound bed and peri-wound skin with dressing pack gauze and tap water (wounds >48 hours)
- 1st line Topical Honey
- 2nd line Iodoflex or Iodosorb
  (see formulary for contraindications and dosing)
- Pain Management
- Wound Dressing changes minimum every 3 days

SPREADING/SYSTEMIC INFECTION

- Treat the wound bed as per Local wound bed infection
- Swab wound for microorganism sensitivities
- Request Antibiotics from GP/Medical Prescriber
- Provide patient education: Action to take if symptoms worsen

RESOLVED

Continue with consistent Wound Bed Preparation Practices. Use suitable dressing from formulary. Continue to monitor for any signs of recurring infection.

SYMPTOMS ARE PERSISTING OR RECURRING

If symptoms persist or recur following completion of 2 or more treatment cycles following the AMBL2.

Suspect Wound Biofilm: assess wound site and commence management using the Biofilm Wound Care Pathway (BWCP).

World Union of Wound Healing Societies (WUWHS) (2020) The role of non-medicated dressings for the management of wound infection. London: Wounds International. Available at: www.woundsinternational.com (accessed: 12th November 2021); International Wound Infection Institute (IWII) (2022) Wound Infection in Clinical Practice. Wounds International.

With special thanks to Professor Steve Percival, CEO and Director, Biofilm Centre for his valuable contribution to this document.

AMBL2 Tool – Key Messages

- Most wounds are contaminated with a range of microorganisms yet will progress through the normal phases of healing without the need for antimicrobial treatment.
- Systemic antibiotics are not indicated unless there is the presence of cellulitis (erythema extending >2cm from wound margin) or the patient is systemically unwell.
- For those with diabetes or compromised immune/circulatory systems, systemic antibiotics may be considered in line with national/local prescribing guidelines.
- Routine wound swabbing should not be undertaken unless systemic antibiotics are being prescribed.

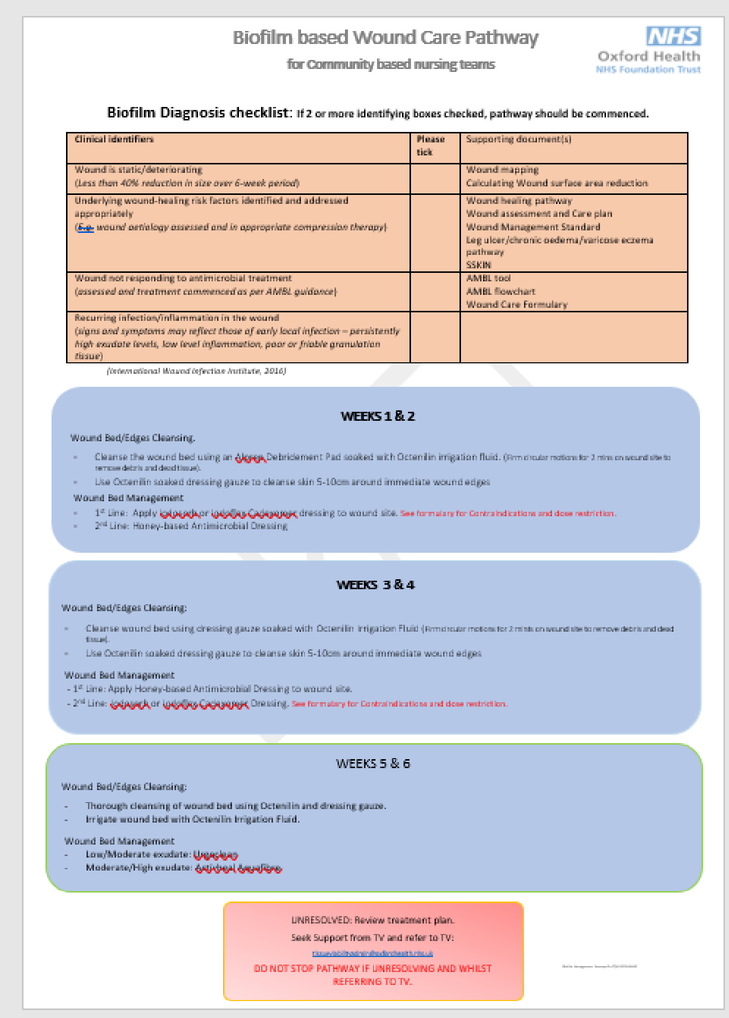
What is a Biofilm?

Caring, safe and excellent

Oxford Health
NHS Foundation Trust

Biofilm Pathway

For persistent or recurring wound infections where Biofilm is suspected, refer to the Biofilm Wound Care Pathway



Biofilm based Wound Care Pathway

for Community based nursing teams

Oxford Health
NHS Foundation Trust

Biofilm Diagnosis checklist: If 2 or more identifying boxes checked, pathway should be commenced.

Clinical identifiers	Please tick	Supporting document(s)
Wound is static/deteriorating *(Less than 40% reduction in size over 6-week period)*		Wound mapping Calculating Wound surface area reduction
Underlying wound-healing risk factors identified and addressed appropriately *(E.g. wound aetiology assessed and in appropriate compression therapy)*		Wound healing pathway Wound assessment and Care plan Wound Management Standard Leg ulcer/chronic oedema/varicose eczema pathway SSKIN
Wound not responding to antimicrobial treatment *(assessed and treatment commenced as per AMBL guidance)*		AMBL tool AMBL flowchart Wound Care Formulary
Recurring infection/inflammation in the wound *(signs and symptoms may reflect those of early local infection – persistently high exudate levels, low level inflammation, poor or friable granulation tissue)*		

(International Wound Infection Institute, 2016)

WEEKS 1 & 2

Wound Bed/Edges Cleansing.

- Cleanse the wound bed using an Alprep Debridement Pad soaked with Octenilin irrigation fluid. (Firm circular motions for 2 mins on wound site to remove debris and dead tissue).
- Use Octenilin soaked dressing gauze to cleanse skin 5-10cm around immediate wound edges

Wound Bed Management

- 1st Line: Apply Iodosorb or Iodoflex Cadexomer dressing to wound site. See formulary for Contraindications and dose restriction.
- 2nd Line: Honey-based Antimicrobial Dressing

WEEKS 3 & 4

Wound Bed/Edges Cleansing:

- Cleanse wound bed using dressing gauze soaked with Octenilin Irrigation Fluid (Firm circular motions for 2 mins on wound site to remove debris and dead tissue).
- Use Octenilin soaked dressing gauze to cleanse skin 5-10cm around immediate wound edges

Wound Bed Management

- 1st Line: Apply Honey-based Antimicrobial Dressing to wound site.
- 2nd Line: Iodosorb or Iodoflex Cadexomer Dressing. See formulary for Contraindications and dose restriction.

WEEKS 5 & 6

Wound Bed/Edges Cleansing:

- Thorough cleansing of wound bed using Octenilin and dressing gauze.
- Irrigate wound bed with Octenilin Irrigation Fluid.

Wound Bed Management

- Low/Moderate exudate: Urgoclean
- Moderate/High exudate: Activheal Aquafibre

UNRESOLVED: Review treatment plan.

Seek Support from TV and refer to TV:

[illegible]

DO NOT STOP PATHWAY IF UNRESOLVING AND WHILST REFERRING TO TV.

Biofilm Diagnosis Checklist

Biofilm Wound Care Pathway (BWCP)

for Community based nursing teams

NHS
Oxford Health
NHS Foundation Trust

Biofilm Diagnosis checklist: **If 2 or more identifying boxes checked, pathway should be commenced.**

Wound Assessment and AMBL2 tool completed. Now assess the following Clinical identifiers:	**Please tick**
Wound is static/deteriorating and less than 40% reduction in size over 6-week period *(despite risk factors to healing being addressed)*	
Recurrence of delayed healing on cessation of antibiotic treatment	
Wound not responding to appropriate antimicrobial treatment *(assessed and treatment commenced as per AMBL2 guidance)*	
Recurring infection/inflammation in the wound *(having followed two treatment cycles using the AMBL2 guidance)*	

Weeks 1 - 4

WEEKS 1 and 2

Cleansing/Debridement:

- Wound Bed: Alprep Debridement Pad soaked with Octenilin irrigation fluid (vigorous cleansing for mininum of 2 minutes)
- Peri-wound Skin: up to 10 cm around wound margin with dressing gauze soaked in Octenilin.

Antimicrobial Dressing Regime:

- 1st Line: Iodosorb or Iodoflex. See formulary for contraindications and dose restriction.
- 2nd Line: Honey-based Antimicrobial Dressing (see formulary).

WEEKS 3 and 4

Cleansing/Debridement:

- Wound Bed: Alprep Debridement Pad soaked with Octenilin irrigation fluid. (vigorous cleansing for minimum of 2 minutes)
- Peri-wound skin: up to 10 cm around wound margin with dressing gauze soaked in Octenilin.

Alternated Antimicrobial Dressing Regime:

- 1st Line: Honey-based Antimicrobial Dressing to wound site.
- 2nd Line: Iodosorb or Iodoflex. See formulary for contraindications and dose restriction.

Weeks 5 – 6

WEEKS 5 and 6

Cleansing/Debridement:

- Wound Bed/peri-wound skin: Dressing gauze soaked with warmed tap water. (vigorous cleansing for minimum of 2 minutes)

Dressing Choice:

- Low/Moderate exudate: Urgoclean.
- Moderate/High exudate: Activheal Aquafibre Extra

UNRESOLVING

Review treatment plan. Seek Support from and/or refer to the Community Tissue Viability Service

tissueviabilityadmin@oxfordhealth.nhs.uk

CONTINUE WITH PATHWAY WHILST AWAITING TV SUPPORT.

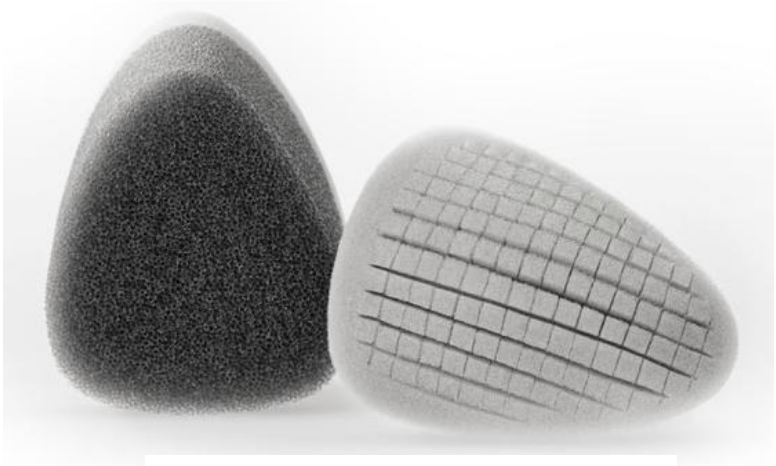
Wound Hygiene – Core Principles

Chronic or hard-to-heal wounds with devitalised tissue or suspected biofilm require vigorous therapeutic cleansing to dislodge loose devitalised tissue, microorganisms, or debris from the wound bed. Options include:

- Tap water – first line, no evidence that sterile water/saline is superior.
- Sterile saline/water – in clinical situations where a sterile solution is required.
- A wound irrigation solution with both surfactant and antiseptic properties.

Mechanical Debridement

- Alprep Debridement Pad – 1st line – use as per Biofilm Pathway - dark grey foam is for loosening. The light grey foam is for absorbing and capturing.
- UCS debridement cloth – 2nd line - anatomically challenging places, e.g. between toes or small cavities, that the Alprep Debridement Pad can't reach.



Infection – Antimicrobial Dressings

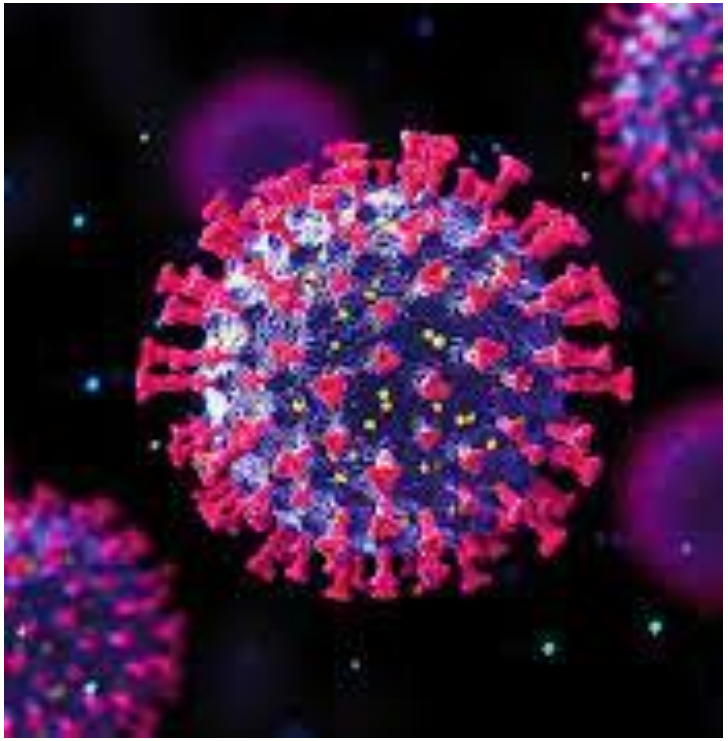
1st line – Medical Grade Honey

2nd line – Cadexomer iodine

3rd line – Cutimed Sorbact Contact or Flaminal

Infection

- What are you documenting?
- What are your management objectives for Wound **Infection**?



Opportunistic Maggots

- Not uncommon, particularly in warmer months
- Does not reflect poor cleanliness of patient/surroundings or dressing technique
- Typically, only ingest necrotic & sloughy tissue. Reduce bacterial load/clean the wound!
- Advice would be to remove/irrigate away and then reassess the wound. Consider if more absorbent dressing or an antimicrobial needed.
- Full guidance on TV website, 'Resources' tab.

- Systemic infection/unwell
- Rule out recent foreign travel

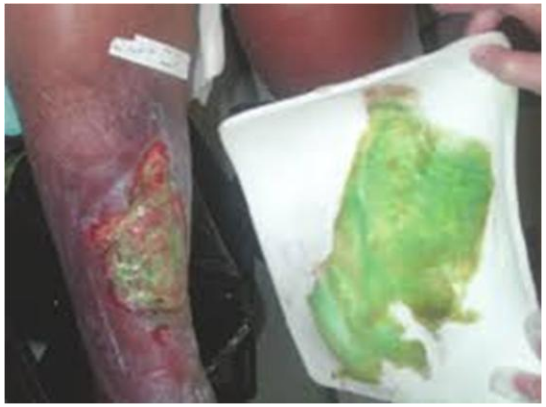
Moisture

Exudate production is a normal part of the healing process to prevent the wound bed drying out, provide essential nutrients and growth factors for healing, and to assist tissue repairing cells to migrate.

Exudate produced by chronic wounds can be detrimental to healing, prolonging the inflammatory phase, and causing harm to both the wound and the peri wound skin.

Exudate Types

- Serous - Amber or straw coloured. Considered 'normal' unless excessive.
- Serosanguineous - Pink due to presence of red blood cells.
- Purulent - Indicates infection. Cloudy, milky, yellow, tan, brown, sometimes green. Often thicker and may be malodorous. Could be pink if red blood cells present.



Wound Exudate Pathway

BOB Buckinghamshire, Oxfordshire and Berkshire West Integrated Care System

NHS Oxford Health NHS Foundation Trust

Assess and record exudate level – consider reasons for high exudate and treat underlying cause

Dry

Little or no exudate on dressing.

Hydrogel sheet or hydrocolloid

*If debridement is clinically indicated (see notes).

Low

(x1 dressing change per week)

Low amount of exudate. No peri-wound maceration.

Xupad®

Choose a size most appropriate to wound surface area. DO NOT LAYER

Kliniderm® Foam Silicone Border

Only for use on skin tears and wounds on the leg under hosiery kits, with light to moderate exudate levels. NOT suitable for sacral wounds.

Moderate - High

(x3 or more dressing changes per week)

Wound exudate visible within dressing. Possible peri-wound maceration.

Kliniderm® Superabsorbent

Choose a size most appropriate to wound surface area. DO NOT LAYER

Resposorb® Silicone Border

For wounds that cannot be retained by a bandage (i.e. on a hip or sacrum).

Very High

(Daily dressing changes)

Exudate saturating dressings. Peri-wound maceration. Strike-through on dressings/bandages

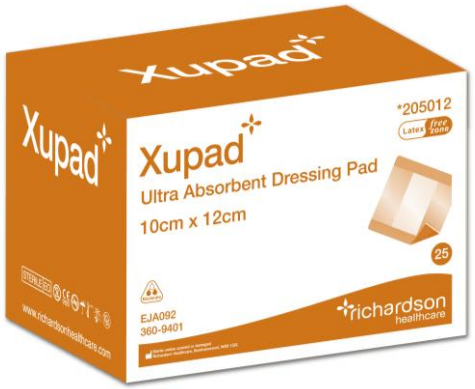
Cutimed® Sorbion® Sachet Extra

Choose a size most appropriate to wound surface area. DO NOT LAYER

Needs Authorisation & supply by Tissue Viability

Complete sorbion authorisation form.

Moisture – Absorbent Dressings



Moisture

- What are you documenting?
- What are your primary management objectives for **Moisture**?

Edges

Edges

- Where new epithelial cells are formed and migrate across the wound
- Protect from trauma
- Get moisture balance right
- Manage any build up of dressing residue/dried exudate
- Rolled edges – static wound as migration of epithelial cells not possible. Occasionally signifies malignancy

Primary dressings need to be non-adherent and should not cause friction/movement over the wound edges.

Use Exudate Management Pathway to select a suitable absorbent dressing.

Follow core wound hygiene principles & ensure removal of residue/exudate

Surrounding Skin

Care of the surrounding skin is as important as care of the wound itself. Management of skin conditions such as:

- Oedema
- Varicose eczema
- Irritant dermatitis
- Xerosis (dry skin)
- Excoriation and maceration

Surrounding Skin - Management

- Oedema - The use of therapeutic compression (dependant on lower limb/ doppler assessment)
- Varicose eczema - Refer to the Varicose Eczema Pathway
- Xerosis (Dry skin) - Refer to the emollient section of the formulary.
- Hyperkeratosis & skin cleansing - Regular bowl washing, using an emollient (Epimax Ointment) as a soap substitute and a clean flannel with gentle circular motions will generally remove the hyperkeratosis. It is essential to also use a leave on emollient after washing to help soften the plaques.
- Excoriation & maceration - Consider increasing absorbency of dressings and frequency of dressing changes (refer to Exudate Pathway). Protect peri-wound skin - refer to Skin Barrier Pathway.

Measuring Success

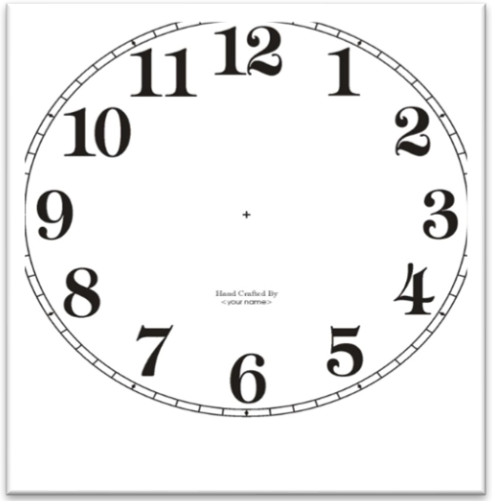
‘If you cannot measurement it, you cannot control it’ (Lord Kelvin

‘One accurate measurement is worth a thousand ‘expert’ opinions’ (Grace Hopper)

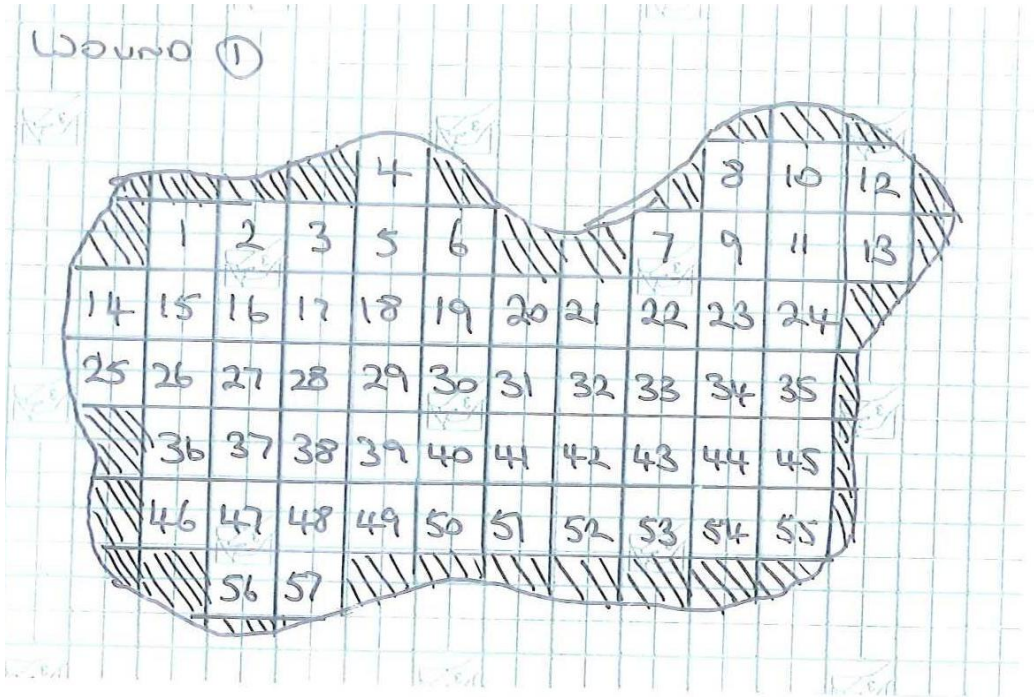
Measuring Outcomes

- Measuring a wound at the start of treatment is seen as best practice to enable accurate assessment of the impact of a clinician's intervention.
- Subsequent measuring can identify whether or not a wound is failing to heal or deteriorating.

Additional Measuring Methods



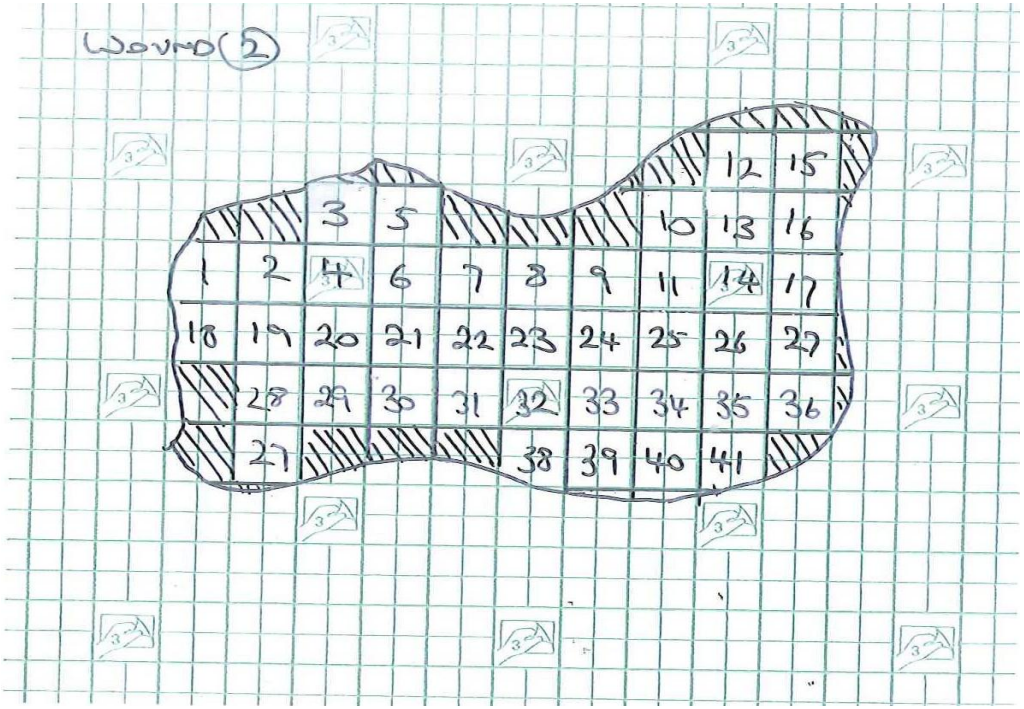
Baseline Measurement



Whole Squares = 57
Non whole = 15

Surface Area = 72cm2

Wound Site Reduction…



Whole squares = 41
Non whole = 9.75

New Surface Area = 50.75 cm2

Sum Example:

<u>Determining the percentage reduction in wound surface area</u>

•Work out the reduction in surface area by using the following equation:

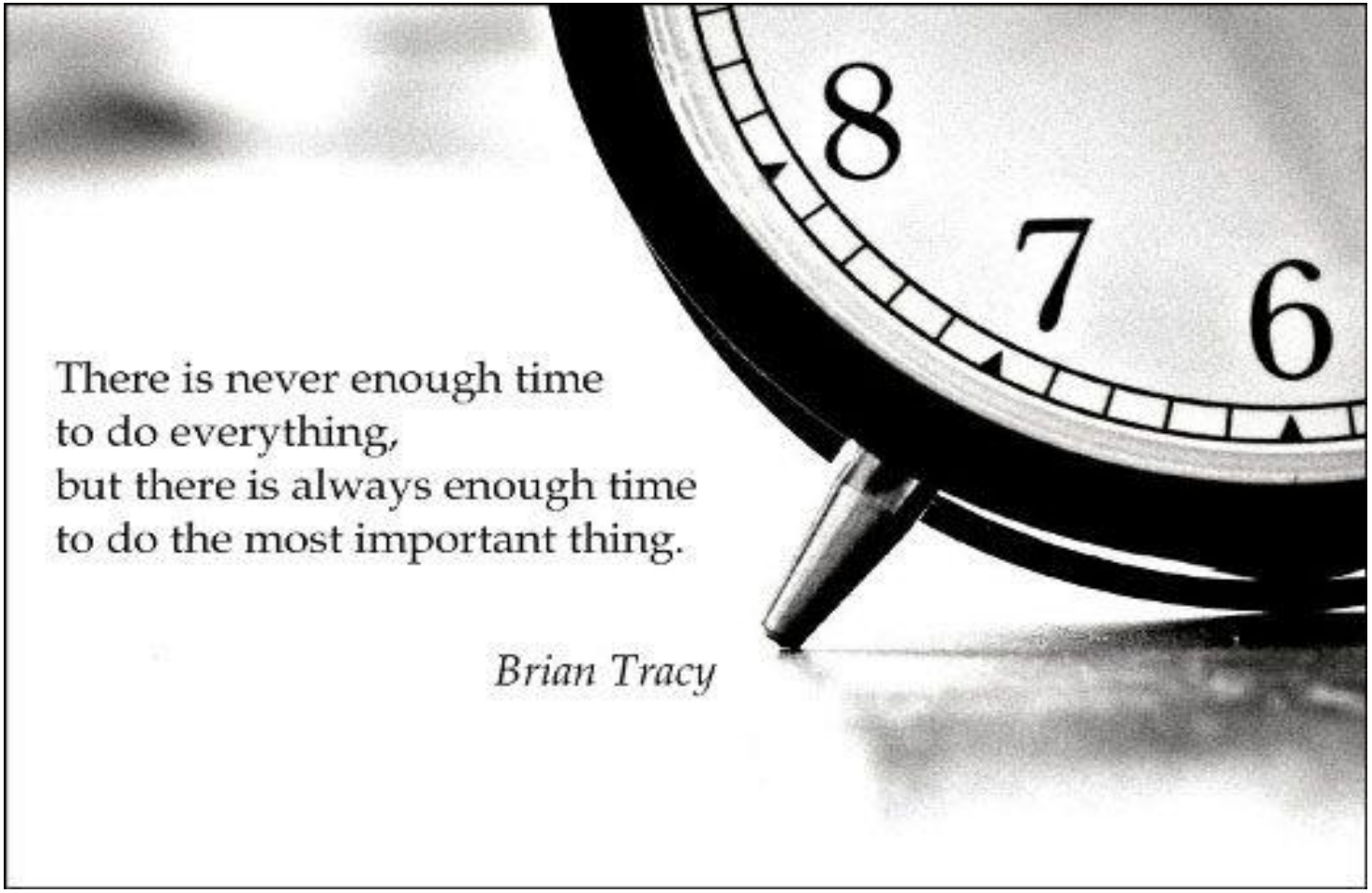
New surface area (50.75) ÷ last surface area (72) x 100 = 70.47%

Next take the % figure (70.47) from 100 (100 – 70.47 = 29.53 %)

This means that there has been a 29.53% reduction in wound area since the last measurement

Summary

- Understand normal healing so you can recognise the abnormal.
- Assess holistically to identify the risks to healing.
- Recognise why a wound is ‘behaving’ in a certain way and be able to put an evidence-based plan in place to manage the problem.
- Measure the effectiveness of your management plan taking appropriate action if outcomes aren't being met.


There is never enough time
to do everything,
but there is always enough time
to do the most important thing.
Brian Tracy


WHY?
WHAT?
WHERE?
WHEN?
WHO?
HOW?
WHERE?
HOW?
HOW?
WHAT? HOW? WHY?
WHO? WHERE? WHAT? HOW?
WHAT?
WHO?
WHERE?
HOW? WHO?
WHO? WHERE? WHAT? HOW?
WHAT? HOW? WHY?
HOW?

Feedback Please…