How wound cleansing and debriding aids management and healing

Annette Downe

Wound debridement can be challenging for community nurses, who need to be able to quickly identify a wound’s status in order to proceed with treatment. This article looks at some of the basic factors that nurses should consider when debriding and cleaning a wound, paying particular attention to assessment and ‘seeing’ the wound, and how clinicians can better remove potentially damaging material such as slough and necrosis. The article also investigates how clinicians caring for patients with leg ulceration can treat the ‘whole leg’. Finally, the authors consider the benefits of a new product, the UCS® debridement cloth (medi UK), and its ability to help community nurses gently debride and clean wounds of all types, as well as reducing the burden of using buckets of water to clean patients’ lower limbs. This has important implications for many community nurses, particularly concerning strain to the back during lower limb cleansing and the infection risk of transporting, cleaning and storing buckets in patients’ homes. There is also a time factor, as debridement cloths mean that visiting nurses can reduce the time associated with filling and emptying buckets in both clinic and home environments.

KEYWORDS:
- Wound assessment
- Debridement
- Lower limb cleaning

Wound care represents a serious health problem in the UK. With a burgeoning older population and an increase in lifestyle-related conditions, such as obesity and diabetes, the care of leg ulcers, pressure ulcers and diabetic foot ulcers will inevitably take up a significant amount of community nurses’ time in the future, as well as being a drain on healthcare resources (Chandan et al, 2009).

Leg ulceration is a widespread problem in the UK, with venous leg ulceration having an estimated prevalence of between 0.1% and 0.3% across the population (Scottish Intercollegiate Guidelines Network [SIGN], 2010). In 2011 the National Institute for Health and Care Excellence (NICE, 2011) cited the incidence of foot ulcers in people with diabetes in England as being as high as 7%. Pressure ulcers have also long been recognised as occupying a disproportionate amount of clinical time (International Guidelines, 2009).

Thus, community nurses need to know how to assess wounds accurately as a basis for good long-term management, as well as having the tools to deal with them safely and efficiently. Accurate wound assessment — as part of a holistic assessment — is key to reaching correct management decisions and ensuring that an acute wound does not turn into a long-term chronic problem (Butcher, 2013). Thus, being able to visualise the wound through cleansing and removing debris can help clinicians gain an accurate picture of the state of the wound.

Of course, for community nurses who may need to see a number of wound care patients on any given day, ease of use is crucial when considering wound care equipment. This article looks at a product that is designed to help clinicians more easily assess and treat chronic wounds.

WOUND ASSESSMENT

Accurately assessing the wound enables clinicians to understand what is taking place within the wound itself and to decide any future treatment. The wound bed preparation model is a recommended and effective tool in assisting wound management, relying on accurate wound assessment through (European Wound Management Association [EWMA], 2004; Heinrichs et al, 2005; Best Practice Statement [BPS], 2008; Fletcher, 2010):
- Aiding accurate diagnosis of the wound’s cause
- Enabling nurses to make correct treatment decisions
- Helping to detect improvement/deterioration in the wound
- Preventing the development of complications
- Helping to avoid ‘ritualistic’ or inappropriate practice
- Maximising the use of resources
- Promoting a positive experience of patient care.

Getting started

The first step in the assessment process is to ensure that the wound and surrounding skin are clean and that any dead/devitalised tissue is debrided to enable a true picture of the wound to be obtained.

Debridement cloths — pre-moistened single-use cloths for the effective removal of dead tissue and slough — offer the opportunity for the wound bed to be gently debrided, reducing necrotic burden within the wound (Butcher, 2013).
The speed of this method can also have advantages over more time-consuming debridement methods, such as autolytic debridement. In the authors’ clinical experience, this not only frees up nurses’ time, but is also more cost-effective in the long run as they will be able to move on to other tasks.

Once the wound is clean and clearly visible, the following should be evaluated and documented:
- Wound type
- Wound size
- Anatomical location
- Tissue types present in the wound bed
- Wound symptoms (exudate, maceration, odour, infection, pain)
- Wound edge
- Basic skin assessment.

Wound type
Clinicians need to identify whether a wound is healing by primary or secondary intention (Eagle, 2009). Acute wounds are usually the result of surgery or trauma, and should heal relatively quickly. Chronic wounds on the other hand, such as leg ulcers, pressure ulcers, diabetic foot ulcers, and malignant wounds, often take longer to heal, are in danger of infection, and may produce large volumes of exudate due to extended inflammation. Acute wounds can become chronic if there are underlying disease processes affecting healing and/or the appropriate treatment is not chosen — hence the importance of accurate assessment.

Wound size
Having cleaned debris from the wound, as mentioned above, its size should be measured. Measurements of the wound’s depth, width and length should be accurately and regularly recorded using a reproducible method, so that wound progress/deterioration can be monitored over time (Grey et al, 2006; Eagle, 2009; Fletcher, 2010).

Anatomical location
The wound’s location gives clues to its cause (i.e. a heel ulcer in a patient with diabetes may indicate a diabetic foot wound), or alert the clinician to the possibility of hidden structures within the wound bed, e.g. tendon and bone in a diabetic foot ulcer (Grey et al, 2006; Eagle, 2009; Fletcher, 2010).

Tissue types present in the wound bed
Identifying the tissue types present in the wound bed helps to select the correct course of treatment, including the most effective dressings. It also enables clinicians to determine the wound’s status, e.g. healthy granulation tissue is red in colour and indicates healing, while the presence of slough can provide a barrier to wound progress (Grey et al, 2006).

‘Identification of the tissue types present in the wound bed enables clinicians to select the correct dressings’

The percentage of slough, necrotic, granulation and epithelial tissue present in the wound bed is usually recorded at each assessment to enable the progress/deterioration of the wound to be monitored (Grey et al, 2006; Eagle, 2009; Fletcher, 2010).

Wound debridement is essential to the generation of tissue repair in all wound types (Strohaul et al, 2013). Removing excess necrotic tissue and debris, with a debridement cloth for example, helps clinicians to get a clearer picture of the type of tissue in the wound bed and optimises wound healing — this in turn will improve the patient’s quality of life.

Wound symptoms
Assessment should consider the following:
- Exudate — volume, colour and viscosity should be recorded
- Malodour — odour from a wound can have a huge impact on the patient’s quality of life. Causes of malodour include infection, presence of necrotic tissue and fungating lesions
- Wound-associated pain — the patient’s experience of pain should be taken seriously and assessed using a recognised pain assessment tool, commonly a visual analogue scale (VAS).

Wound edge
The appearance of the wound edge, including any areas of swelling, may help to identify the wound’s aetiology. Edges may be described as sloping, rolled, regular, irregular or undermining (Grey et al, 2006; Eagle, 2009). Of course, the wound edges may be disguised with slough or devitalised tissue, therefore, the gentle removal of any non-viable tissue will help clinicians to see the extent of the wound and measure its edges.

Skin assessment
Assessment of the condition of the skin surrounding the wound should help to determine the extent of tissue damage and provide clues to underlying pathology (Flour, 2013). Assessment should look for:
- Dry, flaky skin
- Excoriation
- Maceration
- Discolouration, including haemosdererin staining
- Varicose veins, varicosities
- Acute or chronic oedema.

TREATING THE ‘WHOLE LEG’

The skin on the legs of patients with underlying problems to their venous or lymphatic systems, such as lymphoedema or chronic oedema caused by heart failure, for example, will undergo certain changes (SIGN, 2010). These may include:
- ‘Heavy legs’ — where the patient experiences tiredness and aching in the lower limb
- Spider veins
- Varicose veins
- Hyperkeratosis (development of thick, ‘scaly’ areas of skin)
- Dermatitis.

All these symptoms can be indicative of worsening venous or lymphatic return, and, if left unmanaged, can lead to ulceration and chronic oedema.

However, these symptoms can be easily detected when the community nurse is routinely cleaning patient’s lower limbs and can then be managed with a variety of methods including regular cleaning and assessment, lower limb elevation, and compression bandaging and hosiery (SIGN, 2010). This is known as a ‘whole-leg’ approach to chronic lower limb ulceration.
Cleaning the lower limb

It is important, however, that the community nurse is initially able to clean and/or gently debride any areas of hyperkeratosis, dermatitis or early ulceration. In the author’s experience, one of the main issues community nurses have with cleaning a lower limb is the reliance on soaking the leg in a bucket — not only is this an infection risk when carrying, storing and disinfecting buckets of water around the patient’s home, there is also the risk of back strain.

To be able to cleanse, moisturise and debride a whole limb with one product would, therefore, have significant clinical benefits and debridement cloths have been specifically designed for this process.

UCS® DEBRIDEMENT CLOTH

In the author’s experience, wound debridement can be a daunting prospect for community nurses, not only because of the range of wounds with which patients present, but also because they may not be confident in removing dead tissue and slough from the wound bed or surrounding skin.

The UCS debridement cloth is a pre-moistened, single-use cloth for wound debridement and cleaning of the surrounding leg area (Figure 1–3). It incorporates a mild cleansing solution, which moisturises and softens without damaging healthy cells and has three specific properties, which combine for debridement:

- The solution aids cleaning and hydration of the perilesional area.
- The UCS debridement cloth is classed as a sterile device, recommended by the manufacturer for use with chronic and acute wounds, ulcers of all types, pressure ulcers, and first or second-degree burns. Its active ingredients include:
  - Plant extract: aloe vera barbadensis. This soothes, aids healing and has anti-inflammatory and antimicrobial properties (Rajeswari et al, 2012)
  - Allantoin: a naturally occurring chemical compound, which promotes cell replication and healing of wounds, burns, and scars (Darden, 2010)
  - Poloxamer: a hydrophilic surfactant (Curry et al, 2004; Mustafi et al, 2008).

The cloth acts immediately, does not inhibit granulation and is compatible with subsequent use of any type of dressing.

Ease of use

The UCS debridement cloth is also designed to be easy to use and has the following benefits for community nurses:

- Provides a convenient and safe way to clean the wound, including exudate (Figure 4)
- Saves time and improves outcomes
- Easy to transport, particularly if visiting a large caseload — the UCS debridement cloth is small and can easily be packed in a clinician’s car or equipment bag (Figure 5).

As well as being easy to use, the cloth has the following patient benefits:

- Odour reduction
- Can form part of a self-care plan
- Cleans and improves skin conditions
- Safe and simple to use
- Soothing and gentle, which helps to reduce pain.

The UCS debridement cloth can also be used on awkward-to-reach anatomical areas, such as under skin folds, on the sacrum or between the toes (Figure 6).

Why use the UCS debridement cloth?

Wound debridement at an early and appropriate stage is likely to accelerate wound healing and improve patient care. Effective debridement is associated with reduced exudate, reduced odour and the appearance of granulation in the wound bed (Vowden and Vowden, 2011).

The UCS debridement cloth has also been shown to aid the reduction of infective bacteria. A clinical study on porcine skin infected with meticillin-resistant Staphylococcus aureus (MRSA) and Clostridium difficile (data on file at medi UK) demonstrated that the wipes reduced the amount of multi drug-resistant organisms on the treated skin. Another clinical trial (data on file at medi UK) sampled the skin underneath 10 women’s breasts before and after the wipes were used.
and demonstrated a reduction in microbial flora.

**CONCLUSION**

A clear picture of the wound and the surrounding skin is crucial if community nurses are to perform accurate assessment, which enables them to make appropriate treatment plans and ultimately improve patient outcomes such as symptom control, wound healing and quality of life. Comprehensive, holistic patient assessment can help to reduce costs and means that clinicians will quickly reach their desired outcomes for patients, such as healing or symptom control.

Using the appropriate tools and equipment to aid assessment is important, which is why nurses and other wound care specialists need to keep abreast of clinical innovations, such as the debridement cloth featured in this article, to ensure that they provide best practice care.

The UCS debridement cloth is effective in removing necrotic tissue, slough and hyperkeratosis with minimal trauma and pain, as well as cleansing and hydrating the surrounding skin. It also offers clinicians, both specialists and non-specialists, the ability to quickly and accurately assess the wound, and care for the ‘whole leg’, which in turn results in better patient experience and clinical outcomes.

**REFERENCES**


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**KEY POINTS**

- A clear picture of the wound and the surrounding skin is crucial if nurses are to perform accurate assessment.

- The first step in the assessment process is to ensure that the wound and surrounding skin are clean and that any dead/denatured tissue is debrided.

- Effective debridement is associated with reduced exudate, reduced odour and the appearance of granulation in the wound bed.

- The UCS debridement cloth is a pre-moistened single use cloth for wound debridement and cleaning of the surrounding leg area.