

DEBRIDEMENT CONSENSUS: RECOMMENDATIONS FOR PRACTICE

It is important in today's NHS – for the safety and wellbeing of patients, and given that financial penalties are imposed when deep pressure ulcers develop – that pressure damage be avoided where possible, and promptly managed should it occur (Guy, 2012). One of the key elements of managing wounds is appropriate debridement, which this article will explore in more detail.

Debridement is defined as the removal of dead, nonviable or devitalised tissue, infected or foreign material from the wound bed and surrounding skin (Wounds UK, 2013). Devitalised tissue may present in a number of states; yellow, grey, purple, black, or brown in colour, and may be wet or dry depending on the amount of exudate present (Wounds UK, 2013). The devitalised tissue may be dry necrosis, wet necrosis, wet slough, superficial wet slough, dry slough, haematoma, or hyperkeratosis of periwound skin (Gray et al, 2011).

The devitalised tissue can form a physical barrier that prevents new epithelial cells moving from the wound edges to provide a new covering of epithelial tissue (European Wound Management Association [EWMA], 2004). The devitalised tissue can block the delivery of topical preparations (i.e. antimicrobial therapies), preventing them from penetrating the wound bed (Weir et al, 2007). Wound assessment is hindered by devitalised tissue as clinicians are unable to accurately gauge the extent of a wound (Callaghan and Stephen-Haynes, 2012). Debridement can assist the healing process by lowering bioburden

in the wound bed and subsequently reduce wound malodour (Vowden and Vowden 1999; Wolcott et al, 2009).

There is a misconception that debridement is solely the responsibility of the tissue viability nurse specialist. In reality, the majority of patients who require debridement as part of a package of holistic wound care are not under the management of a tissue viability nurse; rather, it is the generalist nurse who often has initial and ongoing responsibility for wound assessment and the delivery of continuing care.

With this in mind, a group of experienced wound care practitioners from a variety of clinical backgrounds have produced a consensus document entitled *Effective Debridement in a Changing NHS: A UK Consensus* (Wounds UK, 2013). The aim of this consensus document was to provide practical support for generalist nurses, helping them to successfully implement effective debridement in clinical practice. This document builds on a recently published EWMA document on debridement (Strohal et al, 2013) by focusing specifically on how to enhance practice and patient outcomes in the UK.

“There is a misconception that debridement is solely the responsibility of the tissue viability nurse specialist.”

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Box 1. Checklist for debridement decision (adapted from Wounds UK, 2013).**The aim/goal for the wound**

- Is debridement appropriate for this wound? NO ► KEEP DRY
- Should I take a conservative approach (stabilise the wound)? YES ► AUTOLYTICALLY DEBRIDE
 - Do I need to change method of debridement? YES ► CONSIDER OTHER METHODS
- Should I actively try to accelerate the wound healing process? YES ► ACCELERATE DEBRIDEMENT
 - Is non-viable tissue delaying healing?
 - Does the wound edge/periwound skin or wound bed require accelerated debridement?
 - Is acceleration of debridement going to help the management of infection in this wound?
 - Is acceleration of debridement in the best interests of the patient at the moment?
- Am I certain what to do? NO ► CONSULT MULTIDISCIPLINARY TEAM, DO NOT DEBRIDE

**Accelerate healing through debridement**

- Have I discussed the debridement options with the patient/family members?
- Do I have the skills to perform the chosen method of debridement myself?
 - Am I confident in what I am doing? NO ► REFER
 - Can I make things worse/do harm? YES ► REFER
 - Is the current environment safe to undertake debridement? YES ► DEBRIDE
- Have I got the resources/equipment necessary? YES ► DEBRIDE



NO ► REFER or PLAN RESOURCES

Expected outcomes of debridement

- Will the intervention remove non-viable tissue in one go?
- Will it be a gradual/staged process?
- Will the debrided wound be ready for another therapy, eg negative pressure wound therapy, skin grafting? YES ► SET DATE FOR REVIEW

Options at every stage

- Check clinical guidelines/policies
- Seek advice from a specialist or colleagues in the multidisciplinary team (as simple as making a call)
- Refer to another practitioner for debridement
- Debride wound, selecting the most appropriate method based on: wound and patient need, speed with which debridement is necessary and patient preference

Guidelines for debridement

The UK consensus expert working group recommend that, prior to debridement, a comprehensive patient assessment should be undertaken to identify factors that will facilitate or hinder the debridement process. If infection is present, the debridement of nonviable tissue may be urgent. If the nonviable tissue is on the lower limb, an assessment of the patient's arterial status (ankle–brachial pressure index) should be undertaken and referral to a vascular team may be necessary, rather than immediate debridement of nonviable tissue on a poorly perfused or ischaemic limb.

Debridement may be a one-off intervention or part of a continuing process. The expert working group propose that the nurse should set short- and long-term treatment

objectives to allow for regular assessment of the intervention.

Within the consensus document, there is a helpful checklist for the generalist to consult that provides guidance on when and when not to debride, how to debride, and when to refer for help and support (*Box 1*). The checklist is supplemented with a useful decision-making pathway (*Figure 1*), which includes the three debridement options recommended for use by the general nurse: autolytic, mechanical, and larval debridement. These three methods are advocated because they do not require additional skills, are available on prescription, and can be safely used in the community setting.

Previously, general nurses have tended to rely solely on autolytic debridement, forgoing mechanical and larval techniques. This has resulted

in debridement becoming ritualistic, with the nurse choosing autolytic debridement due to their familiarity with the technique, rather than because it is in the best interests of the patient. It is important to note that three methods, as detailed in the document, are suitable for use by general nurses.

The expert working group reminds nurses of their professional code of conduct and how failing to act in the best interests of the patient is against its recommendations. Therefore, failing to choose and implement the most appropriate form of debridement may be classed as clinical negligence and an omission of care. Activities that will help nurses overcome their individual obstacles to opening and expanding their views, skills and ultimately their debridement practice are provided. In order to integrate the three methods of debridement into general nursing practice, there may be personal and organisational barriers to overcome, including:

- ▶▶ Inability to access certain methods of debridement/services within the time frame necessitated by the wound's condition.
- ▶▶ Inability to consult with the multidisciplinary team.
- ▶▶ Nurses' lack of debridement knowledge.
- ▶▶ Unclear referral pathways.
- ▶▶ Funding issues/lack of access to services.

One way to overcome these issues is to develop an ideal model for debridement services, which includes producing care pathways that are multidisciplinary in nature. It is suggested that the clinical nurse specialist in tissue viability is an ideal person to develop a debridement service. Healthcare organisations have a role to play in supporting a debridement service that includes the provision of education and training, as well as the development of competency frameworks. This is fundamental in effectively addressing the safety issues surrounding debridement, for both the patient and the generalist clinician.

To support effective debridement in a changing NHS, the expert working group identify the components of an ideal debridement service as follows:

- ▶▶ Integrated services (primary and secondary care) so that patients/practitioners are able to access all methods of debridement when appropriate.
- ▶▶ Patient information/leaflets to facilitate patient understanding of debridement and the techniques recommended by the clinician.
- ▶▶ Confident practitioners knowledgeable about all debridement methods, decision making, and referral pathways.
- ▶▶ Clarity of roles to ensure interventions are carried out by the most appropriate practitioner, providing safe and efficient care.
- ▶▶ Pathways of care with expected time frames for patients to receive treatment.
- ▶▶ Clear concise evidence-based clinical guidelines across community and acute services.
- ▶▶ Rolling programme of relevant education and training with clear guidelines for generalists on how to access education and training.
- ▶▶ Audits to measure outcomes.
- ▶▶ Access to clinical photography and diagnostic services.
- ▶▶ Multidisciplinary support when required.

Case studies

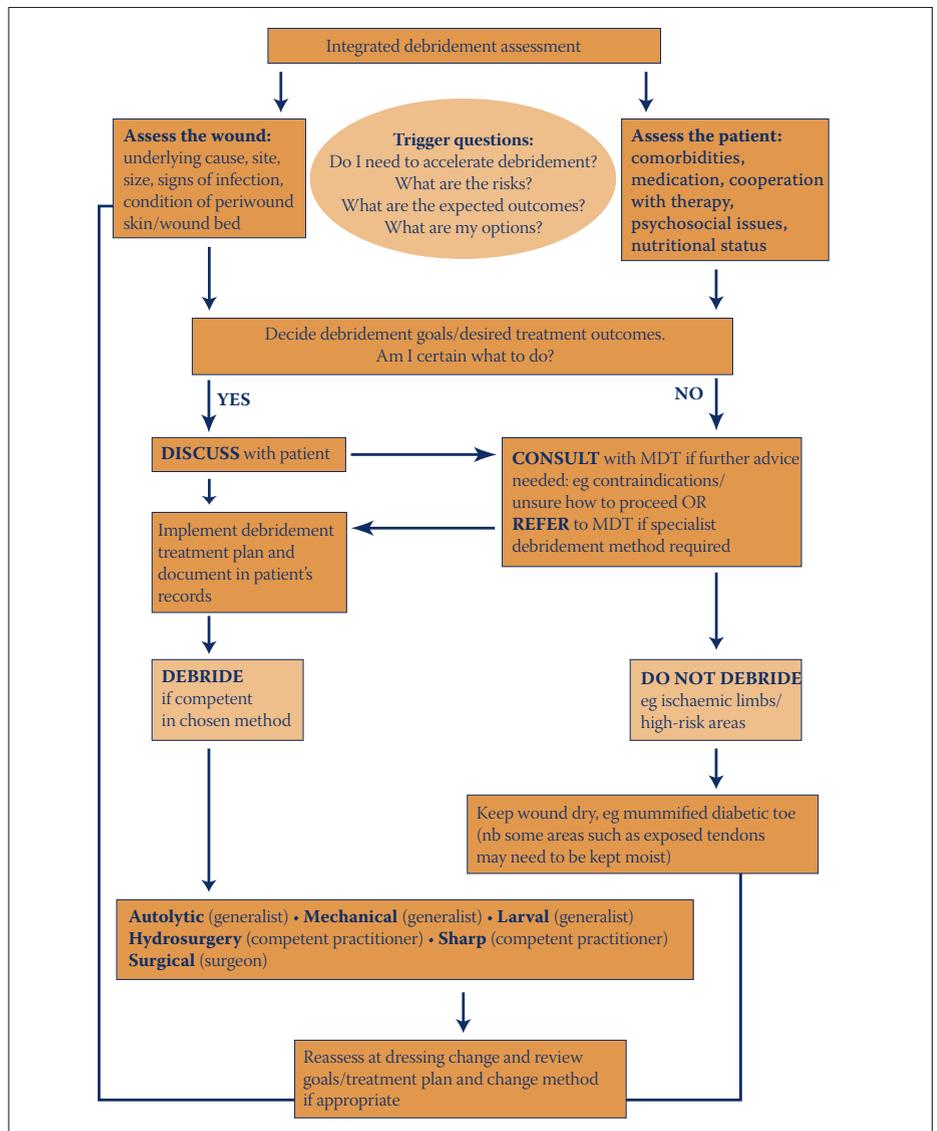
Two case studies are presented here that show the complexities of debridement.

Case study one

A 67-year-old woman had been under the care of the district nursing team for a number of years. She was paraplegic and spent long periods of time in her wheelchair during the day. She was fiercely independent and did not have any help during the day from carers or family.

Pressure-relieving equipment was in place (i.e. a foam pressure-relieving mattress on the bed). She managed to transfer from her bed to her

Figure 1. Decision pathway for nurses considering debridement (adapted from Wounds UK, 2013).



wheelchair unaided, which also had a pressure-relieving cushion in place, but she refused an upgrade of her pressure-relieving equipment to an air mattress because she felt that the increase in height would decrease her independence.

She developed a category III pressure ulcer (European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel [EPUAP–NPUAP], 2009) to her left hip (Figure 2a). A community nurse from the district nursing team visited the patient to assess the pressure ulcer. The wound measured approximately 60 mm × 40 mm with 90% slough and 10% granulation tissue.

The slough was wet and malodorous. The community nurse was unsure of the best option for the patient, but decided to apply a Hydrofiber dressing to the area to aid autolytic debridement, and a foam dressing to absorb excess exudate, and to discuss further management plans with the district nursing team.

Following discussions with the team, it was felt that the wound needed debriding, although they were unsure of the best option for the patient. They did not feel that they had sufficient knowledge within the team to make a decision regarding the selection of a suitable debridement technique, or they were not familiar with all of the available methods.

Figure 2. (a) Category III pressure ulcer to left hip. This wound had developed approximately 2 weeks prior to this photo being taken. (b) Category III pressure ulcer to left hip directly after use of the monofilament mechanical debridement pad. The process took approximately 2–3 minutes.



The team consulted the debridement consensus document (Wounds UK, 2013) and were able to gain knowledge regarding the different types of debridement and the advantages and disadvantages of each.

It was decided that the patient would benefit from mechanical debridement and a monofilament debridement pad (Debrisoft®; Activa Healthcare) was chosen as this would be quick and easy to use (Wounds UK, 2011). Larvae therapy may have been an option for debridement of the wound bed, but due to the patient spending long periods of time in her wheelchair, the team felt that the larvae were at risk of being crushed.

Two days later, the community nurse visited the patient. A discussion took place with the patient regarding the use of Debrisoft to debride the wound. The community nurse informed the patient of the benefits of using this form of debriding to aid wound healing and the patient gave verbal consent for the procedure. The community nurse ensured that the patient was comfortable throughout the procedure and the patient did not voice any concerns regarding pain or discomfort. Within minutes the monofilament debridement pad removed the devitalised tissue from the lower part of the wound bed to reveal red granulation tissue (Figure 2b).

The devitalised tissue at the top of the wound was thicker and harder to remove. The community nurse explained to the patient that although an improvement was evident in the wound bed, she would continue to aid

autolytic debridement by dressing the wound as before and consider using the monofilament debridement pad next visit to further debride the wound bed and aid wound healing.

Case study two

A 75-year-old woman was admitted to a general hospital following a fall at home, following which she had been lying on the floor for an extended period. On admission, a category IV pressure ulcer to her right ischial tuberosity was identified. The wound measured approximately 65 mm×60 mm, with 80% necrotic tissue and 20% slough. It was difficult to assess the depth of the wound due to the nonviable tissue present.

On first assessment, advice was given by the tissue viability team to support autolytic debridement by the use of a hydrogel sheet (ActiFormCool®; Activa Healthcare) to rehydrate the devitalised tissue with a view to undertaking subsequent sharp debridement.

The patient was transferred to a community hospital a week after admission. On assessment, the community hospital nursing staff were unsure how to proceed with the management of the wound and so followed the decision-making pathway for nurses within the debridement consensus document (Wounds UK, 2013) and contacted the tissue viability

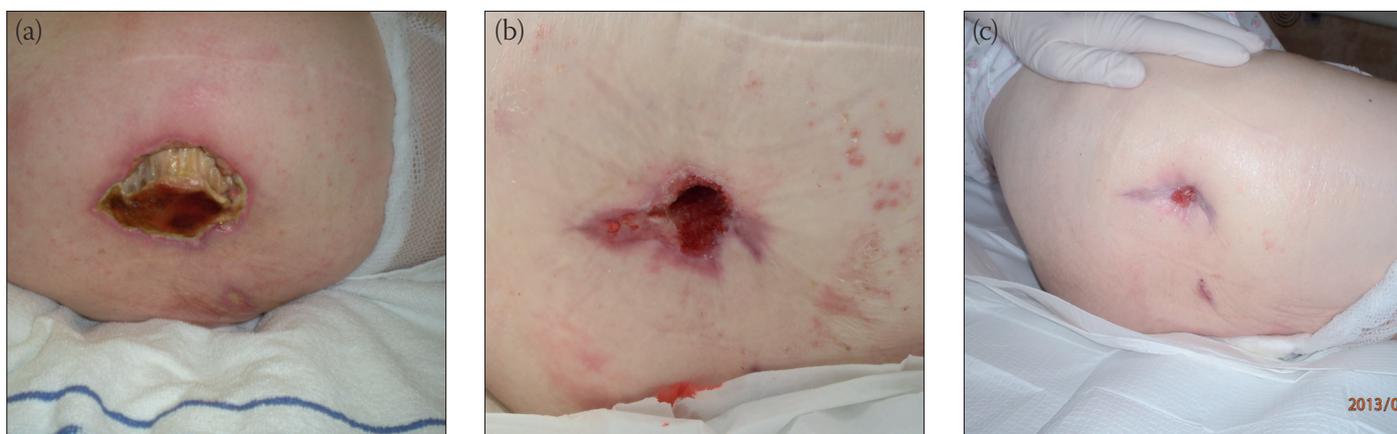


Figure 3. (a) Category III pressure ulcer to right hip prior to sharp debridement. (b) The same pressure ulcer 3 weeks later, following negative pressure wound therapy. (c) The pressure ulcer following a further 2 weeks of autolytic debridement.

team for further advice. It was evident that the devitalised tissue had started to lift and a clear demarcation line was visible between devitalised and healthy tissues (*Figure 3a*). However, the ward staff reported problems controlling the volume of wound exudate and malodour.

In collaboration with the patient – who was keen to be actively involved in decision-making about her treatment – a decision was made that the tissue viability nurse would perform sharp debridement. The patient gave verbal consent. The patient was offered pain relief, but declined, and did not experience any pain before, during, or after, sharp debridement.

Following sharp debridement, the wound was revealed to be approximately 65 mm deep, and probed to bone. Following assessment and a discussion with the patient, the decision was made to apply negative pressure wound therapy (NPWT) to promote granulation and manage exudate levels. NPWT was applied with twice weekly changes.

A reduction in wound size was noted after 3 weeks (*Figure 3b*). The wound measured approximately 20 mm × 20 mm with a depth of 25 mm. It was decided to discontinue NPWT at this time as the periwound skin had started to show signs of irritation related to the film dressings being used.

Following discussions with the nursing staff and the patient, the wound cavity was packed with a silver Hydrofiber dressing to promote healing and a foam dressing to absorb excess exudate. This dressing regimen was repeated every 2 days for a further 2 weeks. The wound continues to improve with 80% granulation tissue present in the wound bed at the time of writing (*Figure 3c*).

Conclusion

Debridement has a significant role to play in the wound healing process, with many benefits for the patient and their wellbeing (Wounds UK, 2013). It has been important to revisit debridement and dispel the myth that it is only the realm of the tissue viability nurse specialist. The general nurse plays an important role in delivering wound care, from wound assessment and debriding of nonviable tissue, to referring to other clinicians if indicated.

The expert working group has acknowledged the key position and responsibility the general nurse has in carrying out appropriate debridement. The consensus document promotes general nurses' understanding of debridement, and provides a driver for improved allocation of resources and training of general nurses in debridement methods.

The case studies provide excellent examples of the complexity of the debridement process and the crucial part played by the general nurse. They illustrate how debridement can enhance wound assessment and aid healing. They emphasise the need for the patient to have access to the method of debridement most suitable for their wound.

As the expert working group states: "Debridement at an early and appropriate stage is likely to accelerate wound healing and improve patient care, which will, in turn, improve patient health and wellbeing, reduce hospital bed days, treatment costs and readmission rates, as well as optimise the time staff spend with patients. This efficient, cost-effective, patient-centred approach is central to delivering NHS services today" (Wounds UK, 2013).

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References

- Callaghan R, Stephen-Haynes J (2012) *Changing the Face of Debridement in Pressure Ulcers*. Poster presentation. 15th Annual European Pressure Ulcer Advisory Panel Conference, Cardiff: 19–21 September
- European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel (2009) *Treatment of Pressure Ulcers: Quick Reference Guide*. National Pressure Ulcer Advisory Panel, Washington DC. Available at: <http://bit.ly/xbQ3Ox> (accessed 17.05.2013)
- European Wound Management Association (2004) *Position Document: Wound Bed Preparation in Practice*. MEP Ltd, London
- Gray D, Acton C, Chadwick P et al (2011) Consensus guidance for the use of debridement techniques in the UK. *Wounds UK* 7(1): 77–84
- Guy H (2012) The difference between pressure ulcers and moisture lesions. *Wound Essentials* 1(1): 36–44
- Strohal R, Apelqvist J, Dissemond J et al (2013) EWMA Document: Debridement. *J Wound Care* 22 (Suppl 1): S1–S52
- Vowden KR, Vowden P (1999) Wound debridement, part 1: non-sharp techniques. *J Wound Care* 8(5): 237–40
- Weir D, Scarborough P, Niezgodka JA (2007) Wound debridement. In: Krasner DL, Rodeheaver GT, Sibbald RG (eds) *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals* (4th edn). HMP Communications, Malvern
- Wolcott RD, Kennedy JP, Dowd SE (2009) Regular debridement is the main tool for maintaining a healthy wound bed in most chronic wounds. *J Wound Care* 18(2): 54–6
- Wounds UK (2011) Debridement Made Easy. *Wounds UK* 7(4): 1–6
- Wounds UK (2013) *Effective Debridement in a Changing NHS: A UK Consensus*. Wounds UK, London. Available at: <http://bit.ly/13er4dt> (accessed 13.05.2013)