

# Wound management: improving what we can see and addressing what we cannot see

This article is based on a symposium held at the Wounds UK conference in Harrogate on 10 November 2015. The symposium opened with two distinct aims: first, to look at what we can see, specifically in terms of pressure ulcer categorisation, and discuss initiatives that have improved confidence in diagnosis and care. Second, to explore what we cannot see, with a focus on biofilm management, reviewing emerging strategies aimed at combatting this invisible threat.

## THE CHALLENGE OF PRESSURE ULCER CATEGORISATION

The symposium reintroduced the discussion around whether or not a pressure ulcer should be cleaned before it is categorised, mirroring a previous debate questioning whether or not we should be swabbing a wound. With recent changes to pressure ulcer category definitions and the introduction of pressure ulcer monitoring systems such as the Safety Thermometer (Smith et al, 2015), clinicians are being encouraged to describe the wound or 'say what you see'.

In burn care, for example, where there is a need to categorise wounds routinely, all surface material is removed before the clinician attempts to determine the depth of tissue damage. In the case of pressure ulcers, however, some clinicians argue it is acceptable to clean the area to see the full depth of a wound and improve visualisation, while others are reluctant to touch a pressure ulcer before categorising it.

There is a debate around whether we are 'cleaning' or 'debriding' the wound when removing residual material. As such, the meeting posed a simple opening question to its audience of clinicians: when faced with removing surface material, are we cleaning or debriding, or are we doing both? More than half (51%) described the action as 'both', 8% as 'cleaning' and 40% as 'debriding' the wound.

Categorisation decisions are certainly complicated. The most recent serious incident framework for grading ulcers is a complex tool, and NHS England acknowledges that categorising can be difficult (particularly when choosing between category II or III, and III or IV ulcers). Distinctions can be subtle

depending on anatomical location, and differences in depth may not be significant. Moreover, only in the past year has the term 'unstageable' been used in the UK to describe a wound with slough or eschar that cannot be categorised accurately before this material is removed.

Ultimately, what one person sees may not be what another person sees, and yet to achieve optimal care, we must record observations that we agree on. As such, Jackie Stephen-Haynes introduced a series of local initiatives looking at the 'changing face of debridement', and Sian Fumarola summarised recent evidence in pressure ulcer categorisation, both looking specifically at Debrisoft® as a debridement option.

## SIMPLIFYING WHAT WE CAN SEE AT THE SURFACE: THE SUPPORTING EVIDENCE

Using a multicentre approach across the Worcestershire Health and Care Trust, a study was designed to review Debrisoft as an active debridement system; support staff in debridement of the wound bed; and encourage clinicians to categorise the pressure ulcer correctly and so put in place appropriate wound management objectives (Callaghan and Stephen-Haynes, 2012).

Results showed that debridement using Debrisoft successfully removed devitalised tissue, allowing clinicians to see the wound clearly and set suitable wound care objectives, with time taken to achieve debridement between 0 and 5 minutes for all 12 patients. As more appropriate care was then being delivered, for 11 of 12 patients the number of subsequent visits required to perform an aspect of wound care reduced. Although this was a small study, Debrisoft made a difference, both to delivery of care and accuracy of categorisation.

Building on this theme, Sian reminded the audience that there are growing concerns around time availed to pressure ulcer analysis activities that may be inappropriate; for example, root cause analysis (RCA) investigations for incorrectly categorised pressure ulcers, that take senior nurses away from the bedside or leadership activities. With NHS England increasingly concerned about resource use, making changes as specialist clinicians to improve the categorisation process will improve patient care.

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### Declaration of interest

*This symposium was sponsored by Activa Healthcare*

A poster presented at EPUAP in 2013 showed Debrisoft to be a quick and easy way for general nurses — not just specialist nurses — to assist in the visual assessment and categorisation of pressure ulcers at the bedside (Swan and Orig, 2013). In 80% of cases, the clinician could more accurately visualise the wound bed and extent of tissue destruction, following no more than four minutes of debridement with Debrisoft. Moreover, in 61.5% of cases, the actual category of pressure ulcer following debridement with Debrisoft was a category II, in contrast to the category III that had originally been estimated. More accurate categorisation could lead to better informed patient management and enable improved use of resources, including reduction in time-intensive serious incident reporting.

A further study presented at EWMA in 2015 took the format of a structured clinical audit looking at the impact of using Debrisoft across an acute trust (Bethell, 2015). Results showed that implementation of Debrisoft as a trust-wide strategy assisted with categorising pressure ulcers at the patient's bedside and opened up a wider debate on pressure ulcer categorisation across the tissue viability community. This translated into many positive benefits, including cost reduction, improved patient outcomes, and reduction in patients' pain experience during the debridement process.

### IMPROVING CONFIDENCE IN DIAGNOSIS: PRESSURE ULCERS AND MOISTURE LESIONS

Further discussions at Worcestershire Health and Care Trust at this time centred around the misclassification of moisture lesions as pressure ulcers. Repeatedly, staff said it was difficult to distinguish between these wounds and that they needed support to get the distinction right. Correct identification of each wound type is critical for accurate trust data collection, and to ensure preventative and treatment strategies are in place. The symposium audience echoed this concern (Figure 1). Just 20% of the audience believed that fewer than 25% of moisture lesions were misclassified as pressure ulcers within their own organisation.

Over time it has become clear that pressure ulcer categorisation, and differential diagnosis of moisture lesions and pressure ulcers, are both challenges. To address these issues, a framework was developed in conjunction with a group of multidisciplinary healthcare professionals across acute, community, and care homes. This tool, named the Moisture or Pressure Tool (MOPT), built on already available

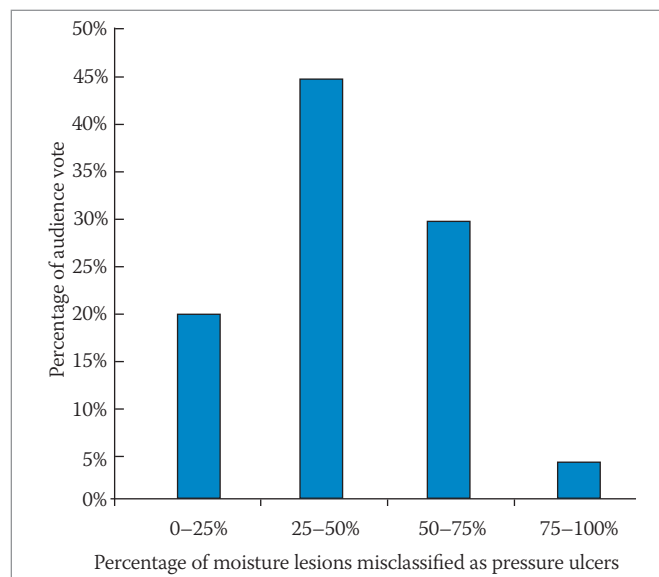


Figure 1. Estimated percentage of moisture lesions misclassified as pressure ulcers within an organisation according to symposium audience (n=262)

tools and was designed to assist decision-making for 4000 staff (Figure 4).

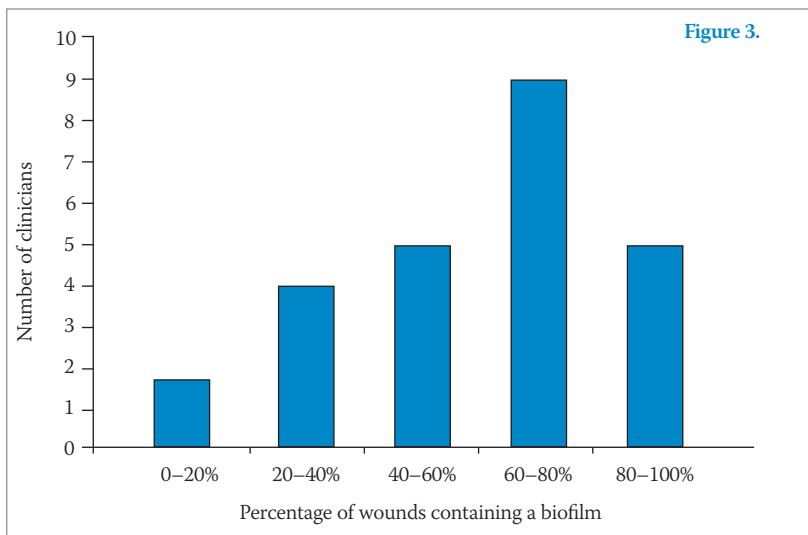
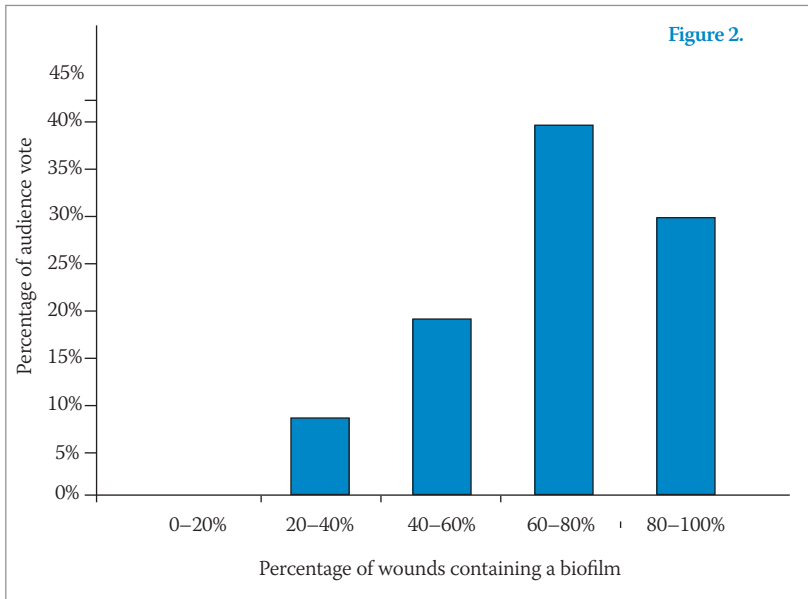
To use the simple tick-box tool, clinicians work through a series of questions, recording the cause (moisture or pressure/sheer/friction), location, shape (specific or diffuse), depth (any depth counts as a pressure ulcer), necrosis status, edges (distinct or diffuse) and colour of the wound. If any ticks appear on the pressure ulcer side, the wound must be categorised as a pressure ulcer — even wounds with just one 'pressure ulcer' tick; these may be exacerbated by moisture, but should still be defined as pressure ulcers. The trust also provided guidance on the reporting system, mentioning debridement and suggested use of Debrisoft to aid with pressure ulcer categorisation, which is available across the organisation.

An audit of 255 clinicians was undertaken to evaluate the effectiveness of the tool in assisting differential diagnosis and delivery of appropriate care. Results showed that the MOPT was easy to use (95% [n=243]), assisted with differentiation (95% [n=243]), and supported clinical practice (100% [n=255]). Moreover, 100% (n=255) of clinicians said the tool and education supported development of appropriate care strategies and raised the profile of appropriate continence and tissue viability care (Stephen-Haynes et al, 2015).

In the past year, no moisture lesions have been reported in the trust. This is a substantial improvement on the previous year when over 100 moisture lesions were misdiagnosed and reported inappropriately. In addition, care homes are no longer reporting moisture lesions inappropriately. One-hundred-and-fifty people have since registered to receive the information and

### REFERENCES

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**Figure 2. Estimated percentage of wounds containing a biofilm according to symposium audience**

**Figure 3. Estimated percentage of wounds containing a biofilm according to survey of 25 experienced clinicians**

This symposium can be viewed at: <http://www.wounds-uk.com/videos-and-e-media/wound-management--improving-what-we-can-see-and-addressing-what-we-cant-see>

the trust is developing e-learning to raise awareness of the tool.

### DEVELOPING BIOFILM-BASED CARE STRATEGIES THAT ADDRESS WHAT WE CANNOT SEE

It is important to improve what we can see at the wound surface, but what about what we cannot see? If a high proportion of chronic wounds contain a biofilm, then biofilm management should also become part of the generalist practitioner’s remit. Indeed, of the symposium audience, 31% believed that 80% to 100% of chronic wounds contain a biofilm, and 40% believed the percentage is between 60% to 80% (Figure 2). To address this, biofilm-based wound care strategies — in other words, clinical pathways that manage or disrupt the biofilm, maintain that disruption and prevent reformation — must be utilised consistently.

A recent survey conducted by Activa Healthcare asked 25 experienced clinicians what percentage of wounds in their care they believed were being disrupted by a biofilm. Of the 25 clinicians surveyed, 76% (19) said that biofilms were disrupting the healing process in over 40% of wounds (Figure 3). This further reinforces the argument for biofilm-based wound care.

In an *in vitro* evaluation of Debrisoft and gauze in biofilm removal, mechanical disruption of a biofilm was achieved using Debrisoft and, to a certain degree, gauze, which removed some biofilm but not to the same degree (Westgate, 2012). The clinical evidence demonstrates that Debrisoft traps the debris and bacteria between the monofilament fibres, and clinicians comment that it is fast and efficient at removing debris, and a viable option for pain management. Comparatively, clinician experience shows that gauze very soon becomes saturated and can be painful for the patient.

In 2014, another *in vitro* evaluation using a glass plate with biofilm added, showed that Debrisoft, a debridement cloth and gauze all removed the biofilm to some degree, but Debrisoft demonstrated a sustained removal (debris retained within the monofilament fibres), while the other options quickly lost their efficacy (Wiegand et al, 2014). The authors concluded that in infected or critically colonised wounds, Debrisoft is a successful anti-biofilm strategy and is potentially superior to the debridement cloth and gauze.


### CONCLUSION

The symposium reiterated the importance of developing pressure ulcer pathways to support consistent wound management, manage resource implications of incorrect categorisation, and improve overall quality of care. It reflected that patients cannot always be seen in specialist clinics, and so highlighted the need to provide general nurses dealing with biofilms and pressure ulcer categorisation with adequate solutions to address these important aspects of wound care.

There has been a change in practice in recent years from an attitude of ‘do not touch the wound’ to a more proactive approach to wound bed management, especially in terms of biofilm-based care. When asked how confident they would feel as an individual to carry out effective biofilm-based management given the tools and knowledge afforded them, 56% of the symposium audience answered ‘very confident’ and 40% were ‘moderately confident’. Moreover, when asked if they

felt it was good practice to remove dressing residue, loose debris, and cream or yellow, non-tethered 'slough-like' material before categorising a pressure ulcer, 95% of symposium attendees answered that it was. The

supporting evidence presented here demonstrates that Debrisoft is a beneficial tool for improving accuracy of pressure ulcer categorisation and as a biofilm-based wound care strategy. WUK





**Staff Guide to the Classification, Assessment and Management of**

**Moisture Lesions and Pressure Ulcers**

Management		
Moisture Lesion	Pressure Ulcer	Combination
<ul style="list-style-type: none"> <li>Wash gently with a low pH soap or a skin cleanser</li> <li>Dry thoroughly by patting the skin</li> <li>Utilise barrier protection</li> <li>Use silicone medical adhesive remover if required</li> <li>Provide patient information</li> </ul>	<p>Think <b>SKINS:</b>                      Skin inspection                      Keep moving                      Incontinence                      Nutrition (food, hydration)                      Surface (bed, chair)</p>	<ul style="list-style-type: none"> <li>Bring the two management plans Together</li> <li>Focus on pressure and moisture management</li> </ul>
Reporting		
Moisture Lesion	Pressure Ulcer	Combination
<ul style="list-style-type: none"> <li>Not to be reported as a Serious Incident</li> <li>Does not require a Root Cause Analysis</li> <li>Refer for Specialist Tissue Viability /Continence Team if advice is required</li> </ul>	<ul style="list-style-type: none"> <li>Report all category 2 pressure ulcers as an Incident, and all category 3 and 4 pressure ulcers as a Serious Incident on the Trust reporting system (Ulysees)</li> <li>The use of Debrisoft® to assist with categorisation</li> <li>Refer all category 3 and 4 pressure ulcers to Tissue Viability</li> </ul>	<ul style="list-style-type: none"> <li>Report all combination wounds as pressure ulcers</li> </ul>

**Combination**

- A moisture lesion and a pressure ulcer may exist in the same area
- Where incontinence associated dermatitis/moisture lesions are accompanied by pressure, this must be reported as a pressure ulcer
- The two areas of moisture and pressure need to be addressed as part of their care plan

This 'Moisture Lesion or Pressure Ulcer?' tool is the work of the Worcester Tissue Viability teams, presented by Jackie Stephen-Haynes at EWMA 2015, London






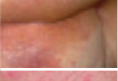

Incontinence Associated Dermatitis (IAD) (Moisture Lesions)	Tick box if present	Signs and Symptoms	Tick box if present	Pressure Ulcer	
Moisture must be present (e.g. shiny, wet skin caused by urinary incontinence or diarrhoea)	<input type="checkbox"/>	Cause	<input type="checkbox"/>	Pressure and/or shear friction/moisture present	
Natal cleft/Inner gluteal/buttocks/any skin fold IAD may occur over a bony prominence. (If this appears to be the case, exclude pressure shear and friction prior to diagnosis)	<input type="checkbox"/>	Location	<input type="checkbox"/>	Over a bony prominence or aligned with causative pressure	
Mirror image and linear in shape (splits in skin) Diffuse, in several superficial spots	<input type="checkbox"/>	Shape	<input type="checkbox"/>	Takes the appearance of the causative pressure Limited to one spot or specific area	
Superficial	<input type="checkbox"/>	Depth	<input type="checkbox"/>	Superficial or deep	
No necrosis	<input type="checkbox"/>	Necrosis	<input type="checkbox"/>	A black necrotic scab on a bony prominence	
Diffuse or irregular edges	<input type="checkbox"/>	Edges	<input type="checkbox"/>	Distinct edges	
Non uniform redness Blanchable or non-blanchable erythema Pink or white surrounding skin due to maceration	<input type="checkbox"/>	Colour	<input type="checkbox"/>	Uniform redness If redness is non-blanchable, this indicates damage to the capillaries	
Moisture damage will improve rapidly (e.g. 48-72 hrs). Pressure Ulcers will improve more slowly (e.g. usually longer than 7 days). If the area occurs over a bony prominence it is more likely to be a Pressure Ulcer.					

Figure 4. Moisture or Pressure Tool (MOPT)