

# WHAT DRESSING, WHERE?

This article explores the importance of individualised wound care and the reasons it is not possible to offer a simple “what dressing, where?” recipe that fits all. In fact, of all the various aspects of care that clinicians have to deliver to patients, wound care is one of the most complex — and clear protocols are lacking for a number of reasons. These reasons are discussed here and further illustrated with a case study.

*“The plan of care to follow is clear [for most conditions], and most Trusts will have this outlined in a locally developed policy. Not so for wound care.”*

The expectation of healthcare professionals attending tissue viability study days is often to find out which dressing should be applied to which wound. They are inevitably disappointed. In fact, wound care is one of the few clinical specialisms that does not have strict protocols of care. For example, within infection control and prevention, if a patient develops *Clostridium difficile*, the plan of care to follow is clear, and most Trusts will have a locally developed policy outlining this. Not so for wound care. There are a number of reasons for this.

First, patients with complex wounds have a number of comorbidities that affect wound healing — diabetes and peripheral vascular disease, to name two. These comorbidities cannot be ignored; blood glucose has to be kept within a specific range; blood flow to the lower limb needs to be restored, if possible. If these issues are not normalised to the best status possible, the wound will prove difficult to heal.

Second, wound healing is a continuum that ends (hopefully) with the wound’s having healed. Wound

healing textbooks describe three to five phases of wound healing, depending on the text (Mayers, 2008; Bryant and Nix, 2011; Hess, 2012). For argument’s sake, we will agree that wound healing has three stages: haemostasis, inflammation and proliferation.

Imagine this to be the scene of a car crash: haemostasis is the phase in which emergency services arrive and stabilise the wounded. Wound bleeding is stopped, a clot is formed. During inflammation, white cells take over from the emergency services and start cleaning up the mess. The proliferative phase is when the damage is repaired, the wound closed and the period of maturation commences. (A good article on the stages of wound healing is Timmons [2006]; a good animation is: [https://www.youtube.com/watch?v=6qU-0ETo5\\_s](https://www.youtube.com/watch?v=6qU-0ETo5_s)) This framework assumes that a wound is a straightforward cut or injury that the body can heal. Unfortunately, this is rarely the case for most wounds that require dressings.

In pressure ulcer care, the wound is caused by ischaemia or death of tissue

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due to a bone's pressing against a hard surface, such as a bed or a chair. The dead tissue (necrotic tissue) will need to be removed before wound healing can occur. At this stage of the continuum, a dressing should be selected to aid wound debridement: hydrogels, honeys or hydrocolloids are all dressings that will help with this process.

Once the wound bed is clean, dressings should be selected depending on the wound's shape or depth. Dressings such as hydrofibers and alginates are for filling a wound with depth; foam dressings are for wounds that have no depth or are used to cover the wound fillers. (A relevant article on the dressings' categories available is Morris [2006]). Dressing selection depends on an assessment of the wound bed, and a comprehensive wound care protocol that takes all aspects into consideration would be too long and complicated for this purpose.

Third, the lack of strict protocols is due to the fact that there is limited quality evidence available in wound care. Pagnamenta (2014) explain that, though dressings are CE-marked medical devices, they are not subject to the same requirements as drugs; manufacturers do not have to provide evidence of effectiveness for their dressings in the way that drug companies do. Furthermore, research on drugs typically requires randomised, controlled trials. This method has been difficult to apply to dressing evaluations.

There are aspects of health care that call for measurement and quantification, such as the numbers of cases of a condition in the UK, or the costs of setting up and maintaining clinical services (Glogowska, 2011), or if venous leg ulcers heal better with or without compression (Cullum et al, 2008). In the case of leg ulcers, for example, patients have their own likes

and dislikes, and wound healing is a collaborative relationship between clinicians and patients to aid concordance with treatment, rather a scenario focused on which dressing is applied to the ulcers. It is the balance of this relationship that will ultimately support wound healing, rather than a quick fix on what dressing, where.

### **Keeping abreast of developments**

The new *Code of Conduct for Nursing and Midwifery* (Nursing and Midwifery Council, 2015) states that we must "provide treatment [...] if you have enough knowledge of that person's health and are satisfied that the treatment serve that person's health needs." Treatment includes selecting and applying dressings. Training and updating oneself in the different types of dressings available is essential.

Most Trusts have developed wound formularies that assist clinicians with dressing selection from a list of products. While appearing to limit clinicians' autonomy in selecting the dressings they believe to be the most effective, this shortened list lets clinicians gain a deeper understanding of how these dressings perform in clinical practice.

Wound formularies are a key resource offering clear guidance on what each product does, how it is applied, how often the dressing should be changed and so on. Product training is then targeted to each ward/community setting. For example, a vascular ward will be used to caring for those with limited blood supply, and a debriding agent will perform differently in their patient population than on those hospitalised with respiratory problems. In the community, staff will be able to observe the patient in his or her own environment and understand what may cause a dressing to perform well or

otherwise. For example, the same debriding agent may not perform as expected because the patient continues to apply pressure to the wound.

Case studies can be a useful way for clinicians to share experiences with colleagues.

### **CASE STUDY**

Mr S, a 65-year-old morbidly obese man with peripheral vascular disease, had his left leg amputated above the knee. He presented to the vascular department with two opposing wounds: one at the bottom of the apron of his abdomen, the other at the top of his left thigh (*Figure 1*). These wounds had been gradually deteriorating for a number of weeks before admission.

Due to his obesity and amputation, Mr S's main challenges were mobilisation and cleaning himself underneath the apron of his abdomen. He did not wear a prosthesis and spent his time sitting, either in a wheelchair or in bed.

The aetiology of this ulcer was pressure with an element of shearing forces, from his abdominal apron onto the upper thigh, exacerbated by trapped moisture (e.g. sweat). This is what is known as a combined lesion. Thus, both elements — pressure/shear and moisture — needed to be addressed to facilitate wound healing.

### **Care plan**

It was decided that Mr S would be admitted as an inpatient and nursed in bed. It was requested that he sit in his wheelchair only for meals. Confining a patient to bed is much easier to achieve in hospital than in the patient's home. The electrically controlled bed — in conjunction with a with a static mattress, hybrid foam and air — allowed for positioning of his body slightly to the right so that his abdominal apron did not rest solely on his thigh and wounds.

The moisture level in Mr S's groin was reduced with the use of a superabsorbent dressing. The superabsorbent dressing was placed in Mr S's groin wound with no secondary dressing, as his abdominal apron kept it in place.

While a superabsorbent was selected in this case, a hydrofibre or an alginate would have been adequate alternatives. Any dressings that made the wound bed wetter (e.g. hydrogels, honeys) would not have been an appropriate selection. These dressing types had been used unsuccessfully before Mr S's admission to hospital.

### Evaluation

The wound became less macerated, and the slough visible in the wound bed started to lift by itself over a 10-day period.

Once the slough had lifted, a healthier wound bed was visible. Granulation had taken place to such an extent that it was appropriate to switch the dressing to a bordered foam. This dressing allowed Mr S improved mobility and rehabilitation services.

A new care plan that included longer periods of time spent in his wheelchair was agreed.

After 3 weeks from admission and revision of the dressing plan, Mr S's wound had epithelialised and, in preparation for discharge, Mr S and his carer were provided with information on the principles of skin care, including on the use of emollients and silicone barrier film. With the assistance of the district nursing team, Mr S's wound healed.

In the author's opinion, this case study demonstrates that the assessment and careful care planing for the specific needs of the patient were more important than only the assessment of the wound.

### Conclusion

This article has explained some of the reasons for the inability to offer a strict set of protocols for wound care, namely "what dressings, where". Patients are individuals who come for treatment with a specific set of comorbidities and needs that may slow the process of wound healing. Wounds heal on a continuum rather

than as a set event, thus it is likely that a sequence of dressings will be required during wound healing. Wound assessment and patient assessment are complemented by understanding what each product can offer along that continuum.

The case study presented here is a demonstration that one of the most important rules in wound care is to understand each patient's comorbidities and activities of living. **WE**

### References

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Figure 1. Mr S's wounds at presentation to the vascular department.