Have we reached the point of oversaturation in dressings choice?

KEY WORDS
- Care costs
- Dressing choice
- Evidence-based practice
- Patient care

As the cost of wound care mounts, are we now in a position where we should consider whether every clinician needs access to every dressing? The author suggests that a very large percentage of the wounds seen on a daily basis could be managed with a small number of dressings, while those requiring more advanced care should see a specialist practitioner. This would provide a structure for a good early referral system pathways where wound care specialists could make better informed decisions about what more difficult wounds need. This is not about rationing, but rather is about evidence-based practice and improving patient care.

JACQUI FLETCHER
Clinical Editor, *Wounds UK*, Fellow, NICE and Clinical Strategy Director, Welsh Wound Innovation Centre, Cardiff

The total cost of wound care internationally is estimated to be more than $70 billion annually (Harding and Queen, 2012). In England, spending on prescribed dressings is approximately £114 million per year (NHS Business Services Authority (2014), while even more is spent through other delivery routes and suppliers such as NHS Supplies and ONPOS. While the work of Harding and Queen (2012) and Drew et al (2007) clearly identifies that the cost of dressing materials is not the largest proportion of spending on wound care, dressings still make up about 15% of the cost — a significant expense.

In order to deliver cost-effective care, clinicians must have a good knowledge and understanding of the wound healing process, good assessment skills and the ability to formulate clear, patient-focused objectives, plus have access to the appropriate resources to implement those objectives in a timely manner. They must also address broader issues relating to patients' overall health and the care environment.

Provision of services, staffing levels and knowledge are all important strategic issues being addressed with varying success by the NHS. Ousey (2015) summarises how the upcoming general election has focused the minds of all political parties on how they might improve the NHS within a tight framework of cost containment and efficiencies.

There is also a point to be addressed about the availability and use (particularly the misuse) of wound care products. Many clinicians spend much of their working time fighting to have products made available in their locality. This may be products such as topical negative pressure wound therapy — where the spend per unit is perceived to be high, yet the clinical evidence shows massive patient benefits (Leaper, 2009) — or a newer version of an existing product with perceived patient benefits or potential to make cost efficiencies.

POOR CLINICAL PRACTICE

While there appears to be a struggle to access some resources, there are also issues about what is routinely available and what is happening in practice.

There is a body of research suggesting that skills of assessment and documentation of wound care remain poor, despite the availability of many resources to support improving knowledge and practice (Gartlan et al, 2010; Gillespie et al, 2014; Mahoney, 2014; Oseni and Adejumo, 2014).

Several authors have suggested that poor practice occurs particularly when lone workers manage patients (O'Brien et al, 2002; Drew et al, 2007; Gillespie et al, 2014). This is because they frequently do not:

- Reach a diagnosis
- Set an objective for treatment
- Review or evaluate the treatment provided
- Refer for specialist advice soon enough.

"A single product can be described in many different ways and therefore appear in several categories."

Adderley and Thompson (2015) researched practice in relation to the care of patients with leg ulceration and identified that clinical judgements and decisions made by nurses are complex and uncertain, and there is considerable variability in judgement. This related primarily to the complexity of choice and the uncertainty present in many clinical encounters.

Models such as the Leg Club where clinicians work closely together have reported improved outcomes with nurses suggesting that in part this relates to the ability to obtain support from colleagues working in the same room, with clear distinctions being drawn between competence and confidence in their own practice when faced with complex or challenging situations.

Research such as that by Price et al (2008) also identifies that clinicians frequently err on the side of caution and in doing so may make poor treatment choices. In their international survey of wound care practice, they identified that patients had as many as seven different dressings and compression systems in use at one time.

More recently, a review of use of antimicrobial products in a community setting in the UK by Mahoney (2014) identified:

- Treatment commenced without documentation of rationale in 44.3% of patients
- For 46% of patients being treated with an antimicrobial the care plan did not match the care being delivered
- Over half (52%) of patients had antimicrobials used for 6 weeks or longer (the recommended period of use is 2 weeks.)

PRODUCT SELECTION

Veremeulen et al (2008) suggest that there are different priorities when selecting products. While doctors, nurses and patients all prioritise similar attributes of an ideal product (pain during dressing changes, duration of hospitalisation, and wound healing time being ranked highest), they have differing priorities when asked what they would be prepared to pay extra for, with doctors preferring to spend more money on shorter hospitalisation, nurses on pain reduction, and patients on faster wound healing.

It seems that a huge amount of time and effort is spent on selecting and applying dressings for patients — but is this necessary and does it achieve the patient outcomes we would hope for?

Sood et al (2104) suggest that there is an overwhelming number of wound dressings available. Selecting and using a wound management product effectively is complex, and this may be partially a result of the myriad options which can be incredibly confusing.

It is wrong to hark back to earlier times and imagine all was well, but only about 20 years ago an interested person could list every dressing available in the UK as there were only 10 or 12 of them. Therefore it was easy to know what they did and — more importantly — how they did it.

Now there is a whole book dedicated to wound care products (Journal of Wound Care [JWC], 2015) — which is revised annually to keep up to date — and the *BNF* has a dedicated section covering about 24 pages. How can any clinician be expected to have a complete understanding of all these products?

While the fundamental aspects of appropriate selection remain, it would be impossible to have a working knowledge of all the products available to determine the best and most appropriate way to care for the patient and the wound.

CATEGORISING PRODUCTS

To complicate matters further, a single product can be described in many different ways and therefore appear in several categories (*Box 1*).

How a dressing is described or categorised may relate to what it is made from (eg carboxymethylcellulose, spun into a hydrofiber),

Box 1. Categories can be confusing.

Taking a popular product like Aquacel Ag as an example, this dressing can be described as:

- A hydrofiber (a description of the composite material)
- A hydrocolloid (it is primarily sodium carboxymethylcellulose)
- A gelling product (description of its mode of action)
- An absorber (the category of product in JWC, 2015)
- A protease modulator (also in this category in JWC, 2015)
- An antimicrobial (also in this category in JWC, 2015)
- A wound contact layer (also in this category JWC, 2015)
- It is also frequently confused with an alginate because it looks like one – but it is not one!

This is simply one example. Many modern dressings are just as complex to categorise.

Table 1. Contact layers.

Brand	Cellulose	Silicone	Polyester mesh	Knitted viscose	Gauze	Polyamide	Rayon	Hydrocolloid particles	Nylon	Petroleum jelly
Adaptic	√	√								
Askina Silnet		√								
Atrauman			√							
Kerlix					√					
Mepitel		√				√				
N-A				√			√			
Physiotulle			√					√		√
Silflex		√								
Tegaderm Contact									√	
Tricotex				√						

what it does (absorbs, kills microbes, soaks up proteases) and how it works (gels, forms intimate contact).

A single product may also have many variants, which may also affect its categorisation, such as:

- Non-adhesive or adhesive
- Special adhesive, eg silicone
- Range of absorbencies
- Antimicrobial or non-antimicrobial
- Flat
- Cavity fillers
- Shaped to fit round tubing such as tracheostomy.

Many products are placed in the same category even though they are made from very different materials (*Table 1*), and many have vague or poorly understood definitions such as none adherent, low adherent, atraumatic (*Table 2*).

It seems we have oversimplified some terms, and products within key categories have proliferated beyond reason.

For example, there is a huge range of products which may be classified as foam, with 26 pages of foam dressings — 102 different types — in the JWC handbook (2015). Foams can be:

- Made from polyurethene or silicone
- A single layer or multilayer
- Adhesive or non adhesive
- Flat, amorphous or cavity filler
- Many shapes.

This can be seen as a great benefit and ensure there is a variant available for almost every wound (as demonstrated by the dominance of foams in the wound care market) or it can be seen as a gross overcomplication of a product in an attempt to maintain market share. One brand of foam has 12 variants listed — plus multiple sizes in each variant.

Does this really help clinicians make informed decisions or are the subtle nuances and large overlap between variants of a product just confusing?

Many of the products referred to as foam are not actually foams. Sussman (2010) breaks these products down into two true foams (soft, open-cell hydrophobic and hydrophilic non-adherent dressings that have single or multiple layers) and pseudo foams or hydroactive polymers. The latter two have a mode of action which differs from real foams. Fluid is drawn into the structure of the

Table 2. Definitions of wound dressings (Meuleneire and Rücknagel, 2013).

Adherent	Products that adhere to any type of drying wound (eg simple dressing pads or cotton gauze
Low-adherent	Products with a wound contact surface that is designed to reduce adherence (eg absorbent wound dressing)
Non-adherent	Products that maintain a moist gel layer over the wound. These dressings are not expected to adhere provided that they are not allowed to dry out (eg alginates, hydrocolloids, hydrogels and Hydrofiber®)
Atraumatic	Products that do not cause trauma either to the wound or the periwound on removal (eg soft silicone dressings)

polymer, which expands, trapping the exudate within the dressing.

Some of these products may absorb 20 to 30 times their weight in exudate. However, it is unlikely that an average clinician would know the difference or what difference it made to their in-use characteristics.

DISCISSION

It feels rather like we have continued to add to what we have without reviewing what is already there. Could we eliminate some of the older products? Do all of the new dressings really offer distinct improvements? If it was our own money, from our own personal budget, would we pay for some of the items we have available to us?

Organisations' formularies are meant to reduce choice and help clinicians make day-to-day decisions, but remain overly large and complex. Is it reasonable to expect the right decision to be made by newly qualified nurses or nurses working in an area where they may not see many wounds?

It is important to have choice and competition, but are we reaching a point of oversaturation? As many systems try to improve the care they deliver, would it not be better to really focus on what is needed?

A very large percentage of the wounds managed on a daily basis could be managed with a handful of dressings. Those which could not should probably be seen by a wound care specialist.

In the absence of readily accessible diagnostics is it fair to expect a ward or community nurse to be able to determine that a wound has a biofilm, or to identify if the issue is raised proteolytic activity?

If we reduced the number of dressings that "average" (in no way meant as a derogatory term) clinicians use down to a handful (*Box 2*) could we really focus on getting the use of that small group of products right, making sure good assessment is done, the right product chosen and appropriate evaluation carried out?

This would then lend itself far more reasonably to a good early referral system into more specialist pathways where higher skilled clinicians could make better informed decisions about what patients need and why.

This is not about rationing (although there would most definitely be significant cost benefits associated with reducing the range of products available), but it is about evidence-based practice and about improving patient care. It is about caring for patients following a principle of minimal intervention — do only what you need to do. WUK

Box 2. Suggested range of products.

Suggested range of products (allowing different sizes and shapes and an adhesive and non-adhesive version of each):

- A product that absorbs
- A product that rehydrates
- A product that offers simple protection
- A first-line antimicrobial.

"A very large percentage of the wounds managed on a daily basis could be managed with a handful of dressings."

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