Vox pops: what is the major innovation in wound care since you started your career?

We asked five experts in the field of wound care to describe the most important innovation that they have witnessed in their practice since beginning their career.

“Choosing the single most important major innovation in wound care during my career is not that easy! To me, the biggest development in wound management has been the transformation of the nursing role, however, you could debate whether or not this is an ‘innovation’. When I was initially involved in wound care, nurses had a voice in terms of ‘which dressing should be applied?’ However, I never dreamt that the role of a nurse would have advanced to the level witnessed today. Back in the day, we thought ‘extending our scope of practice’ involved taking bloods and administrating IV antibiotics. Who would have guessed that, one day, nurses would be diagnosing underlying pathophysiology causing wounds or hindering wound healing, requesting radiological imaging, including CT scans and angiograms, and performing wound biopsy and minor amputations — certainly not me.

I suppose when I think about product innovation, for me, the advances in compression systems for the management of leg ulceration, are the ones that have changed my clinical practice the most; especially the introduction of leg ulcer hosiery kits. The ability to provide treatment dose pressure in stockings has revolutionised the way we practice. The benefits they bring are numerous: having compression profiles that are not dependent on practitioner skills; the ability for patients to self-care; and the advantages the systems deliver in terms of caseload management. I would not like to go back to a time when this option was not at my disposal. The changes in compression systems continue with the new knowledge relating to progressive, rather than gradual, compression and the use of smart materials and technologies, I truly believe the innovations in this field are set to continue and deliver even more innovations in the years to come.”

LEANNE ATKIN
Lecturer Practitioner, The University of Huddersfield, Huddersfield
Negative pressure wound therapy (NPWT) without doubt — all day everyday. It continues to deliver outcomes for patients with challenging wounds and is growing its indications, while our understanding of the mechanisms of action and the benefits this brings to the wound bed and periwound increases. The introduction of smaller devices and different interfaces has expanded clinical applications. With correct assessment and adherence to inclusion/exclusion criteria and the precautions suggested by the manufacturers, clinicians are saving lives and limbs and turning chronic wounds into acute wounds. The caveat, as with all aspects of wound care of course, is that the patient needs holistic assessment that enables differential diagnosis prior to and during application. For example, application alone on a recalcitrant venous leg ulcer will not result in healing unless the NPWT is accompanied by compression. Another important factor to consider with NPWT is the importance of good wound bed preparation to optimise outcomes (i.e. treatment of underlying infection and the debridement of devitalised tissue) is a key component of good care. Assuming this, the modality can deliver double-digit volume reduction week on week. Conclusive evidence is lacking in relation to the optimum time to start and stop therapy; however, in my view, it is a go-to product for surgical dehiscence and the prevention of surgical site infection in high-risk surgical incisions. NPWT is not for every patient. It is essential that clinicians assess the impact any therapy will have on the daily activity of the patient in relation to their lifestyle and the ability to carry and manage the device.

JEANETTE MILNE

“A major innovation for me since I started my career in tissue viability? There have been a few I can think of so to whittle it down to just one makes me think even harder. I would say one of my euphoria moments was when biofilms were actually recognised as a potential delay of wound healing. We all knew that shiny, fibrinous wounds were often hard to progress on to healing and often thought maybe there is something there that we can't actually see. And then it was agreed that you can't always see the biofilm and we were right in thinking that, actually, you can't always see the level of bioburden. So it was debridement, debridement, debridement from then on. No more “let's leave it alone and maybe wipe it with a little gauze and saline”, but more “let's get out that curette and see some robust tissue at that wound bed” — how fantastic is that? It has meant that with our initial thoughts supported, we can now get those stubborn wounds stimulated and debrided in the knowledge we are not just acting on instinct, but also with evidence. I know there needs to be much more investigation and study of these little biofilm devils, but I do appreciate the progress that has been made in recognising their impact on wound healing. I'm sure that with time there will be even more innovation in the field of eradicating the little biofilm blighters.”

MARIE WILSON
Wound care is such an exciting specialty to work in and there are so many fantastic innovations that have changed the face of wound care over my career — it is indeed very difficult to choose one single innovation! One recent innovation that stands out for me is the Dopplex ATP Ankle and Toe Pressure Kit (Huntleigh). As a community tissue viability nurse, the handheld Doppler is part of my every day assessment, both in the clinic setting and within the patient’s home. For larger-limbed patients or patients with lymphoedema and oedema, an ankle brachial pressure index (ABPI) measurement is more challenging and toe brachial pressure index (TBPI) measurement may be necessary.

The vascular assist machine that was traditionally used in our practice was effective, but quite difficult to transport around into a patient’s home, due to its size and shape. The next generation handheld dopplers incorporated interchangeable probes and accessories in a kit, which can measure both ankle or toe pressures. The handheld doppler kits are very portable and allow efficient, rapid ABPI and TBPI measurement within the clinic and home setting. There is also a function that allows preset stored vascular sounds (monophasic/biphasic and triphasic) to be played, which is invaluable when teaching students/nurses about vascular sounds. The product is amazingly simple to use and has made vascular assessments much easier, especially within the patient’s home. I do love this product!

KIRSTY MAHONEY

From my experience, topical negative pressure (TNP) has been the most innovative technology in the field of wound healing. TNP was first investigated by Morykwas et al in 1997. They postulated that it might have application in chronic wounds, but had no animal model available on which to mimic this state. They produced acute wounds on pigs and attempted to extrapolate their findings to what might reasonably be expected in chronic wounds.

I have been working in tissue viability for the last 15 years. When I first started, TNP was just being introduced in the UK and the Newcastle upon Tyne Hospitals NHS foundation Trust was one of the first sites to use this therapy. The very first patient who was treated with TNP was a patient with a large ischial pressure ulcer and the wound healed so much quicker than with the topical dressings we used to use. We quickly realised that we had a really innovative product on our hands. Nonetheless, far from being the panacea for all wounds, each speciality has had to learn where it would fit in their patient group.

As applications for TNP increase, new questions were posed and answered as to how best to use it.

Fast forward a few years, and over 300 patients were treated with the therapy in 2006, 400 in 2007, and this reached 500 by 2008. With multiple applications in a variety of wounds, especially those wounds that had proven difficult to heal, such as pressure ulcers, amputation sites, surgical wounds, such as sternotomy wounds and abdominal wounds and skin grafts, but also used in the open abdomen to maintain a closed environment until full closure can be achieved.

New applications for the therapy are now used, such as instillation where fluid is instilled intermittently and then suctioned. Postoperative TNP is used on closed incisional wounds and we now use dressings that provide TNP with manual pumps. Lately, disposable units have become available, which may facilitate the patient’s journey from hospital to home and we are currently exploring some of these new medical devices.

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