

Using advanced wound-care products to increase positive outcomes

A report from a satellite symposium held on the occasion of the 9th Annual Conference and Exhibition of *The Diabetic Foot Journal*. The meeting took place on 29 September 2008 at The Ibis Hotel, Earls Court, London, and was sponsored by Smith & Nephew

Introduction

The purpose of the symposium was to highlight the use of advanced wound-care products, including the Versajet debridement system, in the treatment of diabetic foot ulcers. Further, the symposium addressed how healthcare professionals can gain funding for advanced wound-care programmes. The chair of the meeting was Michelle Spruce, Head of Postgraduate Education within the School of Health Sciences, University of Southampton, and the speakers were Paul Chadwick (Principal Podiatrist, Salford PCT), Colette Hamilton (Managing Director, ATP Consulting) and Graham Bowen (Clinical Service Manager, Portsmouth PCT). This is a report from the symposium.

With the prevalence of diabetes increasing, likewise the challenge of treating the associated complications of the foot intensifies. Problems associated with the foot are the largest single reason for hospital admissions among those in the UK with diabetes, with 5–15% of people with the condition developing a diabetic foot ulcer during their life (Booth and Young, 2000; Boulton, 2005; International Working Group on the Diabetic Foot, 2007). Diabetic ulceration is strongly associated with amputation, and amputation of a lower-limb is itself associated with a 2-year survival rate of 50% (Ragnarson and Apelqvist, 2004).

Beyond these statistics, Michelle Spruce, symposium chair, reminded us of Lord Darzi's maxim to add life to years, rather than years to life. With this in mind, the speakers presented perspectives on increasing positive outcomes using

advanced wound-care products. They looked both at the positive clinical outcomes achievable, and at how healthcare professionals can secure funding for investment in advanced wound-care programmes.

Dynamic care pathway

In the first talk, Paul Chadwick turned the delegates' attention to the "Three Ps" integral to successful and lasting wound healing: *Preparation* of the wound, *Promotion* of healing and *Protection* of the healing that has been achieved.

In the preparation phase, Paul stressed the importance of beginning the healing process with an acute wound, which, in the case of older, necrotic, sloughy wounds, means creating an acute wound through debridement. The traditional methods of debridement, sharp and biological, are now joined by the Versajet (Smith & Nephew, Hull) debridement system, a technology that utilises the drop in pressure

that occurs around a rapidly flowing fluid (the Venturi effect), to remove debris and contaminants from suitable wound sites, leaving a clean, acute wound bed (Hsu and Breuing, 2004).

Having achieved an acute wound environment, the task of promoting healing (the second "P") begins. As an important avenue in the promotion of healing, Paul spoke about negative pressure wound therapy (NPWT). NPWT avoids excessive fluid accumulation in the wound, thus avoiding the delays in healing that can be associated with maceration. It has been suggested that NPWT also enhances blood flow to the treated area, and decreases local tissue oedema (Campbell et al, 2008). Paul stressed that contra-indications need to be heeded; use of NPWT is not suitable in wounds that have not achieved haemostasis, or in cases involving osteomyelitis or fistulas.

Finally, the protection of the healing that has been

achieved (the third "P") is essential to avoid wound recurrence. Successful healing is contingent on bringing together all "Three Ps".

The case of Mr Y, a success story of Paul's dynamic care pathway, was presented and is summarised here in *Box 1*. After admission with an infected, neuroischaemic foot ulcer, Mr Y refused a below-knee amputation. With the use of antibiotics, Versajet debridement, NPWT and careful management, healing of Mr Y's ulcer was achieved.

Funding advanced wound care

The second and third speakers discussed the economics associated with providing advanced wound care. In introducing the speakers, the chair spoke of "fiscal outcomes being picked up on rather than the true clinical outcomes", a statement that clearly resonated with the experience of many attending clinicians.

Colette Hamilton discussed the Department of Health's Payment by Results (PbR) tariff system, and suggested that healthcare professionals use the system to help demonstrate the value of advanced wound care and to build robust cases for investment in its provision.

Under the PbR system, payments given to acute-

care hospitals are linked to activity, and adjusted for casemix. A Healthcare Resource Group (HRG) code is generated from a patient's primary medical diagnosis, co-morbidities and inpatient complications, the surgical procedure, patient age and length of stay. HRG inpatient tariffs cover the spell of care, rather than the costs of an admission, procedure or product, and are inclusive of all hospital costs. An additional daily tariff is generated if a patient's stay exceeds a nationally specified length (known as the trim point).

Colette's presentation of the way in which HRG tariffs are awarded revealed avenues for maximising funding, thereby making money available for investment in services and equipment. These included:

- HRG tariffs are setting independent; a spell of care will attract the same tariff regardless of the patient being admitted as an inpatient or day case.
- PCTs are not obliged to pay the tariff if a person is readmitted under the same HRG category within 14 days of their discharge, incentivizing high-quality, lasting resolutions for patients.
- Planned admissions cost the PCT less than emergency admissions. PCTs are incentivized to deliver solutions that will avoid unnecessary admission and to ensure that patients requiring specialised procedures, such as surgical debridement, can access this in a planned way.
- Reductions in the length

of hospital stay are incentivized. For stays within the trim point, the hospital benefits financially by reducing average length of stay. Since the PCT pays an excess stay tariff for additional days beyond the trim point, the PCT is incentivized to manage pathways of care more effectively through the commissioning process.

- Given that the HRG tariffs are irrespective of the number of treatments or types of dressings used, the focus switches from the use of low-cost products with poorer outcomes (or that require multiple uses), to products that have proven to be quick and effective for wound healing.

Overall, the HRG system changes the focus in PCTs and hospitals from product price to cost effectiveness of a care pathway in its totality.

In this vein, Graham Bowen looked at how healthcare professionals can engage with commissioners and PCTs to make a business case for funding advanced wound-care programmes. Graham acknowledged that getting to grips with healthcare economics will be a new experience for many clinicians, but stressed that learning to build business cases is essential to achieving the funding necessary to address the increasing burden of foot ulceration and the capacity of the podiatric workforce to meet that demand.

In building cases for funding, Graham suggested that healthcare professionals need to employ the language

and methods more familiar to business. One quantifiable, and often convincing, method is to employ clinical examples or statistics to show the viability, or subsequently the success, of a proposed business case. These "key performance indicators" can include: a reduction in costs alongside an increase in activity or capacity; avoidance of admissions; a move from non-elective to planned admissions; early discharge; improved wound healing; and successful interdisciplinary teamwork.

He concluded that persistent pursuit of funding, and engaging and petitioning commissioners, is certainly worth the work; the demand for better outcomes in advanced wound care is real. ■

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Campbell P, Smith J, Smith G (2008) Retrospective evaluation of a gauze-based wound filler in negative pressure wound therapy (VISTA). Available at : http://global.smith-nephew.com/us/NPWT_DWNL_MATERIAL_20302.htm (accessed 25.11.08)

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Ragnarson TG, Apelqvist J (2004) Health-economic consequences of diabetic foot lesions. *Clinical Infectious Diseases* 39(Supp 2): 132-9

Box. 1 Case study: Mr Y.

Shortly after moving to Salford, Mr Y, a 71-year-old man with long-standing type 2 diabetes, cardiac failure, decreased renal function and previous hallux and 2nd-toe amputations, was admitted to hospital with an infected, neuroischaemic foot ulcer. Mr Y was offered, and refused, a below-knee amputation. All metatarsals and toes were amputated, gentamycin beads inserted and intravenous meropenem commenced. Mr Y was surgically debrided following further necrosis. Versajet (Smith & Nephew, Hull) debridement was undertaken 2 weeks after surgical debridement (Figures 1-2); the beads were removed and a negative pressure wound therapy system (VISTA; Smith & Nephew, Hull), draining through Mr Y's cast to a back pack to retain mobility, was applied 2.5 weeks after debridement. Four-weeks post-VISTA application, Mr Y was discharged with the wound close to fully healed.



Figure 1. Mr Y's ulcer just prior to Versajet debridement.



Figure 2. Mr Y's ulcer post-Versajet debridement. The wound is again acute.