The hidden costs of wound care

The management of chronic and acute wounds involves professionals from multiple disciplines across acute and community care settings. Paul Trueman of Smith & Nephew explains why this disparate provision of wound care means that the financial burden is often overlooked or poorly understood by healthcare planners.

The financial cost of managing an uncomplicated wound is typically relatively modest, comprising staff time and wound dressings. However, the cost increases significantly where sub-optimal management results in an adverse outcome such as infection or delayed healing, which increases the risk of hospitalisation or surgical intervention.

The cost of managing a relatively uncomplicated (category 1) pressure ulcer has been estimated at £1,200, but this increases to over £14,000 for a more complicated (category 4) condition. This highlights the importance of prevention, monitoring and early intervention to avoid wounds progressing to more complicated states, and increasing the patient and economic burden. A study published in 2008 in Nursing Times estimated that the management of chronic wounds alone accounts for approximately 3% of all health service expenditure in the UK.

Individuals with a wound also experience a significant human cost. Wounds can cause significant morbidity, creating pain, reduced mobility and anxiety. For many individuals, a wound can have a major impact on their well-being and impair their ability to conduct daily activities such as bathing or going to work. This may be made worse by the stigma that is associated with having an open wound, particularly when this might be visible or associated with odour.

Despite these significant human and economic costs, wound care remains a relatively low priority for most healthcare planners for two reasons. Firstly, wound care is a disparate discipline practiced across various specialities and settings, making professional leadership more challenging than in other disciplines such as oncology, cardiology and diabetology – and pushing it down the list when it comes to resource allocation decisions. Specialists, such as vascular surgeons or tissue viability nurses, provide leadership in the development of treatment protocols and the provision of care for complex wounds. However, these wounds account for a relatively small proportion of the total population and the majority of patients with a wound are managed by general nursing staff.

Secondly, monitoring the healthcare resources consumed by wound care is challenging. In acute care, the technologies used to manage wounds are often covered by general ‘supplies’ budgets, while much of the routine staff time involved (for example in managing dressings) is considered to be a general nursing duty and as such is poorly monitored. In home care and long-term care, chronic wounds such as diabetic foot ulcers and venous leg ulcers are often treated by general nurses as part of their ongoing care for a patient. Yet audits of community nurse activity estimate that around 50% of staff time is allocated for managing chronic wounds in the home care setting, a fact that is likely to be unrecognised by most healthcare managers.
Interventions to reduce the burden of wound care
A frustration among wound care professionals is that many of the adverse outcomes that account for the majority of expenditure in the field are avoidable through improved practice. Implementing best practice guidelines developed by professional bodies like the European Pressure Ulcer Advisory Panel (EPUAP), and ensuring that those involved in the provision of wound care are educated appropriately, could have a significant impact on the financial burden of wound care. To illustrate this, three examples are provided, which identify how prevention, improved management and infection control could help to reduce the financial burden of wound care.

Prevention of pressure ulcers
Pressure ulcers form as a result of continuous skin damage, which may occur due to a combination of pressure, friction, shear and moisture (EPUAP). They are especially problematic among hospitalised patients who are immobile, such as elderly patients who have undergone orthopaedic surgery, and also in long-term care settings. The cost of managing a pressure ulcer is significant, and when they occur in hospital settings, they can significantly extend the duration of hospitalisation. Management is a resource-intensive procedure that requires redistribution of pressure and regular dressing changes.

However, there is a significant body of evidence on interventions to reduce pressure ulcers, many of which can be incorporated into routine practice with modest levels of training and minimal disruption to current care pathways. Many of the most effective interventions can be introduced with little incremental investment. Monitoring patients for skin damage and ‘turning’ immobile patients is the basis of all pressure ulcer prevention, yet it is often poorly understood or adhered to in practice. In addition to this, a range of technological solutions are available to help prevent the occurrence of skin damage in patients at risk, ranging from relatively uncomplicated technologies such as dressings and dermal pads designed to distribute pressure more evenly, to more advanced technologies including pressure-relieving surfaces. These technologies have the potential to reduce the incidence of pressure ulcers and many have been shown to be highly cost-effective interventions that can reduce the total cost of care, often without large up-front investments.

Sub-optimal intervention in chronic wounds
The majority of chronic wound dressings seek to provide an optimal wound-healing environment to promote primary closure of a wound. In addition to this, there is an increased use of more active interventions, particularly negative pressure wound therapy (NPWT), which has been shown to improve wound-healing outcomes in a range of chronic and acute wound types.

In practice, the availability of many modern dressings remains limited, often due to concerns about their cost. As a result, many patients continue to be treated with traditional dressings such as gauze secured by tape. However, adopting dressings on the basis of cost can often be a false economy. Modern dressings have been designed to have improved exudate-handling abilities, meaning that the frequency of dressing changes and the associated nursing time can be dramatically reduced. Several studies have shown that the frequency of dressing changes can be reduced from daily to every 2–3 days, thereby reducing the number of dressings and nurse visits required.

Furthermore, modern dressings are intended to provide an optimal wound-healing environment which, when compared with gauze dressings, has been shown to lead to the closure of more wounds in a shorter time. While it may be tempting to choose dressings on the basis of cost, particularly when budgets are under pressure, doing so is likely to have a perverse effect on nursing time and hospitalisations.

Infection management
Surgical site infections occur as a result of bacterial colonisation of a surgical wound and are estimated to affect around 5% of patients who have a surgical procedure. Often, these can be managed relatively easily with topical antibiotics. However, in more extreme cases, these can result in significant morbidities; for example, mediastinitis following cardiac surgery or osteomyelitis. Such infections can result in extended hospital stays, re-hospitalisations and even repeat surgery.

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Paul Trueman
Paul Trueman is global vice-president of market access at Smith & Nephew Advanced Wound Management, with responsibility for health economics, reimbursement and market access. For the past 15 years, he has worked in the medical device, pharmaceutical and academic sectors, and has been involved in developing numerous health technology assessments and clinical guidelines.
Many of these infections can be easily prevented through a combination of pre-operative and peri-operative prophylactic measures, and improved post-operative management of the surgical site. Simple, uncomplicated anti-microbial and post-operative dressings that improve the visibility of the wound, while at the same time providing appropriate protection, have been shown to contribute to reductions in the incidence of surgical site infections. In many instances, these dressings are unavailable on the grounds of their cost relative to more traditional surgical dressings.

However, considered in context, these dressings typically account for a fraction of the total cost of a procedure or a potential complication. It seems perverse to jeopardise the success of a major surgical procedure costing thousands of pounds in staff time and theatre use by attempting to save a little money on dressings, yet this is precisely what happens in many cases.

Improving wound care efficiency and patient outcomes
Attempts to improve wound care efficiency tend to focus on rationalisation of formularies to reduce supply costs. Dressings form a relatively small part of wound care costs and adopting the least-costly dressings may actually increase nurse and hospital costs. Rationalisation of formularies to reduce the number of similar dressings available should be driven by the adoption of treatment protocols rather than cost.

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Potentially, the greatest efficiency gains can be achieved through effective training and education of individuals involved in wound care. A structured programme of training for practitioners involved in wound care, supported by clearly stating the responsibilities of the patient can all help to limit the impact of a wound on patient well-being while achieving an optimal clinical outcome. References available upon request.

A European case study of BSN medical showed that the combination of Advanced Wound Care and Compression Therapy significantly improved 85% of venous leg ulcers and completely healed 53% of all cases within 12 weeks.* With its four products BSN medical enables effective management of venous leg ulcers while offering ease of use for doctors and patients.

*For more information check: A European Approach for Successful Venous Leg Ulcer Healing (VERUM).

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