

Clinical and financial outcomes with Allevyn Gentle Border Lite™

The current healthcare environment has prompted healthcare professionals to consider carefully the clinical and financial outcomes of wound management dressing products that are listed in wound management formularies and used within clinical practice. This article discusses the appropriate use of Allevyn Gentle Border Lite™ (Smith and Nephew) and considers the dressing's function from a clinical, practical and financial perspective. The paper also explores the features of foam dressings and the importance of clinical and cost-effectiveness in practice today.

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KEY WORDS

Foam dressings
Cost-effectiveness
Clinical practice
Quality of life

Health care is under increasing scrutiny in relation to both the financial cost of service delivery and the maintenance of the highest standards of care. This is exemplified in the NHS White Paper, *Equity and Excellence: Liberating the NHS* (Department of Health [DH], 2010), which outlines a number of essential aspects of care delivery which should be considered within the context of tissue viability. These include:

- ▶ Putting the patient first during patient consultations, i.e. 'not for me, without me'

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- ▶ The ability to measure efficiency with improvement to healthcare and outcomes.

This accompanies the DH document, *From good to great* (DH, 2009), which explicitly sets the cost-effectiveness agenda and identifies the need to maximise impact from taxpayers' money.

To select an appropriate treatment regimen, clinicians should consider the wound type, the evidence available, the clinical and cost-effectiveness of the treatment and, most importantly, the views of the patient and other clinicians.

In the author's opinion, attaining such improvements in wound management services will be dependent upon efficient and effective practice, with appropriate and timely use of relevant wound care interventions and measurable outcomes.

Management and treatment of wounds is complex and multifaceted due to:

- ▶ Aetiology
- ▶ The complexity of the healing process
- ▶ The multiplicity of factors that affect healing (e.g. general health, diabetes, anaemia, nutrition, mobility, lifestyle and motivation)
- ▶ The range of treatment options available (World Union of Wound Healing Societies [WUWHS], 2008).

To select an appropriate treatment regimen, clinicians should consider the wound type, the evidence available, the clinical and cost-effectiveness of the treatment and, most importantly, the views of the patient and other clinicians. Posnett and Franks (2008) stated that a high proportion of chronic wounds remain unhealed for longer than necessary and suggested that with proper diagnosis and delivery of optimal wound care, the financial burden could be reduced.

As wound care is delivered by the multidisciplinary team (i.e. tissue viability, community and practice nurses, podiatrists, care home staff and nutritionists), this can lead to variations in practice. Harding (2000) suggests that this can influence both clinical and financial outcomes.

Physiological impact of foam and silicone dressings

Human skin is the largest organ of the body (Sibbald et al, 2009) and

has a number of important physical and biological roles, particularly as a protective barrier to the external environment. The integrity of the skin is essential for protection against invading microorganisms, ultraviolet (UV) light, extremes of temperature and chemical toxins (Butcher and White, 2007). However, as skin ages, it becomes less able to perform many of its essential functions. The outermost component of the skin, the epidermis, interfaces with the external environment and is composed of keratinocytes which make up the stratum corneum, an area which constitutes the major barrier to chemical and microbial invasion. During the later years of life, the turnover time of keratinocytes is reduced by 50% in the epidermis. Below the epidermis is the dermis, which is principally composed of connective tissue and other components such as blood vessels, lymphatics, macrophages, endothelial cells and fibroblasts. During the ageing process, there is approximately 20% loss in the thickness of the dermal layer (Butcher and White, 2007). As the fatty layer becomes thinner, certain areas of the body, such as the face, neck and hands, will lack the cushioning produced by fatty deposits and become more susceptible to skin tears (Timmons, 2006). Natural changes in the skin have led to the need for dressings that can support these changes, as covering a wound with a dressing mimics the barrier role of the epithelium, promoting granulation and helping to reduce wound pain (Hurd et al, 2009).

Pain

An individual's experience of pain is unique, influenced by many factors. A systematic and rational approach to the assessment and management of pain is essential. This is a specific role of the clinician that should be documented, as with other aspects of holistic assessment (Nursing and Midwifery Council [NMC], 2010). Hollinworth (2005) offers a practical template for assessment of procedural pain and proposes several interventions for its reduction, including:

- ▶▶ The use of warm cleansing solutions
- ▶▶ Careful removal of dressings
- ▶▶ The use of 'time out'
- ▶▶ The use of atraumatic dressings, including reducing dressing changes as appropriate
- ▶▶ The correct application of bandages.

More recently, the WUWHS (2008) have identified factors that the clinician should consider pre, during and post dressing change. These include assessing and addressing the issue of pain, as this

Silicone gel and soft gel are synthetic materials which are 'tacky', soft and flexible, providing gentle adhesion to the skin. When applied to the skin, 'gel adhesives' flow gently into the crevices, allowing more points of contact to stay in place and are, therefore, ideal for fragile or sensitive skin.

can have a major influence on patient concordance and positive wound care outcomes.

Allevyn Gentle Border Lite™

Foam dressings have been used since the 1980s, with the technology being available since the 1950s. The cellular structure of foams allow them to absorb and evaporate exudate from the wound bed, thereby decreasing maceration (White et al, 2007). However, foam dressings are a disparate group and cannot be regarded as similar (Thomas, 2007), as there are variations in the material costs per dressing change (Stephen-Haynes and Bielby, 2009).

Allevyn Gentle Border Lite™ (Smith and Nephew) is a hydrocellular dressing with a soft silicone gel adhesive. This wound contact layer has been used for several years and has evidence to support its use. Carter (2008) undertook a single care study on a patient with extremely fragile skin and reported a reduction in dressing changes, protection of the periwound area and the promotion of self-care.

Stephen-Haynes and Greenwood (2010) undertook an audit of 50 patients across a primary care trust (PCT) to evaluate the silicone/soft gel product range. The audit reviewed the dressing's:

- ▶▶ Ability to aid wound healing
- ▶▶ Comfort during dressing wear time
- ▶▶ Ease of application and removal
- ▶▶ Cost-effectiveness
- ▶▶ Patient satisfaction.

The audit was undertaken by the county tissue viability team consisting of healthcare representatives across the PCT, including community, nursing homes and community hospitals. Fifty members of staff (100%) found the product easy to apply and remove, and 40 (80%) found wear time of two days longer, with an average wear time of between five and seven days.

In a 67-patient evaluation, Grothier (2009) had similar findings, including acceptability for indication, wear time, fluid-handling properties, conformability, comfort and ease of use.

Hurd (2009) undertook a multicentered evaluation with 153 patients from six countries. Ninety-five percent found the dressing suitable for the wound type and that it achieved good results in conjunction with routine clinical practice. Hutchcox and Mangan (2009) reported the successful use of a silicone adhesive shaped heel dressing to treat a sacral wound. Moody and Bielby (2009) evaluated Allevyn Gentle Border Heel on 20 patients, considering ease of use, wear time, fluid-handling, conformability, comfort, change in wound characteristics and in the condition of the periwound skin. They concluded that the dressing was easy to apply to the hard-to-dress heel area, and prevented maceration due to the pooling of exudate. In another evaluation of a silicone adhesive shaped heel dressing on 20 patients (Hampton, 2010), the results based on the subjective data from the clinicians found that the wound improved, the dressing was atraumatic to the wound bed and was easy to remove. One hundred percent of the patients also reported an improvement in pain experienced (Hampton, 2010).



The challenge in any dressing application is conformability to the wound bed and the ability of the dressing to remain in place, while offering the added support of pain and trauma-free dressing removal.

Features of Allewyn Gentle Border Lite™

Allewyn Gentle Border Lite is a shaped hydrocellular foam dressing with a silicone adhesive wound contact layer. It has a permeable waterproof outer film which will not adhere to the wounded areas. Silicone gel and soft gel are synthetic materials which are 'tacky', soft and flexible, providing gentle adhesion to the skin. When applied to the skin, 'gel adhesives' flow gently into the crevices, allowing more points of contact to stay in place and are, therefore, ideal for fragile or sensitive skin. The dressing is easy to apply, does not require a secondary dressing, can be repositioned and moulds around bodily contours, thus assisting in dressing awkward areas (Grothier, 2009; Hampton, 2010). The dressing

stretches with the skin but retains its original shape. It can be removed gently without trauma to the wound bed and periwound tissue (Grothier, 2009). When used for low to moderately exuding wounds, it may be worn for up to seven days.

Recommendations for use

Allewyn Gentle Border Lite is recommended for the management of wounds with low to moderate levels of exudate, namely:

- ▶▶ Cuts
- ▶▶ Skin tears and lacerations
- ▶▶ Abrasions
- ▶▶ Minor burns
- ▶▶ Leg and foot ulcers
- ▶▶ Finger and toe injuries
- ▶▶ Surgical wounds.

The dressing is not recommended for sacral wounds where a specific dressing designed for the sacrum is recommended. Care should also be taken when dressing the heel, as due to gravity there is likely to be an increase in exudate and thus a specific heel dressing should be applied.

While *in vitro* data is important, the impact of wound care should



Figure 1. Examples of Allewyn Gentle Border Lite on awkward to dress areas.

be considered in relation to clinical, practical and financial outcomes.

Clinical outcomes

Patients with chronic wounds identify malodour, exudate management, leakage and pain as being high on their list of symptoms and priorities, and those that cause them the most distress (Franks and Moffatt, 2006). Thus, outcomes for patients should be considered both in terms of healing and the psychological impact that

Table 1

Dressing objectives

Objectives	Outcome
Maintains the wound and the surrounding skin in an optimum state of hydration	✓
Forms an effective water-resistant seal to the peri-wound skin and is easily removable without causing trauma or skin stripping	✓
Forms a bacterial barrier, effectively containing exudate or cellular debris to prevent the transmission of microorganisms into or out of the wound	✓
Provides protection to the peri-wound skin from potentially irritant wound exudate and excess moisture	✓
Produces minimal pain during application or removal as a result of adherence to the wound surface	✓
Is non-toxic	✓
Requires minimal disturbance or replacement	✓

having a wound has on the patient (Woo, 2010).

The challenge in any dressing application is conformability to the wound bed and the ability of the dressing to remain in place, while offering the added support of pain and trauma-free dressing removal. This is a major factor for those with damage to the periwound area or friable skin. Soft silicone foam dressings will not adhere to the wounded areas and can be removed gently without trauma to the wound bed and peri-wound tissue (Grothier, 2009; Hampton, 2010). The flexibility of Allevyn Gentle Border Lite allows it to conform to the wound bed, thereby providing a more secure fit which prevents leakage, as well as providing active fluid management in its control of exudate (Grothier, 2009; Hampton, 2010).

On removal, gel adhesives distribute force over a large surface area of skin under the dressing, stretching and flowing out of any crevices. This property of the 'gel adhesives' minimises the risk of damage to the surrounding skin, which is particularly important for patients with fragile skin. The dressing can also be repositioned if required.

Importantly, no one dressing is suitable for all wound types, and few are ideally suited for the treatment of a single wound during all stages of the healing cycle. Factors to consider in dressing selection are (Thomas, 1997):

- ▶▶ Is the dressing conformable and comfortable?
- ▶▶ Is it suitable to be left in place for a long duration?
- ▶▶ Will the dressing prevent leakage between dressing changes?
- ▶▶ Is it easy to remove?
- ▶▶ Is it easy to use?

Table 1 outlines the primary requirements of the 'ideal dressing' (Thomas, 2008). Allevyn Gentle border light aims to achieve these dressing requirements.

Secondary requirements of the 'ideal dressing' are the action of the dressing within the wound bed, including debridement, antimicrobial action, ability to absorb odour, and being capable of inactivating proteolytic enzymes (Thomas, 2008). Fletcher (2005) also identifies the need to define clear objectives and to provide high care standards in a cost-efficient way. It is essential that clinicians practice with

personal accountability and have an understanding of how wound care products work, while also recognising and understanding their limitations (Nursing and Midwifery Council [NMC], 2010).

Practical outcomes

For many years, clinicians have needed to be creative when managing anatomically difficult to dress areas, as dressings have been limited in their size and shape. White (2010), in a clinical survey of 59 randomly selected healthcare professionals, identified wound location and exudate as the main reasons for wounds being difficult to dress, concluding that clinical and financial outcomes can be improved through education and training in conjunction with wound care product development and design to address these issues. Stephen-Haynes and Greenwood (2010) identify the need to be creative when managing anatomically difficult to dress areas and highlight a number of clinical instances where the shape and size of Allevyn Gentle has assisted the clinician to provide appropriate care (Figure 1).



Figure 2. Wound to the scalp at initial presentation.



Figure 3. Application of Allevyn Gentle Lite.

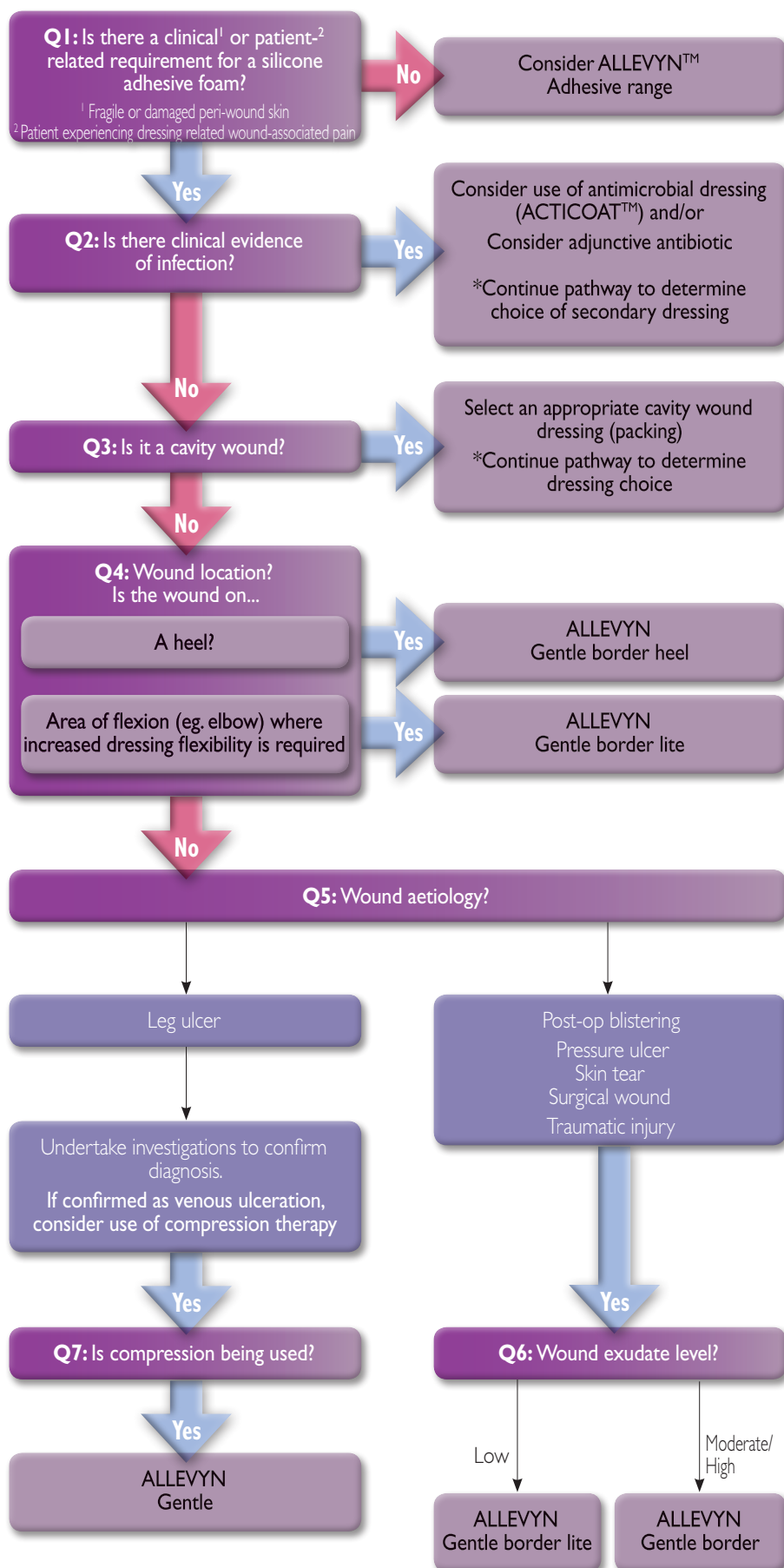


Figure 4. Flow chart for appropriate use of the Alleevyn dressing range.

Financial outcomes

Wound care accounts for 3% of the annual National Health Service expenditure (Posnett and Frank, 2007), an estimated £2.3–£3.1bn per year (Posnett and Franks, 2007). The cost of wound care should also be considered in terms of its impact on patient quality of life, i.e. effects of pain, restrictions of having a wound that can lead to social isolation and coping with daily activities of life (Hopkins et al, 2006). Selecting appropriate dressings can help to reduce wastage, providing the clinician with the cost-effectiveness that they are required to deliver.

Case report

A 97-year-old male with short-term memory loss, who occasionally forgets he cannot walk, presented with an injury to his scalp, which he had sustained as a result of a fall (Figure 2). The patient still smokes and has mild chronic obstructive pulmonary disease (COPD), but otherwise is relatively well for his age. The wound had been present for some time due to delayed healing, but was half its original size. Due to the difficult anatomical location of the wound, Alleevyn Gentle was applied. This dressing was well tolerated and so the author decided to change to Alleevyn Lite as there was only a small amount of exudate (Figure 3). The dressing was worn for 4–5 days, with three dressing changes until the area healed.

Conclusion

Most clinicians are committed to improving quality of life for patients and have high expectations of wound dressings. Wound care is complex and clinicians providing care for the patient must have an understanding of the wound healing process, pain, dressing products, asepsis, microbiology, pharmacology, psychosocial factors, ethics and possess good communication skills. Without such knowledge and careful consideration, dressing selection is likely to be arbitrary and potentially ineffective, wasteful both in terms of time and physical resources. The overall aim of wound dressings is to achieve a wound bed that is sufficiently moist for

healing and does not cause problems such as maceration, while also treating and enhancing underlying contributory factors, such as:

- ▶ Periwound skin
- ▶ Patient quality of life
- ▶ Healing
- ▶ Exudate-related problems
- ▶ Healthcare resource use.

Thus, while dressings have traditionally been used to provide the optimal environment for wound healing, to protect, absorb, prevent fluid loss and to hide or cover a wound for aesthetic reasons, there is an expectation that they will assist in pain management, require minimal dressing changes and be clinically and cost-effective. In addition, as Fletcher (2005) states, meeting the patient's wound-related objectives may also lead to greater acceptability and patient concordance.

The flow chart in *Figure 4* can help clinicians achieve both clinical and financial outcomes by ensuring appropriate use of the Allevyn dressing range. Selection of a lighter dressing reduces costs, but consideration should be given both to wear time and saving the healthcare professionals' time. **WUK**

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Key points

- ▶ The properties of wound dressings are important in providing the optimal wound bed environment for healing.
- ▶ Clinicians are increasingly selecting atraumatic foam and silicone dressings to reduce trauma and assist with the healing process.
- ▶ Clinical and financial outcomes can be met by selecting appropriate dressings.
- ▶ Protection of the periwound area from maceration with appropriate exudate management is important.