

# Clinical and cost-effective leg ulcer care: capturing current practice and future solutions

This article is based on a symposium held at the Wound Essentials annual summer conference by Jackie Stephen-Haynes, and at the Wounds UK conference by Joy Tickle and Leanne Atkin, in 2015. The aims of the two symposia were to reflect on current practice in terms of compression therapy to heal venous leg ulceration, considering practitioner and patient experience. The interactive sessions used voting pads to gauge delegates' views on the current climate and to explore the viability of alternative ways of working. The results showed that, after considering the evidence, 100% of delegates felt that hosiery kits could be seen as a viable alternative to bandaging in future practice.

## LEG ULCER TREATMENT IN PRACTICE

The prevalence — and associated cost — of leg ulcers in wound care is a major issue for both the patient and the NHS. Treatment of leg ulcers has been shown to take up to 65% of community nurses' time (Vowden et al, 2009; Chamanga, 2014). Care is influenced by a number of external factors, e.g. workload, the working environment and organisational efficiency savings. Evidence shows that nursing time is the biggest cost driver for venous leg ulcer (VLU) care, accounting for up to 64% of costs (Guest et al, 2015).

The NHS Five Year Forward View (NHS, 2014) has outlined plans to introduce overall cost savings, closing a funding gap of £30 billion by 2020/21. A key element of this will be introducing efficiency measures in provision of care. In terms of leg ulcer treatment, studies have emphasised the cost benefits, as well as clinical and patient benefits, associated with using alternative forms of compression therapy to assist with VLU healing (Ashby et al, 2014; Guest et al, 2015).

Compression is recognised as gold standard treatment for confirmed VLUs. However, incorrectly applied compression can be ineffective and even harmful (Chamanga, 2014). Inconsistent

compression technique has resulted in many patients not receiving therapeutic compression, and a lack of consistent training and information can lead to varying levels of bandaging competency (Chamanga, 2014). Also, concordance issues with compression bandaging are common, due to the impact on patients' lifestyle (Wounds UK, 2015).

Common reasons for not continuing with compression therapy include:

- ▶ Finding compression therapy painful or bandages being too tight
- ▶ Poorly applied bandages
- ▶ Bandage slippage
- ▶ Lack of understanding of ulcer aetiology
- ▶ Lack of information about the treatment for the ulcer (Harding et al, 2015).

Despite this, nurses are responsible in practice for reducing nursing time, promoting patient self-care and improving quality of life without compromising clinical outcomes; subsequently, care has become task- rather than patient-focused.

According to accepted evidence, 70% of VLUs should heal within 12–16 weeks, and 98% of VLUs should heal within 24 weeks (*Figure 1*; NHS, 2012). However, in practice, this is not the case: in reality, healing rates at 6 months are 9%, mean time to healing is 5.1 months, and infection rates are 58% (Guest et al, 2012).

Reasons for this discrepancy, and why healing rates are so poor in practice, include:

- ▶ Ulceration not recognised — VLUs being treated as wounds only
- ▶ Differential diagnosis not undertaken
- ▶ ABPI measurements — not performed
- ▶ Interpretation of ABPI
- ▶ Under-use of compression
- ▶ Sub-therapeutic compression
- ▶ Inadequate compression
- ▶ Poor compression techniques.

Despite the evidence, there has been found to be only a 20% uptake of compression therapy in VLU

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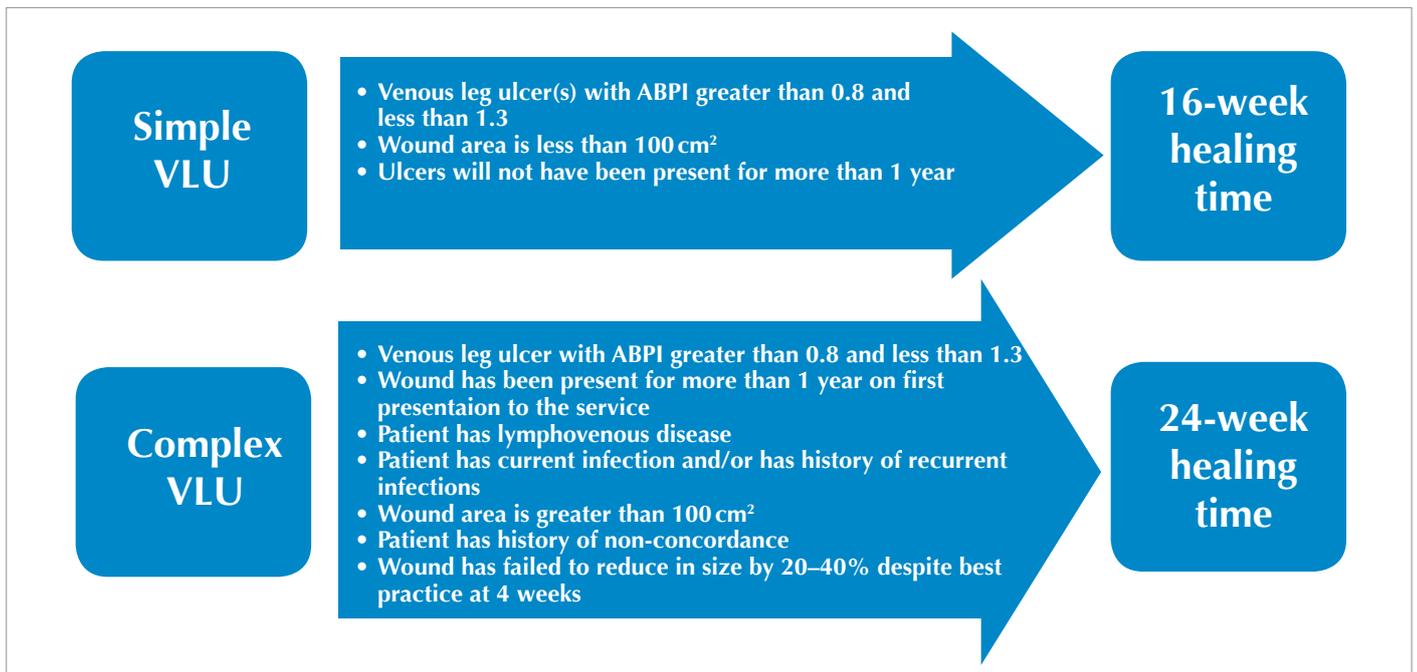


Figure 1. NHS guidelines for treating venous leg ulcers (NHS, 2012)

treatment, which represents a missed opportunity in treating patients (Harding et al, 2015) and demonstrates that new methods are needed.

### CAPTURING CURRENT PRACTICE

A key aim of both of the sessions was to capture information about current practice. In order to do this, delegates attending the symposia were asked a series of questions and invited to respond via voting pads.

Delegates were initially asked what their job role was in order to gain an accurate picture of respondents and their practice (Figure 2). They were then asked whether leg ulcer management was a part of this role (to which 70% overall replied yes).

Delegates were then asked how often they use compression therapy in practice: 27% answered daily, 25% weekly, but 48% said they used compression therapy 'less often' than weekly in practice. This not only represents a missed opportunity in terms of treatment, but also poses a challenge to training and competencies. Regular practice is crucial in order to maintain competencies, and a resulting lack of skill or confidence in application of compression therapy can result in suboptimal compression or the most effective options not being utilised in practice (Harding et al, 2015).

When asked what the main challenges/barriers

are to effective VLU care provision in their practice, all delegates cited a combination of: time, resources, training needs and risk of recurrence (Figure 3). It has become apparent in recent years that it is essential to overcome these barriers (Ashby, 2014; Guest et al, 2015; Moffatt, 2014), in order to optimise clinical and patient benefits. Crucially, patient access to effective compression therapy should not be restricted by the experience or knowledge of the practitioner (Moffatt, 2014).

Delegates were also asked which compression options they most frequently use in practice — the majority use elastic compression bandaging (64%), with 18% using inelastic compression bandaging. A further 18% use leg ulcer hosiery kits, which are an alternative treatment for the management of VLU and oedema.

### COMPRESSION HOSIERY KITS

New advances in products and evidence are now providing alternative treatment options to the traditional four-layer compression bandaging (Tickle, 2015). This allows increased choice for clinicians and patients, providing the means to improve adherence to treatment regimens without compromising outcomes (Tickle, 2015).

Alternatives to 4-layer bandaging include cohesive inelastic compression, 2-layer bandaging kits and hosiery kits (Ashby et al, 2014; Guest et al, 2015).

Figure 2a. Voting results: What is your current role? Delegates at the Wound Essentials symposium

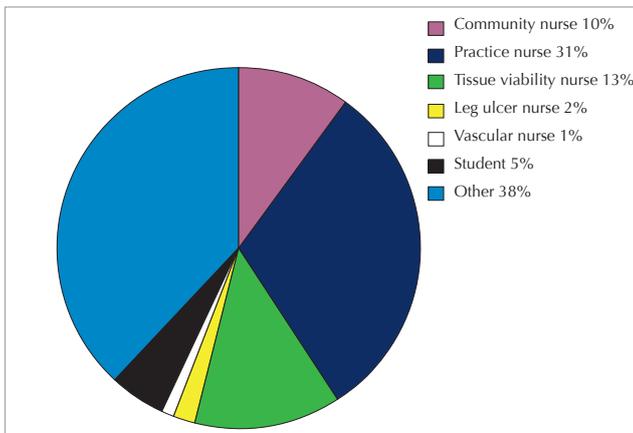


Figure 2b. Voting results: What is your current role? Delegates at the Wounds UK symposium

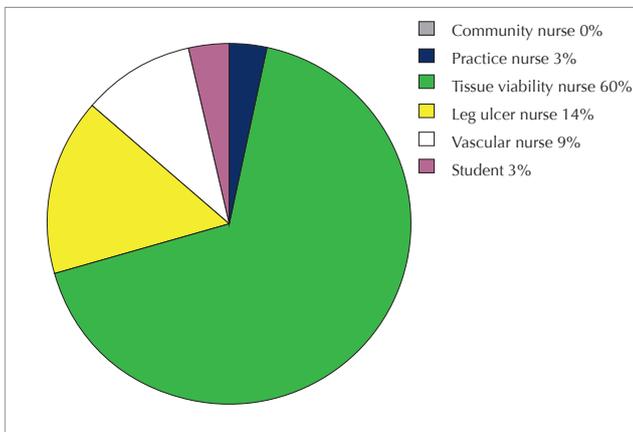
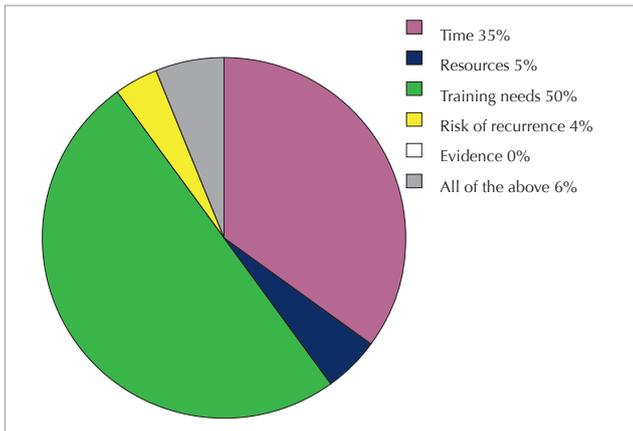


Figure 3. Voting results: What is your main challenge/barrier to leg ulcer care provision?



Hosiery kits, which apply graduated compression and increase venous return in the limb, have been shown to overcome some of the drawbacks associated with compression bandaging (Ashby et al, 2014).

Compression hosiery kits provide increased choice for patients, and are associated with practical benefits to the patient (such as ease of application, and being able to shower/bathe, and wear normal footwear), as well as time and cost advantages to the practitioner (Tickle, 2015). The

kits can be used as a first-line treatment, utilising bandaging only when a hosiery kit is inappropriate (e.g. in patients with high exudate levels or limb distortion; *Figure 4*).

Activa Healthcare offer two types of compression hosiery kit — European and British standard — to suit the needs of patients with and without oedema. This provides a simple and effective two-layer hosiery kit: two stockings are worn (one on top of the other), a 10 mmHg liner, followed by a second layer, which slides over the top. The liner holds dressings in place and helps the second layer to go on easily, which helps to encourage self-care in the patient. The second compression layer is added over the liner, to achieve a consistent therapeutic 40 mmHg pressure.

### VENUS IV

When asked whether they were aware of the findings of the VenUS IV trial, the results varied between groups. Among non-specialist nurses, 13% were aware of the trial and its findings, and the vast majority (87%) were not; among the specialist nurse audience, 44% were aware of the trial, whereas 56% were not. This demonstrates not only the challenge that clinicians face in keeping up with current research and evidence, but also the importance of communicating evidence between specialist and non-specialist clinicians to influence best practice.

The randomised controlled VenUS IV trial (Ashby et al, 2014) tested the clinical and cost-effectiveness of compression hosiery kits versus compression bandages in the treatment of VLU (Venous leg Ulcer Study IV, VenUS IV).

The trial included 457 patients randomised to 2-layer hosiery kits or 4-layer bandaging, across 34 centres in the UK, with a maximum follow-up time of 12 months. The trial assessed cost, healing, quality of life and patient concordance.

The study found that ‘increased use [of hosiery kits] is likely to result in a substantial saving for the NHS with improved quality of life for people with venous ulcers.’ It was found that 2-layer hosiery kits are a viable alternative to 4-layer bandaging, and are also cost-effective and improve recurrence rates (*Table 1*).

### CONCLUSIONS

The compression hosiery kit has been proven as a viable alternative to 4-layer bandaging systems for

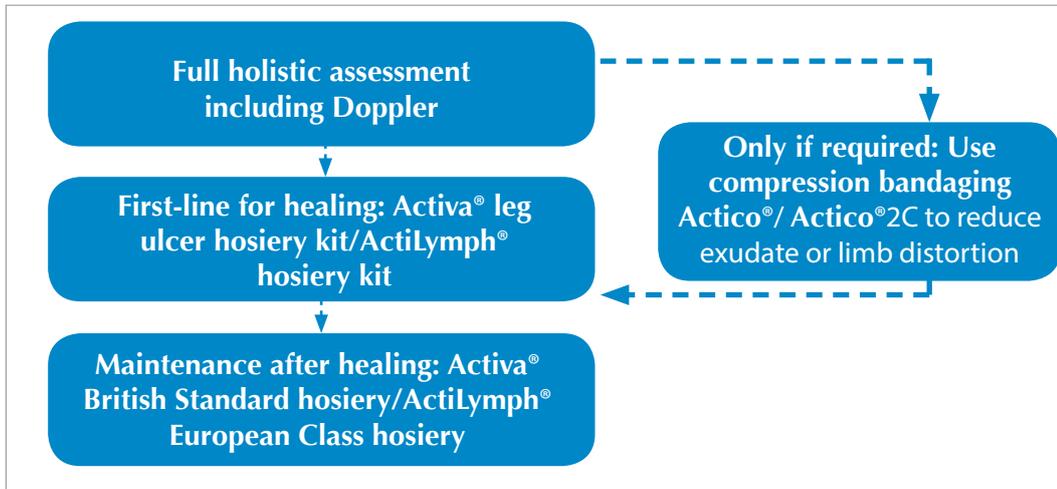


Figure 4. Pathway for selecting when to use a hosiery kit (Tickle et al, 2015)

Table 1. Results of the VenUS IV trial

	With 4-layer bandaging	With 2-layer hosiery kit
Median time to healing	98 days	99 days
Ulcers healing	70.4%	70.9%
Ulcers recurring	23%	14%
Mean annual cost	£1,795	£1,494

treating VLUs, providing cost and time advantages to practitioners and practical benefits for patients. The kits are extremely popular with patients, which facilitates self-care and thus helps to reduce recurrence rates.

When asked about their views on the current evidence and practical examples shown, 100% of delegates agreed that hosiery kits could be seen as a viable alternative to bandaging, due to a variety of practical reasons (Figure 5).

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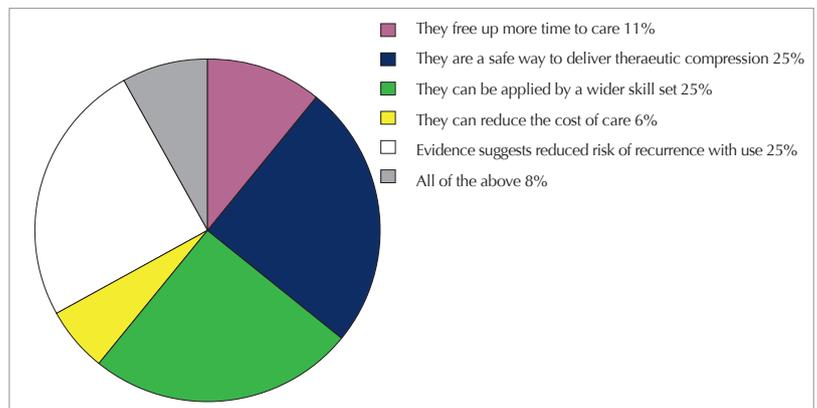


Figure 5. Voting results: I feel that leg ulcer hosiery kits are a viable first-line option for leg ulcer patients in the future because: