

# Promoting patient concordance to support rapid leg ulcer healing

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Venous leg ulceration can be a chronic problem that has a negative effect on patients' quality of life and is very expensive in terms of healthcare resources. The scale of the problem is continually increasing due to the ageing population, however, the standard of care across the UK varies despite a clear relationship between accurate assessment of the patient and the delivery of effective compression therapy. One of the major obstacles to the delivery of effective treatment is the reluctance of some patients to concord with prescribed compression therapy and there are a variety of reasons for this, including a lack of patient understanding of the importance of compression, or clinicians' lack of knowledge or experience leading to poor patient education. The authors suggest, however, that maintaining patient concordance with compression therapy can result in effective healing. Central to this is the development of an effective therapeutic relationship between the clinicians and the patient and their family/carers and this article provides an overview of how one team of nurses were able to achieve this.

## KEYWORDS:

■ Concordance ■ Specialist assessment ■ Compression therapy

The most common chronic wound — affecting one-in-500 people in the UK (increasing to one-in-50 in those aged over 80) — is the venous leg ulcer (Simon et al, 2004; NHS Choices, 2012). One recent publication even suggested that the number of diagnosed venous leg ulcers may be an underestimate and that a potential one-in-170 adults may have the condition (Guest et al, 2015a).

## WHAT IS A VENOUS LEG ULCER?

Venous ulcers are caused by venous valve incompetence in the lower limb and calf muscle pump insufficiency, which leads to venous stasis and hypertension. This results in localised tissue ischaemia and, ultimately, lower limb ulceration. The common

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course of the disease is a continuous cycle of healing and breakdown and chronic venous leg ulcers are associated with considerable morbidity and impaired quality of life. Treatment is founded on accurate diagnosis, appropriate wound care and the provision of sustained graduated compression therapy (Scottish Intercollegiate Guidelines Network [SIGN], 2010).

Chronic venous leg ulcers are also a substantial financial burden on the NHS, costing up to £400 million a year (Simon et al, 2004; NHS Choices, 2012). Guest et al (2015b), however, estimated that the actual cost may be much higher, with 278,000 venous leg ulcers being treated per annum, plus an additional 420,000 leg ulcers with no working diagnosis, some of which will be venous in origin. With a rising ageing population, the demand for treatment will continue to grow.

Similarly, the challenges facing the NHS now and in the future have been well-publicised and the growing

number of patients with venous leg ulceration will have potentially serious consequences for health budgets (NHS England, 2014).

## Impact of venous leg ulcers

While the Department of Health (DH) has a focus on the management of chronic diseases, it has yet to recognise leg ulceration as a long-term condition (Yarwood-Ross and Haigh, 2013). According to NHS England (2014), many clinicians believe that patients who have leg ulcers 'perceive them to be "long term" taking into account the intensive and costly treatments that they require; the high recurrence rates and the impact they have on quality of life'.

There is a clear impact on the quality of life of patients living with a leg ulcer (González-Consuegra and Verdú 2011), including pain, immobility, malodour, exudate, lack of self-esteem, sleep disturbance and social isolation (Green and Jester, 2009; Faria et al, 2011; Upton and South, 2011; Parker, 2012; Upton et al, 2014). The evidence in the literature shows that there are a number of requirements to ensure effective outcomes in patients with leg ulceration, including:

- ▶ Patient concordance
- ▶ Provision of appropriate patient education (van Hecke et al, 2011)
- ▶ Setting where care takes place
- ▶ Continuity of care (Cullen and Phillips, 2009)
- ▶ Use of specialist trained leg ulcer nurses (Ellison et al, 2002)
- ▶ Development of a therapeutic relationship between nurse and patient (Morgan and Moffatt, 2008).

## CONCORDANCE WITH LEG ULCER TREATMENT

Concordance or compliance?

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When it comes to concordance with treatment, Muir Gray (1983) first discussed the phenomenon of the 'social ulcer', where clinicians believe that some patients may not want their ulcers to heal due to the subsequent fear of social isolation and loss of attention from clinicians and carers.

While there appears to be little or no evidence to support this theory, it suggests that patients' care may be negatively impacted if clinicians believe the reasons offered by patients for non-concordance are in reality a desire to maintain the ulcer.

However, examples that may be mistakenly interpreted by clinicians as non-concordance include bandage slippage, where patients often remove their bandages and present at clinic without them; however, slippage can cause a painful overlap of bandages and may be a real justification for non-concordance.

Buchmann (1997) defined compliance as 'a willingness to follow or consent to the wishes of another person', which perhaps represents many clinicians' expectations of how patients should behave in response to illness and prescribed treatment (Williams, 2010). Moffatt (2004), however, stated that 'many healthcare professionals see this as a way to abdicate their responsibility for treatment failure, placing the onus for success on the patient, and gives no regard to other circumstances that may influence compliance to specific treatments'.

Similarly, many clinicians assign the term 'non-compliant' to patients with long-term chronic leg ulcers without performing a holistic assessment and looking at factors that may affect their ability to follow treatment plans.

In general, the term concordance is preferred to compliance, as concordance places greater emphasis on factors which may not be directly associated with the condition, but which can affect a patient's choice whether or not to follow a treatment regimen, such as their beliefs,

previous treatment experiences, expectations of care, anxiety levels and coping strategies (Moffatt, 2004).

In this article, the term concordance describes the consistency with which a patient follows the prescribed therapy. Moffatt (2004) stated that concordance is comprised of three essential elements:

- ▶ Patients having the knowledge to participate as partners in their own care
- ▶ Patients being involved in consultations
- ▶ Being supported during treatment.

Non-concordance rates in chronic wounds remain a major problem and are similar to those in other chronic illnesses, standing at around 50% of patients (van Hecke et al, 2009). Jin et al (2008) undertook a qualitative review of therapeutic non-compliance and found that it was affected by a number of factors including:

- ▶ Knowledge
- ▶ Motivation
- ▶ Patient-prescriber relationship
- ▶ Health literacy, i.e. where a patient may not fully understand the implications of their health decisions
- ▶ Physical difficulties.

Jin et al (2008) also found that therapy-related factors such as treatment complexity and the duration and degree of behavioural change required also affected compliance.

Wider organisational issues such as lack of accessibility, waiting times and difficult clinic visits were also relevant, as were the symptoms and severity of the disease itself. Jin et al (2008) did find, however, that compliance improved when patients had certain beliefs:

- ▶ Susceptibility to the illness or its complication, such as a person with a relative with diabetes who has undergone an amputation
- ▶ The illness or its complications has severe health consequences
- ▶ Belief that therapy would be effective or beneficial.

This reinforces the need for a true holistic assessment, the provision of patient education and the development of a therapeutic relationship between nurse and patient.

## A FRESH APPROACH TO CONCORDANCE

Since October 2013 the authors' leg ulcer service (Healogics) has treated and discharged 438 patients with simple and complex venous leg ulceration. The service operates five different clinics across the UK and is staffed by specialist nurses and trained healthcare assistants.

On entering the service, patients are systematically assessed and clinicians begin to build a therapeutic relationship with them. The aim is to educate patients on the steps required to heal their leg ulcers from the first time of meeting and central to this regimen is the establishment of a non-judgemental relationship between the nurse and the patient based on effective communication, education (Brooks et al, 2004), and a willingness to listen to patients and not 'label' them. Many patients who present with a history of non-concordance need to establish trust with the clinicians.

Miller et al (2011) stated that: 'In isolation, the proven effectiveness of a treatment will not ensure that it is the best option in every instance, as there are variations in how treatments are accepted and adhered to by individual clients.'

This is the principle applied by the service in relation to the use of compression therapy. Therapeutic compression can be achieved in a number of ways, providing the patient with varying degrees of control and one of the service's central principles is a patient-centred approach to compression. To achieve this, however, clinicians must consider the patient's needs and be flexible when prescribing compression treatment. The service's aim is to find a level of compression that is sufficient to heal the patients leg ulcer and — working in partnership with the patient and listening to their opinions — there are many routes to achieving this goal.

Mandal (2006) stated that there were a number of factors that could increase concordance:

You visit your patient at

HOME.



As you arrive,  
he hides his legs under a

BLANKET.

He's embarrassed, depressed,  
he's not followed your advice.

His wound has started to *deteriorate*.

You question, 'COULD IT BE MRSA, IS HE AT RISK?'

You know the dangers of exudate,  
but you're not sure if **bacteria** are to blame.

You need to take steps *now* to protect the wound,

Reduce the risk of infection.

PROTECT THE PATIENT.

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CASE STUDY 1

This was a female patient with a medical history of autoimmune hepatitis, liver disease and depression. Her leg ulcer developed after an injury sustained during a fall seven weeks before her referral to the clinic (*Figure a*). She was unable to tolerate an ankle brachial pressure index (ABPI) assessment using Doppler because of the wound pain caused by calcification of the arteries, although a previous Doppler result indicated biphasic pedal pulses (showing mild-to-moderate disease, which can be treated using compression under specialist supervision).

The patient was very anxious, believing that healing was unachievable and the treatment plan decided upon by the team included modified compression bandaging



used in conjunction with support throughout her treatment; the patient had had several negative experiences in the past and required support to recognise the steady improvement in the ulcer with the

team attempting to reinforce the belief that healing was possible. This was reinforced at each appointment and together with the modified compression resulted in full healing after 82 days of treatment (*Figure b*).

- ▶ A therapeutic bond between the patient and clinician, where the patient believes the clinician has a sustained interest in understanding their problems
- ▶ Treatment that can be fitted into the patient's everyday life without much disruption
- ▶ A family member sharing an interest in the patient's progress
- ▶ The patient perceiving their condition as serious, but accepting that treatment can control the symptoms.

These factors are used by the service to enhance the patient's

- concordance with treatment. Staff at the service also believe that the keys to successful outcomes are:
- ▶ Assessment by specialist trained nurses
  - ▶ A relaxed, non-judgemental clinic environment
  - ▶ Time for patients to discuss their care and treatment pathways, which may involve discussing previous unsatisfactory experiences
  - ▶ Continuity of care — the involvement of too many nurses in the patient's care can lead to misunderstandings, poor perceptions and assumptions; all of which are detrimental

- to a therapeutic nurse/patient relationship (Anderson, 2015)
- ▶ Assessment of the patient's educational abilities, willingness to learn, and understanding of their condition
  - ▶ Tailoring management plans to the individual's needs, comprehension and abilities, especially in relation to the provision of therapeutic compression therapy (Cullen et al, 2009; Anderson, 2015)
  - ▶ Reinforcing knowledge with verbal information and leaflets aimed at the patient's educational level.

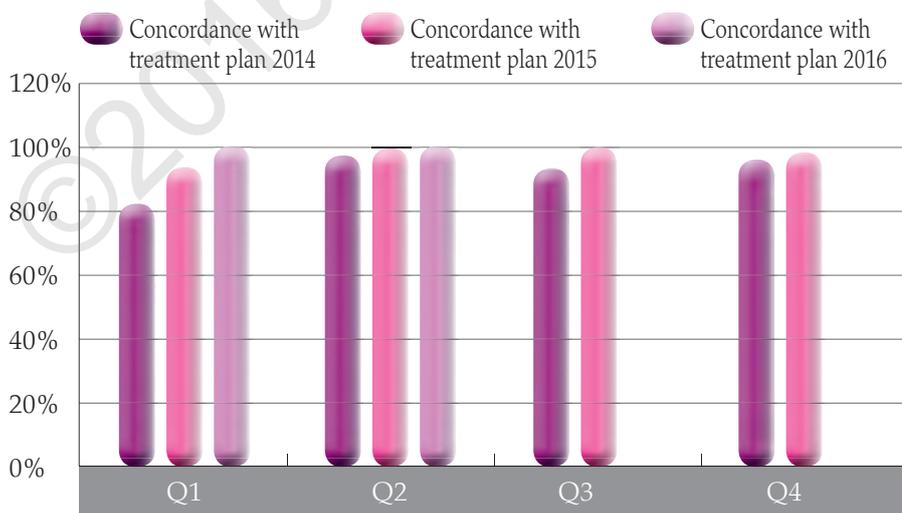


Figure 1. Patient concordance scores, 2014–2016.

Following the initial assessment, patients are allocated to a pathway that follows DH (2013) guidance for venous leg ulceration, including that to be classed as 'complex' a patient should have one of the following:

- ▶ An ulcer of more than one year duration
- ▶ A history of ulcer infection
- ▶ A history of non-concordance
- ▶ The presence of chronic oedema in the affected limb.

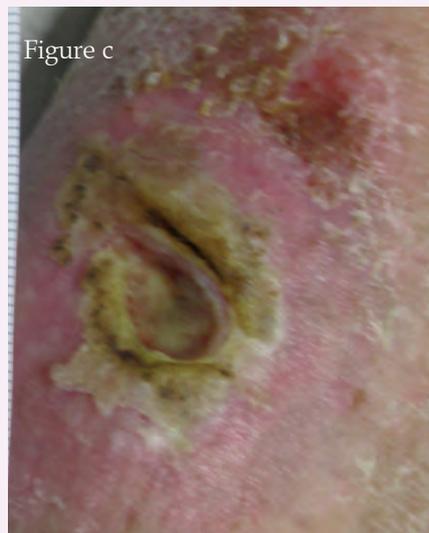
Concordance data is collated from all patients and quality of life and experience and expectation surveys are undertaken as part of the key performance indicators (KPIs), including:

## CASE STUDY 2

This 58-year-old male worked as a security guard and had a history of heart disease and a previous myocardial infarction, which necessitated a pacemaker. He was also hypertensive and asthmatic.

His leg ulcer had been present for approximately 650 days (*Figure c*) before he was referred to the clinic and he had a history of non-attendance and self-caring for his ulcers, and was reluctant to receive any nursing input.

After consultation with the specialist caring for him, he agreed to attend clinic and undergo a full assessment and discuss the potential for compression therapy. He attended the clinic when he



was able and it was an important factor in building the therapeutic relationship that he felt there was some flexibility from the team treating him.



*Figure d* shows the progress in his leg ulcer after 80 days of treatment, the patient having maintained concordance with the prescribed compression therapy.

- ▶ Concordance during treatment and at four weeks
- ▶ Patients' experiences, obtained via anonymous questionnaire
- ▶ Quality of life assessment using a recognised tool
- ▶ Infection rates.

## RESULTS

### Concordance

The results of the patient concordance scores for the period November 2013–August 2016 are presented in *Figure 1*. The concordance of patients in relation to their management plans were assessed and the service's scores were consistently high over a two-year period. As part of the team's KPIs

the patients had to be concordant throughout their treatment, but they were also able to report negative aspects of their treatment so that staff could amend it, for example, a patient might be concordant with their bandaging but want to highlight that the bandages were too bulky for wearing certain shoes; the staff could then modify the compression therapy to a multilayer compression hosiery system.

The service began with scores of around 80%, but with the introduction of additional training (staff were supported to develop their ability to build therapeutic relationships with patients and their families, and to be flexible with

patient feedback), an educational assessment tool and patient leaflets, this has improved to above 90%.

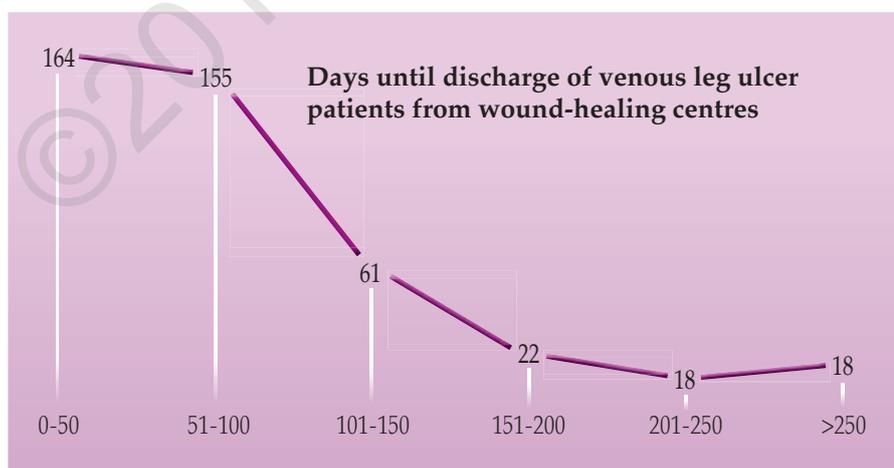
All venous leg ulcer patients in the service receive some degree of compression therapy, including bandages, compression hosiery (off-the-shelf or custom-made) or wraps, depending on their diagnosis and tolerance. Nurses work with patients to achieve optimal levels of compression and each patient works with their nurse to achieve a balance of therapeutic compression and tolerance.

### Healing rates

Healing rates for patients with venous leg ulcers treated in the service's wound healing centres since its inception in October 2013 until August 2016 (inclusive) are outlined in *Figure 2*. Of the 438 patients treated, the mean days to healing were 84, with a mean of 15 appointments required (*Figure 2*).

## DISCUSSION

Concordance with treatment has remained consistently high across five different sites with over 20 different staff working over 35 months, which is strongly suggestive of a consistent approach to clinical decision making. Every patient treated by the leg ulcer service should be assessed and



**Figure 2.**  
Average time-to-healing rates.

supported in line with the service's processes and the results support that this does in fact happen.

The healing rates can be interpreted in a variety of ways but, taken as a whole over the 35 months, the patients have healed in a mean of 84 days, requiring a mean of 15 visits; healing rates (93% at seven months) that are in excess of those reported in recent large studies; Guest et al (2015a), for example, reported venous leg ulcer healing rates of 44% over six months, while Guest et al (2015b) reported venous leg ulcer healing rates of 47% over 12 months.

## CONCLUSION

The authors have sought to demonstrate that rates of concordance with compression can be maintained at high levels by developing a patient-centred approach to leg ulcer management based upon developing strong relationships with patients and their families/carers.

Compression is central to the successful closure of a venous leg ulcer and allowing the patient to live wound-free; therefore failure to find a form of compression that the patient can concord with can potentially result in misery for them and their families/carers.

The healing rates observed and the consistency of concordance across the five different clinics over a 35-month period point towards a consistent approach. The case reports detailed above also provide examples of patients believed to be non-concordant who, in reality, simply required convincing of the merits of the proposed treatment alongside building trust with clinicians. The team's approach has been to disregard any of the labels that sometimes come with patients when they are referred. Instead, every patient is fully assessed, supported and communicated with to help them appreciate the treatment options on offer.

The levels of patient engagement suggest that this approach has very real benefits for patients and their

families/carers. For the foreseeable future, leg ulcers will continue to represent a significant burden on the NHS and the healing rates reported remain poor (Guest et al, 2015a,b) indicating that this condition has a significant impact upon NHS finances with no sign of improvement.

Concordance with compression is key to achieving rapid healing and it is the authors' contention that this can be achieved by placing the patient 'front and centre' of the decision-making process. If the patient cannot tolerate a particular multilayered bandaging system, then there are a wide variety of other bandage, hosiery and wrap systems available.

By taking a flexible and responsive approach, clinical staff can gain the patient's trust and match them to the most effective compression option to heal their ulcer. The results outlined here indicate that this approach can result in high levels of patient concordance matched by high levels of healing, which is in everyone's best interests. **JCN**

*Healogs provides clinical services in wounds, leg ulcers and lymphoedema to four clinical commissioning groups in England.*

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## KEY POINTS

- Venous leg ulceration can be a chronic problem that has a negative effect on patients' quality of life and is very expensive in terms of healthcare resources.
- The scale of the problem is continually increasing due to the ageing population, however, the standard of care across the UK varies despite a clear relationship between accurate assessment of the patient and the delivery of effective compression therapy.
- One of the major obstacles to the delivery of effective treatment is the reluctance of some patients to concord with prescribed compression therapy. There are a variety of reasons for this, including a lack of patient understanding of the importance of compression, or clinicians' lack of knowledge or experience leading to poor patient education.

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