**Leg ulcer service provision in NHS hospitals**

**Abstract**

Leg ulcers are painful, distressing and common in an older population. They are costly to treat and put additional pressure on NHS providers. Compression therapy is the mainstay of treatment of venous leg ulceration. **Aim:** To explore the current service provision for compression therapy for inpatients with leg ulcers in UK hospitals. **Methods:** An online survey was conducted to explore the service provision in hospital settings, through distribution to the Wounds UK National Conference delegates. The online survey was also distributed to Wound Care Specialist groups using social media. **Results:** 101 healthcare professionals completed the survey covering UK hospitals. Surveyresponses identified that 67.3% did not have a leg ulcer service for inpatients with leg ulceration and only 32% provided compression therapy in their hospitals. **Conclusion:** This survey confirmed a significant gap in the quality of care for patients with leg ulcers in secondary care and highlighted the wide variations in service delivery in hospital settings. Further research is needed to understand the rationale for these variations in leg ulcer service provision in secondary care.

**Key words:** leg ulcer, hospital, secondary care, compression therapy, service provision

**Introduction**

A leg ulcer is an open wound between the knee and ankle that remains unhealed for at least four weeks (Scottish Intercollegiate Guidelines Network (SIGN, 2010). Leg ulcers are painful, distressing and embarrassing for patients (Anderson et al, 2012). They can cause social isolation, immobility, uncontrolled wound exudate and unpleasant odour (Vowden et al, 2000; Moffatt, 2004; Dumville et al, 2009). Around 1.5% of the UK population have a leg ulcer (Guest, et al, 2017), and prevalence increases with age (Green et al, 2017). Leg ulcers are very costly to treat, placing additional strain on healthcare providers (Guest, et al, 2017; Gray et al, 2018).

Venous leg ulcers are the most common type (70%) of leg ulcers (Dealey, 1999; Guest, et al, 2021). Compression therapy is the mainstay of treatment of venous leg ulceration to promote healing by reducing oedema and improving venous return (SIGN, 2010; Guest at al, 2018). Compression therapy also helps to prevent ulcer recurrence, which could be as high as 70% (SIGN, 2010; White et al, 2011). While most leg ulcer patients are being cared for in community settings, patients could be admitted to secondary care; either due to a complication of ulceration or as a result of a co-morbidity where the leg ulcer is not the primary concern.

The point prevalence audit conducted in December 2019 in a large NHS hospital (Lian et al, 2021) confirmed a significant proportion (8.5%) of hospital inpatients have an open leg ulceration. Of these, 36/80 (45%) were assessed with Ankle Brachial Pressure Index (ABPI) measurements and 25/36 (69.4%) were eligible for full compression therapy. However, a recent literature review on compression for inpatients with leg ulcers (Lian et al, 2021) demonstrated a lack of published evidence on the prevalence of hospital inpatients with leg ulcers and also highlighted the lack of leg ulcer service provision in secondary care settings.

**Aim**

This audit aims to explore the current leg ulcer service provision including the provision of compression therapy for inpatients affected by leg ulcers in hospitals.

**Methods**

An online survey questionnaire exploring service provision for patients with leg ulceration in hospitals in the United Kingdom was conducted in November 2020. The survey utilised the SurveyMonkey platform and it was sent to the Wounds UK National Conference 2020 delegates. The delegates were largely Tissue Viability Nurse Specialists alongside other wound care specialists such as Vascular Nurse Specialists, Podiatrists, District Nurses, Practice Nurses, and General Practice Nurses. The online survey was also sent via social media to Wound Care Specialist Groups using Facebook and Twitter platforms.

The four survey questions are included below:

1. Does your hospital have a designated service to care for inpatients with leg ulcerations? A. Yes B. No
2. Which team delivers the leg ulcer service in your hospital? A. Vascular B. Tissue Viability C. Both D. Other E. No service
3. Does the leg ulcer service provide compression therapy for the management of venous leg ulcer patients in your hospital? A. Yes B. No
4. Is your leg ulcer service an integrated service with the community team? A. Yes B. No

**Results**

Responses were obtained from 101 healthcare professionals. A total of 68/101 (67.3%) responses reported not having a designated service to care for inpatients with leg ulceration. This suggests that less than a third of healthcare professionals have a designed service for inpatients with leg ulceration.

Of the 33 healthcare professionals who have an inpatient leg ulcer service, 16/33 (48.5%) reported the leg ulcer service is delivered by the Tissue Viability team. This was followed by 10/33 (30.3%) provided by Vascular Surgery. Only 5 responses stated the leg ulcer service was provided by both Tissue Viability team and Vascular Surgery (Fig. 1).

Figure 1. Percentage on inpatient leg ulcer service providers

Where an inpatient ulcer service was available, 32/33 (97.0%) reported their services provide compression therapy as part of the leg ulcer care plan for inpatients with leg ulceration. In addition, 30/33 (90.9%) reported to have the leg ulcer service integrated with the community team.

**Discussion**

This is the first audit highlights the significant paucity of leg ulcer service provision across NHS hospitals. This survey identified a number of areas in need of improvement: care inequality, care variation and quality of service.

Inequality in care for inpatients with leg ulcers in hospital settings

This report highlighted a huge gap nationally in the provision of care for patients with leg ulcers across NHS organisations with 67.3% reporting no designated service to care for inpatients with leg ulcerations in their hospitals. The National Wound Care Strategy- Lower Limb Workstream (National Wound Care Strategy, 2020) has been striving to improve care for patients with lower limb ulcerations nationally since 2018. However, while much resources and energy have been put forward in the community settings, with very little focus and emphasis were placed on the care provision in secondary care. In addition, whilst there has been a plethora of publications discussing leg ulcer care in the community, very little has been discussed regarding the leg ulcer care provision in secondary care (Lian et al, 2021).

Wide variations on the service delivery providing the leg ulcer service

Those hospitals with an inpatient leg ulcer service should be congratulated for enabling this important service. However, clear variation exists regarding their set up and overseeing team. The majority of inpatient leg ulcer services were provided by Tissue Viability teams, followed by Vascular Surgery, with a small proportion providing a combined approach.

These figures demonstrate the wide range of variations in leg ulcer service provision in hospital settings. The reason for these variations are unclear, and may be due to a number of factors which warrant further investigation. Firstly, if there is no designated leg ulcer specialist service in the hospital, inpatients with leg ulcers are often referred to multiple specialities (Lian et al, 2020). This is because, although the majority of leg ulcers are venous (most common), there are other complex aetiologies such as arterial, vasculitis, autoimmune disease, haematological and dermatological conditions that are potential causes (Chen and Rogers, 2007). Furthermore, multiple aetiologies can add levels of complexity in making an accurate diagnosis for leg ulcers (Lian et al, 2021). Occasionally, the diagnosis of leg ulceration requires involvement of multiple specialities at different stages, such as Tissue Viability Nurses, Vascular Surgery, and even Dermatology in the process of decision making. This may exacerbate variations in care when multiple specialities are involved. Nevertheless, the urgent need to call for a unified approach across NHS organisations is far-reaching for patients suffering from leg ulcers. This could be the role of National Wound Care Strategy- Lower limb Workstream for further instructions and directions across healthcare providers.

Quality of care

Although 33/101 (32.7%) responses reported to have a designated service, there is still a question over how well they provide the service and what they actually provide.

Nevertheless, as shown in data, the majority of the hospitals (32/33, 97%) providing leg ulcer services for inpatients also provide compression therapy and are part of integrated service with community settings (30/33, 90.9%). This information is encouraging in terms of setting out a potential future care model for patients with leg ulcers across organisations, which is an integrated leg ulcer service between the community and secondary care. Further research is needed to evaluate the details of leg ulcer service provision including the leg ulcer policy and guidelines in order to benchmark the national guidelines such as the National Wound Care Strategy – Lower Limb Recommendations. There is also a need to critically explore the barriers and facilitators associated with the use of compression therapy and leg ulcer care plans for inpatients with leg ulcers in secondary care.

**Limitations**

This audit has two major limitations. Firstly, survey is a quick and effective way of gathering information in a short period of time and remains the most popular data collection tool in healthcare settings (Ross, 2012). However, it can increase the risk of both representation and measurement errors. For example, this survey showed 33 out of 101 NHS hospitals provided designated services to care for inpatients with leg ulceration. However, the author was unclear of the actual representation of the respondents working in hospitals and also multiple respondents from one single institution.

Secondly, reliability is concerned with the extent to which the survey can be repeated in order to obtain a similar response (Ross, 2012). Given mostly the wound care experts attending the national Wounds UK conference, the yearly representation could be quite similar. Therefore, repeating a similar survey could generate very comparable results. However, if the survey is sent to another conference such as the Society Vascular Nurses conference, then the results could be very different.

**Conclusion and Recommendations**

This audit confirmed an inequality in care for inpatients with leg ulceration in secondary care with over two thirds of respondents reporting no designated leg ulcer service to care for inpatients with leg ulceration. The survey also highlighted the wide variations in leg ulcer service delivery in hospitals. Further research is needed to evaluate the details of leg ulcer service provision in order to benchmark the national guidelines. There is also a need to critically explore the barriers and enablers associated with the use of compression therapy and leg ulcer care plans for inpatients with leg ulcers in secondary care. These future studies will fill gaps in research and clinical practices with aims to improve clinical outcomes, streamline the inpatient services, achieve equitable care, meet patient’s expectations and satisfactions, and enhance the quality of life for patients affected by leg ulcers across healthcare providers.

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**Declaration of interest**

The authors have no conflicts of interest to declare.

**Key points**

* This audit confirmed an inequality in care for inpatients with leg ulceration in secondary care.
* The survey highlighted the wide variations in leg ulcer service delivery in hospitals.
* The future care model for patients with leg ulcers across organisations could be an integrated leg ulcer service between the community and secondary care.
* Further research is needed to understand the rationale for the variations in leg ulcer service provision in secondary care.

**Reflective questions:**

* Does your hospital have designated leg ulcer service caring for patients admitted with leg ulceration?
* Does your hospital provide compression therapy for inpatients with venous leg ulcers?
* Is the compression therapy provided by the Tissue Viability team or Vascular Surgery, or both?

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