A Quality and Cost Efficiency Improvement Project: Compression Hosiery

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Introduction

The Lytham District Nursing Team are responsible for Lytham St Annes and the surrounding areas with a population of 42,695[1] which is renowned for being a popular retirement area. During a review of the district nursing services, it was evident that lower limb wound care was not a priority, with ankle brachial pressure index (ABPI) assessments being repeatedly deferred and follow up visits to apply compression becoming irregular..

In previous months there had been limited capacity within the team and 12 posts were vacant for various reasons resulting in the team members repeatedly working an extra 300+ minutes per month, equating to 300 hours and leading to a poor work-life balance, decreased staff morale, increased sickness levels and accounts of burnout and stress related ill health.

To support planning, Malinko, a scheduling software programme, is used to allocate work for the clinical team. Each clinical intervention is allocated a set number of minutes for completion, e.g. a visit to apply bilateral compression including the clinical intervention, documentation and travel time would be allocated 70 minutes. With an increasing workload and expanding range of complexities of care-interventions, the district nursing team were unable to prioritise lower limb assessments.

It was essential a solution was implemented using available resources to reduce the caseload, effectively use the skill mix and improve patient care and wound healing rates.

Method

To promote effective use of clinical time and to reduce disproportionate workloads, a Quality Improvement Programme (QIP) for leg ulcer management was designed and introduced within the locality. It was agreed that the focus during the 12-month project period was full vascular assessments, including an ABPI assessment and utilising compression hosiery opposed to compression bandages, where appropriate, with the aim of improving patient outcomes. Compression hosiery had not previously been considered as a treatment option due to lack of education and understanding of the multitude of hosiery products available.

Between Aug 2023–June 2024 the QIP included an improved referral process for patients with leg ulcers, ensuring a timely, complete vascular assessment and a senior nurse review.

Following the caseload review a full vascular leg ulcer assessment, including a Doppler assessment was scheduled and completed for all patients who had not yet had this done. The overall aim was to provide full compression using hosiery. It was acknowledged that some people cannot tolerate full compression due to comfort or have difficulty in safely donning and doffing the hosiery. If patients had reduced dexterity, training was offered to relatives and carers to allow them to support the patient. This partnership working was key to supporting patient concordance with treatment.

For those patients with smaller wounds, minimal exudate and oedema, who were already in compression bandages were changed into hosiery.

Providing education and skills development for all staff was integral to the new processes. All team members attended education sessions and were assessed by senior staff as being confident and competent to apply the hosiery. Hosiery companies had already presented their ranges and a decision made to standardise hosiery across the team using the Urgo Medical hosiery range (**Altiform**).

Results

The project began in August 2023 with a caseload of 64 patients. Initially, 5 patients had previously received full vascular assessments including ABPI and were wearing compression bandages. The remaining 59 patients had not.

In September 2023, patients without red flags, as identified by the National Wound Care Strategy[2], were provided with liners and hosiery ≤ 20mmHg. This intervention led to complete healing of ulcers in 15 patients, who then transitioned to maintenance hosiery.

By November 2023, all 64 patients had undergone a full vascular assessment. Of these patients, 13 were deemed unsuitable for compression therapy due to other comorbidities. Eight patients were placed in compression bandaging as they did not meet the criteria for compression hosiery, either because their wounds exceeded 10cm in length or width or due to the presence of highly exuding wounds, requiring extra absorbent dressings.

By the end of February 2024:

- **0 patients** were waiting for a Doppler assessment
- **30 patients** had healed and were wearing maintenance hosiery
- **20 patients** were unsuitable for any compression therapy
- **6 patients** remained in bandages
- **8 patients** had active wounds and were wearing hosiery *(see Figure 1)*

The objectives of the QIP were successfully met earlier than anticipated, and the project concluded in February 2024.

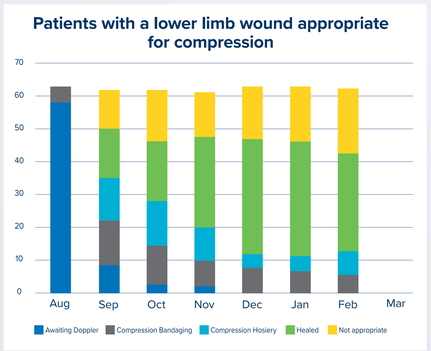

Figure 1

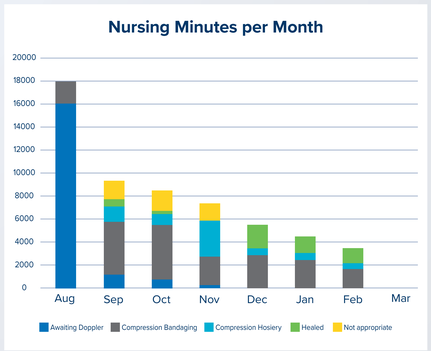

Figure 2

Discussion & Conclusion:

The level of compression provided by bandages can vary significantly depending on application and although this could be the same for hosiery, it is more likely to ensure a consistent level of compression regardless of the applier, thus optimising healing rates. Through experience, Urgo hosiery has proven to be high quality, innovative and designed to support wound healing whilst improving the quality-of-life for patients. The district nursing team found the **Urgo Measure & Go website** *(see Figure 3)* a useful tool in day-to-day practice, assisting staff to select the appropriate product and increasing confidence in their interventions. Throughout the project there was a noticeable reduction in patients returning to the caseload with a deterioration of their leg ulcer due to ongoing support from band 3 practitioners who helped support patients and increase concordance with their maintenance hosiery.

MEASURE &GO
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Figure 3

This local evaluation highlighted the team saved 15,840 minutes/264 hours/35.2 days of nursing time per month *(see Figure 2)* equating to an average financial saving of £5,944.75 in nursing time and £1,066 in dressings per month.

Informal feedback from staff stated they felt their workload had reduced; they had more variation in day-to-day activities as compression visits had decreased, boosting job satisfaction and as a result they felt less stressed and burnt out.

Sustainability is a key priority for the NHS and this QIP continues to support and optimise the Trust's green and sustainable agenda[3,4] through purchasing hosiery kits that are made in Britain enabling carbon reduction, reducing the need for patient and staff travel through fewer visits and minimising disposal of bandages by encouraging use of hosiery. Furthermore, De Moraes Silva et al[5], in their Cochrane review concluded compression with bandages or hosiery can help heal most venous ulcers and continued use of compression therapy may reduce the chance of ulcers recurring, therefore, the increased concordance with hosiery will assist in reducing the numbers of patients with leg ulcers in the population and the resources needed to care for them.

References:
1 Blackpool NHS. (2024) About us. Retrieved from: About us: Blackpool Teaching Hospitals
2 National Wound Care Strategy Programme: (2024) Recommendations for Leg Ulcers
3 NHS England and NHS Improvement. Greener NHS campaign to tackle climate 'health emergency'. 2020.
4 NHS England (2022) Delivering a 'Net Zero' national health service Available from: B1728-delivering-a-net-zero-nhs-july-2022.pdf (england.nhs.uk)
5 Compression for preventing recurrence of venous ulcers. Cochrane Database of Systematic Reviews 2024, Issue 3. de Moraes Silva MA et al; Accessed September 2024

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