

# Improving outcomes for patients with chronic oedema/wet legs during a global pandemic

## KEY WORDS

- ▶▶ Chronic oedema
- ▶▶ COVID-19
- ▶▶ Lymphoedema
- ▶▶ Tissue Viability Service
- ▶▶ Wet legs

Cambridge and Peterborough NHS Foundation Trust had planned to assess and implement the impact of managing chronic oedema and wet legs more effectively in the community in 2020. The article outlines how the service reacted to the sudden change of direction needed in response to COVID-19 pandemic and how the work we had already undertaken in this project facilitated this new way of working. When the TVN team was redeployed, they used information from our original audit to target the patients who had been deemed the highest risk. Ensuring the patient had the most appropriate care began to improve outcomes and reduce visits. A small dip check audit was completed to prove the impact of appropriate compression in the community. This paper highlights the positive impacts made in the first 3 months of the pandemic.

In 2017, Cambridgeshire and Peterborough NHS Foundation Trust (CPFT) started a project to look at how we can reduce the community caseload of patients with chronic oedema and wet leg. An initial audit to understand the issue was completed in 2017, which led to a larger project in 2018 mapped out in three phases. This is covered in detail in *Wounds UK 'Working together to improve patient outcomes for patients with chronic oedema/wet legs'* (Bradford, and Rossiter 2020).

- ▶▶ Phase 1 was to create a new way of working through treatment pathways, care plans, patient information and education
- ▶▶ Phase 2 began in 2019 with several steps. To begin with, we needed to complete a full caseload audit of community patients for leg management and create a scoring system to identify patients requiring urgent assessment. We then provided extensive education in each locality to ensure successful implementation of the new treatment pathways and care plans. Re-audit was planned for November 2020
- ▶▶ Phase 3 was to have a joined up, cohesive service.

In March 2020 the project was on track for the Phase 2 rollout. We had completed a full caseload audit of 458 patients and had begun the education within each locality.

Using the data from the 458 patients audited, we needed a way of prioritising the patients requiring the most immediate intervention. From the 40-question audit, we picked five main areas and created a weighted points system (*Table 1*) to ensure that the focus of wet legs and reducing its impact was at the forefront of the decisions-making process. The scoring was weighted as shown in *Table 2*. *Table 3* shows an example patient and how scoring took place.

The audit results and scoring system identified an urgent need for Doppler training. In February 2020, using the scoring system to identify patients in the 'red (urgent)' category, the TVN team developed a training schedule for each of the localities. It was initially agreed to upskill as many community nurses as possible to raise awareness on earlier intervention of care through holistic assessment, including a Doppler. The TVN team wanted to ensure maximum engagement with the project to improve patient outcomes.

The initial training was completed by the TVNs in the first locality team by 3 March 2020. Training was due to commence imminently with the next team. Training had been scheduled to begin with the next team, on Friday 13 March. The author was providing education at Anglia Ruskin University when she was contacted urgently by

SALLY-ANNE BRADFORD  
Operational & Clinical  
Manager, Tissue Viability  
& Continence Services,  
Cambridgeshire and  
Peterborough NHS  
Foundation Trust

**Table 1. The Bradford scoring system. Each of the five main areas (time, Doppler, visits, compression type and wet legs) are given a score from 0–5**

| Score assigned | Time on case load | Doppler performed                | Visits per week  | Compression type  | Are the legs wet? |
|----------------|-------------------|----------------------------------|------------------|---|-------------------|
| 0              | < 1 Month         | Yes, in last 6 months            | Self-care/weekly | Leg ulcer hosiery kit/ /made-to-measure hosiery/ compression wrap systems/ short stretch bandages | No                |
| 1              | 1–3 Months        | Yes, in last 12 months           | Twice weekly     | Circular knit hosiery/ multilayer bandages  | Intermittent      |
| 2              | 3–6 Months        | Yes, by other service            | Mon/Wed/Fri      | –   | –                 |
| 3              | 6–12 Months       | Yes, not recorded on care record | Alternate days   | Any other   | Wet               |
| 4              | 12 Month +        | No                               | Daily            | None  | –                 |

**Table 2. Overall scoring system for initial patient audit**

| Points | Plan  | Number of patients |
|--------|---|--------------------|
| 1–7    | Review patient as per care plan and continue                  | 101                |
| 8–12   | Action needed. Re-assessment and care plan updated in 8 weeks | 80                 |
| 12–14  | Action needed. Re-assessment and care plan updated in 4 weeks | 198                |
| 14+    | Immediate review by caseload holder                           | 60                 |

**Table 3. Example of scoring**

| Patient | Time on case load | Doppler performed | Visits per week | Compression type | Are the legs wet? | Score assigned |
|---------|-------------------|-------------------|-----------------|------------------|-------------------|----------------|
| A       | 12 months         | No                | Daily           | None             | Yes               | 15             |
| B       | 1 month           | Yes               | Twice weekly    | Wrap             | No                | 1              |

the COVID-19 response team within the Trust and asked to immediately to help plan how CPFT would manage the COVID-19 pandemic with the possibility of staff redeployment .

On Monday 23 March, the global health emergency COVID-19 (GOV.UK, 2020) forced the UK into lockdown and the NHS to restructure. On the 27 March, the COVID-19 response team requested TVN staff to be redeployed to support the community nursing service. At this point one of our concerns was that this project would lose momentum.

### TVN RESPONSE

The primary remit of the redeployed TVN team, which had initially been agreed, was to avoid hospital admission as acute care was under threat and needed bed space, to reduce footfall in patients' houses and encourage patient self-care.

For the first few days of redeployment, the Band 6 triage community nurses tasked the TVN

team with completing routine wound care, such as skin tears and dressing changes. However, it was soon realised that the majority of patients with the highest footfall, risk of hospital admission and multiple visits were for leg management. Therefore, the decision was made to begin using the audit data and the Bradford Scoring System (*Table 1*) so the TVNs and Band 6 community nurses were able to easily identify which patients needed urgent leg intervention.

I was then tasked with how to assess the balance between intervention of care versus the COVID-19 risk for the patient and team members. As Hopkins stated (2020):

*"This frankly depends on your local context and the bubble you are in and the decision made regarding what is considered 'essential care' What we know is that patients require effective treatment and if they do not receive it, then COVID-19 or not, nothing will stop*

*the deterioration. And leg ulcer deterioration means that someone within the health system will pick up the pieces.'*

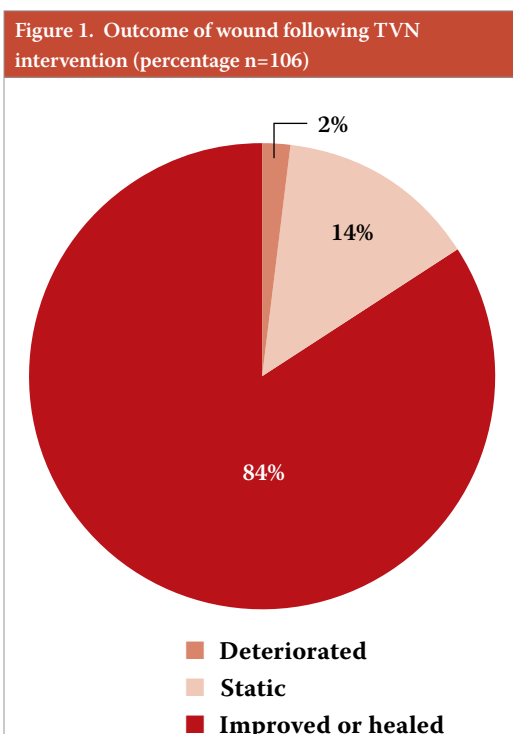
Would it be better to expose somebody to a 45-minute visit for a holistic assessment, including a Doppler and a clear treatment plan? This may save countless hours of community nurses time going in and out of the patient's house. What would be the impact on these patients if they were left? For example, would they have to be admitted to hospital with cellulitis? What would the long-term impact be for that patient and health professional involved? Especially at this time, when the acute hospital had discharged many patients to the community to make way for the predicted influx of COVID-19 patients.

Having two members of the team shielding at home during the COVID-19 pandemic benefited the whole team. One predominantly triaged patients, collated background information and booked appointments, optimising TVN/patient face-to-face time. The other created personalised self-management care plans to support carers and designed and delivered online training

Guidance from the Government, the Trust and Infection Prevention were all considered in the next steps. This guidance suggested that appropriate personal protective equipment (PPE) would protect staff members and patients. The TVNs was initially concerned that despite wearing appropriate PPE, prolonged visits in patients' homes would pose a high risk to both parties. However, they soon decided that if these patients were left, the risk would then be even greater.

By using the Bradford Scoring System, developed for this project, the TVN team were easily able to identify patients that required a high level of nurse interaction or were deemed high risk of potential hospital admission, both of which were essential to reduce the risk to patients and nurses.

The TVNs had access to treatment pathways and care plans to encourage patient self-care, including footcare/leg elevation/exercise/compression/skin care (FLECS) from the project work, so they could begin implementing this immediately. The team realised the importance of proving the impact and outcomes of this new way of working so produced interim results of 234 patients, which are detailed below.



**RESULTS**

There were 234 patients audited by the TVNs in May, June and July 2020. Patients with pressure ulcers and other unrelated wounds were removed from the data. Of the audited patients, 75% (175/234) had a TVN intervention. For the purpose of this paper TVN intervention covers a wide range of support and intervention, including conducting Doppler assessments, garment measurement, garment ordering, care planning and advice.

Of the patients who had some form of TVN intervention, 72% (122/170) were put in compression therapy. This excludes the 8 patients who were already in compression, before TVN intervention. There were five patients who it was deemed clinically inappropriate to put into compression.

In 62% (109/175) of patients, a Doppler was performed or attempted. There were 34 patients for whom a Doppler was not attempted, reasons included inappropriate to use a Doppler, patient discomfort,

unable to be completed due to restrictions or where patients declined for no reason.

Figure 1 and Table 4 show 84% (89/106) of wounds were deemed to have improved following TVN intervention. There were only 106 patients included for whom wound outcomes were recorded for the remainder (69 patients) the data were missing.

Of the 89 patients who had an improved outcome 33% (35/106) improved enough to be deemed healed and were discharged from the community caseload.

The most common compression garment being used were mild graduate compression liners, at 35% (45/130) (Table 5). The TVN team had a consignment stock of compression liners, to facilitate immediate and safe intervention. These were applied to patients with a suitable limb shape who were either waiting for a Doppler, could not tolerate full compression or had poor dexterity). It

was also found that 63% (12/19) of patients had a reduction in the frequency of their visits (Table 6), however visit frequency was only recorded for 19 patients, the remainder the data were missing.

From reviewing the outcome data, CPFT has been able to realise implementing this new way of working has not only been able to keep their patients and staff safe by allowing a reduction of visits and enforcing the most appropriate lockdown measures, but also implementing allowed a positive health outcome for these patients. We are excited to be able to continue the implementation of this project to all patients in the CPFT, to ensure that this project has a lasting and positive impact.

Further details of the re-audit will be published in 2022 with more detailed information on the auditing and re-auditing process.

To continue momentum with the project and

**Table 4. Outcome of patients' wound following TVN intervention (percentage and number of patients as determined by TVNs judgement)**

| Wound outcome | % of patients | No. of patients |
|---------------|---------------|-----------------|
| Deteriorated  | 2%            | 2               |
| Static        | 14%           | 15              |
| Improved      | 51%           | 53              |
| Healed        | 33%           | 35              |
| <b>Total</b>  | <b>100%</b>   | <b>106</b>      |

**Table 5. Type of compression being worn at time of audit (percentage and number of garments)**

| Type of compression                 | %           | No.        |
|-------------------------------------|-------------|------------|
| 3 layer bandage                     | 3%          | 4          |
| 4 layer bandage                     | 1%          | 1          |
| 2 layer K-lite spiral & figure of 8 | 1%          | 1          |
| Hosiery                             | 15%         | 20         |
| Leg ulcer kit                       | 3%          | 4          |
| Liners                              | 35%         | 46         |
| Short stretch                       | 11%         | 14         |
| Wraps                               | 31%         | 40         |
| <b>Total</b>                        | <b>100%</b> | <b>130</b> |

**Table 6. Resultant change in frequency of visits following TVN intervention (percentage and number of patients)**

| Change in visits | %           | No.       |
|------------------|-------------|-----------|
| Reduced          | 63%         | 12        |
| Unchanged        | 21%         | 4         |
| Increased        | 16%         | 3         |
| <b>Total</b>     | <b>100%</b> | <b>19</b> |

