

Lower-limb oedema and diabetic foot ulcers: attitudes, scope and barriers to practice of Podiatrists in the UK— a national survey

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Article points

1. The impact of lower-limb oedema on the treatment and outcomes of diabetic foot ulcers.
2. Attitudes, scope of practice and barriers to UK podiatrists managing oedema as part of their diabetic foot ulcer treatment planning.
3. Identifying an un-met healthcare need and regional healthcare inequalities via a national survey.

Key words

- Compression therapy
- Diabetic foot ulcer
- Healthcare inequalities
- Lower-limb oedema
- Multidisciplinary working

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A national survey of UK podiatrists was undertaken to explore the attitudes, scope of practice and potential barriers to practice when treating patients with diabetic foot ulcers and the added complication of lower-limb oedema. The survey aimed to: discover whether lower-limb oedema was seen as a risk factor in the management of the diabetic foot; learn whether UK podiatrists have the knowledge and skills to manage this potential risk factor; explore the barriers to podiatrists considering oedema reduction as part of their treatment planning. The survey suggested that treatment of lower-limb oedema as part of diabetic foot ulcer management is lacking nationally and further reveals that regional healthcare inequalities exist.

Lower-limb oedema is not a direct complication of diabetes; however, when it presents in conjunction with diabetic foot ulceration (DFU), it can negatively impact on treatment planning and delivery, wound healing and possibly influence outcomes (Hillson, 2017). Previous studies have linked oedema in patients with DFU with poorer outcomes, such as an increased risk of amputation (Apelqvist et al, 1990).

In the UK, a gold standard of care has been recommended by The National Institute for Health and Care Excellence (NICE) for the management and treatment of diabetic foot problems, which includes wound management and offloading (NICE 2015). These recommended interventions can be obstructed or contraindicated by the presence of lower-limb oedema/lymphoedema (International Working Group on the Diabetic Foot [IWGDF], 2019), therefore, denying this group of patients 'gold standard' treatment. Compression therapy remains the recommended first-line treatment for venous hypertension and associated complications, such as lower-limb oedema (NICE, 2017, Scottish Intercollegiate Guidelines Network, 2010).

However, where patients have evidence of both DFU and lower-limb oedema, published guidance to support the use of compression therapy to manage oedema and help reduce additional complications in the management of DFUs has not been found. Therefore, the author was keen to explore the extent of an already identified gap in service provision (Atkin et al, 2017) for this group of patients. A national survey of UK podiatrists was undertaken to explore the attitudes, scope of practice and potential barriers to practice when treating patients with diabetic foot ulcers and the added complication of lower-limb oedema.

Aims

The aim of the survey was to discover whether clinicians considered lower-limb oedema as a risk factor in the management of the diabetic foot, and to learn whether UK podiatrists currently have the knowledge and skills to incorporate management in their everyday practice. The survey also aimed to explore the barriers to clinicians considering oedema reduction as part of their treatment planning, and to discover more about whether any issues were able to be addressed by clinicians at a local level, or whether there was a larger national problem.

Methods

An online survey was shared with practicing podiatrists across the UK. The survey was shared via e-mail and podiatry specialist interest groups via social media sites. Participants were asked to answer questions relating to their attitudes and their ability to manage oedema reduction, within their daily practice. Multiple choice closed-ended questions were used to collect quantitative data and the frequencies and percentages to each answer option were used to analyse the data (*Table 1*). Participants were also asked open-ended questions and were given the opportunity to leave their own comments and opinions after each set of closed-ended questions. The text from this qualitative data was analysed and sorted into groups depending on the theme to give a better understanding of the frequency of common or conflicting themes and opinions (see Discussion). There were no expectations or theories as to what themes may arise prior to the survey.

Results

A total of 169 podiatrists responded and all areas of the UK were represented. Not all of the respondents completed every question. The podiatrists were asked if they felt that lower-limb oedema had a negative impact on the healing of diabetic foot ulcers. All of the respondents (100%, $n=165$) shared the opinion that lower-limb oedema has a negative impact on the healing of diabetic foot ulcers. When asked if they actively take measures to reduce lower-limb oedema in their patients who also have a DFU, the majority of podiatrists (77%, $n=123$) reported that they refer their patients on to another healthcare professional if lower-limb oedema is an issue. Giving the patient lifestyle advice also scored highly (72%, $n=116$). However, only 8% ($n=13$) of respondents to this question, stated they were trained in compression therapy and 3% ($n=5$) said they did not consider oedema reduction as part of their clinical practice.

A lack of resources and training (63%, $n=96$) and having no recognised treatment pathway (58%, $n=88$) were identified as the main barriers to considering oedema reduction as part of diabetic foot ulcer treatment. Whereas lack of evidence to support the benefits of oedema reduction in the treatment of DFUs (17%, $n=26$) and concerns

about patient safety (10%, $n=15$) scored much lower. 97% ($n=155$) of respondents felt this was an area of podiatric practice that requires development.

Discussion

The author set out to complete a survey to explore the attitudes, scope of practice and potential barriers to practice when treating patients with diabetic foot ulcers and the added complication of lower-limb oedema. It was discovered that the participating podiatrists did recognise lower-limb oedema as a risk factor to the diabetic foot and that it could negatively impact on the healing of diabetic foot ulcers.

However, it was evident that despite this, the majority of podiatrists felt that they did not have the resources and training to support their own clinical practice with effective oedema reduction and management. In 2019, the NHS published its long-term plan, which focuses on improving quality of care and healthcare outcomes (NHS England, 2019). It specifically mentions improving outcomes for those with long-term conditions, such as diabetes, as well as taking action to improve unwarranted health inequalities and integrated care.

This survey has identified an unmet health need in patients with DFU and lower-limb oedema, which would welcome an improvement in all of the key areas mentioned in the NHS long-term plan. The responding podiatrists commented on the quality of care currently provided, regional inequalities, lack of evidence and guidance and their desire for improvement in multidisciplinary/integrated working, their attitudes and opinions expressed are discussed below.

Although the survey suggests that podiatrists in the UK recognise lower-limb oedema as a factor that can negatively impact the healing of DFUs, it is evident that a large number of clinicians feel as though they have limited influence over the problem — they may be able to provide advice if they feel confident to do so, or refer on to another professional, but not necessarily suggest or provide an intervention, such as compression therapy and only a small amount of podiatrists have undertaken additional training to extend their scope of practice in this area. The theme concerning lack of knowledge and training in this area continued when podiatrists considered their barriers to including

oedema reduction in their treatment planning. Thematic analysis brought together comments such as “Not trained”; “I lack the skills and knowledge to apply compression therapy and assess when it’s contraindicated” and “Schools of Podiatry don’t teach compression therapy”, which suggests that the podiatrists are aware of their limitations and scope of practice, and are not compromising patient safety by working outside of their scope. However, this lack of additional training may result in the problem not being appropriately addressed.

Podiatrists registered with the Health Care Professions Council (HCPC) are required to work safely and effectively within their given scope of practice, and not to practice in areas where they are not proficient to do so (HCPC, 2013). However, the HCPC acknowledges that a podiatrists scope of practice may change over time with specialisation and experience, compared to a newly registered colleague. They are not restricted to the knowledge and skills learnt at undergraduate level. The survey did not go further to explore why podiatrists had not taken further training to upskill themselves in this particular area.

However, the responses indicate that there is an attitude towards oedema management and compression therapy being a nursing practice, and concerns that it may cause conflict between professions if podiatrists also become involved, e.g. “I think this has been seen as another professions area”; “Generally, oedema reduction and compression is done by nurses”; “If we start doing this, the patient will lose their practice nurse time, who will then see them once the foot wound has healed?” “Another barrier is the crossover of roles”.

While some podiatrists saw a lack of training as an issue, others suggested that this issue may be overcome by utilising an already specialist trained nurse or practitioner, as part of the multidisciplinary team: “These patients are best managed within a multidisciplinary setting”; “Training and dedicated clinics with fast access, education and efficiency in delivery of treatment would really help, whoever delivers it”. Integrated care models are designed to bring organisations and professionals together to address such gaps in care and support people with complex care needs. Evidence has shown that integrated care initiatives result in improved patient outcomes and experiences. Co-ordinating

care across professions could be an opportunity to review service provision and delivery. However, if it is to be successfully implemented, systemic barriers must first be addressed (Curry and Ham, 2010).

The podiatrists expressed concerns about the profession “... being too focused on a specific point of wound care” and not taking a more holistic approach to wound management, which incorporates the whole of the lower limb, e.g. “Podiatrists should be involved in the venous/lymphatic issues of the lower limb”; “We should be able to do this, it improves care delivery”. Guest et al’s (2015) Burden of Wounds study estimated that the annual cost of wound care to the NHS (for the year 2012/13) was £4.5bn–£5.1bn.

The study included diabetic foot ulcers and leg ulceration of differing aetiologies but there was no way of knowing if a patient had more than one type of wound, although it did acknowledge that comorbidities did exist and that it cost between £250m and £788m to manage them. The study suggested that reducing the cost of wound care could be achieved with effective diagnosis, treatment and prevention under the care of specialist trained clinicians, but recognises that wound care is often not carried out in this way. The podiatrists comments suggested a desire to be able to manage oedema as part of their diabetes wound management and improve the quality of their care.

Lack of a clear treatment pathway was also considered to be one of the main barriers to podiatrists considering oedema reduction as part of their treatment planning. The absence of such a pathway is likely due to a lack of high-quality evidence to support its implementation (Kanapathy et al, 2015).

NICE (2015) has developed a clear set of national guidelines (NG19) for the prevention and management of diabetic foot problems based on the highest-quality evidence available to promote best practice. Lower-limb oedema is not listed as a risk factor to the diabetic foot or to the healing potential to a DFU. The guidance does, however, state that evidence for use of types of dressings remains inconclusive and it would welcome more randomised controlled trials, as well as “alternative methodologies” to provide evidence for the treatment of these complex wounds, indicating more work is required in this area.

The podiatrists comments also suggested the presence of regional disparities in care. Several podiatrists agreed to having “good access to a lymphoedema nurse” and “lucky enough to have a good referral set up to a local service”. However others stated “I don’t have many options, the lymphoedema service has been practically disbanded in our area” and concerns that the referral process can be “... so slow within the NHS, meaning this condition is not addressed early enough”. “Compression bandaging is done by a PN or DN and unable to offer joint visits/appointments”. NHS England in partnership with Public Health England (2020) describe health inequalities as “preventable, unfair and unjust”, but acknowledge that some people are still encountering inequalities when it comes to access and experiences of NHS Services. NHS England also reinforce the need for change and for local innovations to be shared, e.g. via the NHS RightCare intelligence programme. Sharing such evidence will help to create or improve a pathway of care and reduce healthcare inequalities.

AHPs (and other healthcare professions, such as nurses and midwives within their respective professions) are being encouraged to lead the way in offering solutions to improve health, wellbeing and quality of care. Initiatives such as ‘AHPs into action’ are encouraging professions such as podiatry to develop their skills further. Evaluating and evidencing the impact of their contribution and sharing that information with others will help promote and improve current best practice. This information can further be used to help support local sustainability and transformation plans (STP). AHPs have more opportunity than ever to take the lead in influencing change within their areas of practice.

Conclusion

This survey suggested that an improved approach to integrated working would be welcomed by the responding podiatrists, as would personal development opportunities to enable them to provide an increased quality of care for patients with lower-limb oedema and a DFU. A set of

competencies for podiatrists and a much-needed standardised pathway to improve quality of care to those patients with oedema and a DFU, minimising disparities in care and contributing in the campaign to reduce the number of diabetic amputations, would also be of value. However, in order to successfully make the case to implement this, further evidence is required to demonstrate that oedema reduction in the form of compression therapy can have a positive impact on DFU outcomes. Furthermore it needs to be demonstrated that it may be integrated with the current gold standard national diabetic foot ulcer prevention and management guidelines to further improve and not compromise quality of care. ■

- Apelqvist J, Larsson J, Agardh C (1990) The importance of peripheral pulses, peripheral oedema and local pain for the outcome of diabetic foot ulcers. *Diabet Med* 7(7): 590–4
- Atkin L, Tansley J, Stephenson J (2017) Diabetic foot ulceration: The impact of oedema. *Wounds UK* 14(1): 33–9
- Curry N, Ham C (2010) Clinical and service integration: The route to improved outcomes. The King’s Fund. Available at: <https://www.kingsfund.org.uk/sites/default/files/Clinical-and-service-integration-Natasha-Curry-Chris-Ham-22-November-2010.pdf> (accessed 26.10.2020)
- Guest J, Ayoub N, McIlwrai et al (2015) Health economic burden that wounds impose on the National Health Service in the UK. *BMJ Open* 5(12): e009283
- Health Care Professions Council (2013) *The Standards of Proficiency for Chiropodists/Podiatrists*. Available at: <https://www.hcpc-uk.org/standards/standards-of-proficiency/chiropodists-podiatrists/> (accessed 26.10.2020)
- Hillson R (2017) Lower limb oedema in diabetes. *Practical Diabetes* 34(8): 266–7
- International Working Group on the Diabetic Foot (IWGDF) (2019) *Guideline on Offloading Foot Ulcers in Persons with Diabetes*. Available at: <https://iwgdfguidelines.org/offloading-guideline/> (accessed 26.10.2020)
- Kanapathy M, Portou M, Tsui J, Richards T (2015) Diabetic foot ulcers in conjunction with lower limb lymphedema: pathophysiology and treatment procedures. *Chronic Wound Care Management and Research* 2: 129–36
- National Institute for Health and Care Excellence (2015) *Diabetic Foot Problems: Prevention and Management*. Available at: <https://www.nice.org.uk/guidance/ng19/resources/diabetic-foot-problems-prevention-andmanagement-1837279828933> (accessed 26.10.2020)
- National Institute of Clinical Excellence (2017) *Clinical Knowledge Summary: Leg ulcer – Venous*. Available at: <https://cks.nice.org.uk/leg-ulcer-venous> (accessed 26.10.2020)
- NHS England (2019) *The NHS Long Term Plan*. Available at: <https://www.longtermplan.nhs.uk> (accessed 26.10.2020)
- NHS England (2020) *Equality, Diversity and Healthy Inequalities: Reducing Health Inequalities Resources*. Available at: <https://www.england.nhs.uk/about/equality/equality-hub/resources/> (accessed 26.10.2020)
- Scottish Intercollegiate Guidelines Network (2010) National Clinical Guideline 120: Management of chronic venous leg ulcers. Available at: <https://www.sign.ac.uk/assets/sign120> (accessed 26.10.2020)