

# Diabetic foot ulcer management in the community

## KEY WORDS

- ▶ Assessment
- ▶ Community care
- ▶ Diabetic foot ulcer
- ▶ Transferable skill set

Foot ulcers affect as many as 1 in 10 people with diabetes and it is important for people with this condition to understand the potentially severe consequences of leaving a foot ulcer untreated. Even small ulcers on the foot can represent a serious risk because they may heal extremely slowly and need rigorous treatment to cure. Ulcers can also develop into serious lower body infections, with the possibility of amputation at an advanced stage. Therefore, foot screening is the cornerstone of good diabetic foot care. This article explores the role of the community nurse and tissue viability service as part of the multidisciplinary team.

Foot ulcers can occur in anyone, and refer to a patch of broken-down skin, usually on the lower leg or feet. Diabetes influences foot ulcers in a number of ways, and it is important for people with diabetes to understand the potentially severe consequences of leaving a foot ulcer untreated. Foot ulcers can affect people with both type 1 and type 2 diabetes. When blood sugar levels are high or fluctuate regularly, skin that would normally heal may not properly repair itself because of nerve damage.

Based on UK population surveys, foot problems are a common complication of diabetes, with a prevalence of 23–42% for neuropathy, 9–23% for vascular disease and 5–7% for foot ulceration (Boulton et al, 2005).

Amputation rates are higher in people with diabetes than those without the condition. People with diabetes are at increased risk of developing peripheral arterial disease (PAD), especially when other associated risk factors are present, for example, smoking, hypertension and hypercholesterolaemia. Diabetic foot ulceration is principally associated with PAD and peripheral neuropathy, often in combination. Other factors associated with increased risk include previous amputation, previous ulceration, the presence of significant callus, the presence of significant structural abnormality, visual problems and mobility problems.

In the UK, around 100 amputations a week are performed as a result of diabetes (National Diabetes Support Team, 2008). People with

diabetes are reported to be 15 times more at risk of an amputation than people without diabetes (Williams and Pickup, 2004), and half of all amputations occur in people who have diabetes (Amputee Statistical Database for the UK, 2007). The majority of these amputations are preceded by foot ulcers. Only two-thirds of ulcers will eventually heal and the remainder may result in some form of amputation (National Diabetes Support Team, 2008). Both ulcers and amputations have an enormous impact on people's lives, often leading to reduced independence, social isolation and psychological stress. The diabetic foot is also a significant economic problem, particularly if amputation results in prolonged hospitalisation, rehabilitation and an increased need for home care and social services (International Working Group on the Diabetic Foot, 2011).

Despite its clinical burden and cost, estimated to be between £639 million and £661 million per annum – equivalent to 0.6–0.7% of NHS expenditure (NHS Diabetes, 2012), foot disease has been the most neglected complication of diabetes and this is evidenced by the widespread differences in outcomes. There is evidence that rapid access to multidisciplinary foot care teams can lead to faster healing, fewer amputations and improved survival.

In an attempt to address this problem, a new integrated care pathway encompassing prevention, treatment and long-term care for the management of people whose feet are at

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risk because of diabetes has been launched by Diabetes UK (2012). This pathway hinges on heightened professional awareness of the scope of the problem, and prompt and effective communication, leading to care for individuals that transcends conventional professional boundaries.

This article will focus on the role of the community nurse and tissue viability service in relation to their roles and responsibilities as an integrated part of this multidisciplinary team.

### THE ROLE OF THE COMMUNITY NURSE

Community nurses look after people at home and in other community settings. They provide high-quality nursing care in the home and work with family members, GPs and other professionals to meet all of the individual's needs. They aim to improve the individual's quality of life, and help them remain

independent as long as possible, whether they need urgent or 24-hour care, long-term care or terminal care. They are experts at partnership working and coordinating different services to meet people's needs.

The key principles of community nursing services are effectiveness, integration, efficiency and expertise. However changing demography, persisting health inequalities and long-term conditions are challenging existing services. In addition, there are a number of interlinked factors that need to be considered in order to describe how district and community nursing should be developed. These include advances in medical technologies, increasing complexity and intensity of patient need in the community, consumer expectations, demand for services, the economic climate, the need to maximise the use of resources, and new commissioning and provider models.

*“Rapid access to multidisciplinary foot care teams can lead to faster healing, fewer amputations and improved survival.”*

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*“Primary care nurses are good at managing wounds and often viewed as the experts in pressure ulcer care, but are not podiatrists and do not have the same skill set.”*

With this in mind, it could be argued that community nursing staff have a vast and varied repertoire with competing specialties placing demands on time and care provision. As such, is it unreasonable to expect them to be a specialist in care of the diabetic foot? However, it is important for them to have an understanding of the cornerstones of care. As a minimum, community nurses should have an awareness of diabetic foot health principles, be able to recognise early symptoms, be able to follow local pathways to initiate referrals for screening, assessment and diagnosis, recognise complications and escalate care where appropriate. Unfortunately in practice it is not often as simple.

Nurses in primary care excel at initial holistic assessment, taking into account comorbidities. They are used to completing vascular assessment for leg ulcers and initiating wound care. These transferable skills can be used and applied to the care of a foot ulcer, but it is not easy to find an assessment tool that uses the same language, and care of the diabetic foot in the UK has become a podiatry-led service.

Effective foot care does not centre on what is put on the ulcer, but around holistic care in terms of offloading, debridement and judicious use of topical and systemic antimicrobials, where appropriate, to both treat and prevent infection in high-risk patients. This goes hand-in-hand with overall disease management and patient education. This approach has been adopted locally, but what is clear is that currently not all community nurses have the skills. Furthermore, while nurses are accountable for their own practice (Nursing and Midwifery Council, 2008), they are not podiatrists, and we must seek ways of integrating local pathways and assessment tools to accommodate this to ensure that patients see the right clinician in the right setting at the right time.

The University of Texas (Lavery et al, 1998) or Wagner scales (Wagner, 1989) are generally used to classify a diabetic foot ulcer.

If a foot ulcer is discovered during screening, the patient should be referred without delay for treatment and management by an experienced podiatrist who is part of a multidisciplinary foot team/service.

## THE LOCAL SERVICE

We have a local diabetes steering meeting that oversees strategic developments and reviews progress. The forum has taken a lead in the introduction of the diabetic foot pathway. Local foot teams have seen a significant improvement in major amputation rates in the past 18 months; the diabetes-related major amputation rate dropped from 1.54 per 1000 to 0.8 per 1000.

This forum is a primary care driven meeting and is always looking for ways to improve care and aims to promote the diabetes foot service in continuing to reduce local amputation rates. Evidence of late is directing diabetes foot teams to become involved in treating diabetic foot ulcers at a much earlier point. Traditionally patients have only been seen when the wounds are failing to heal, which is often quite late. Evidence suggests that multidisciplinary teams should see everyone with diabetic foot wounds to evaluate them at the start of the ulcer episode (SIGN, 2010).

Locally, it is clear that we need to re-examine our referral pathway to facilitate earlier referral, and the multidisciplinary foot care teams need to work more closely with the community nursing service to enable this. A change in current practice would be required and this approach is challenging because a significant proportion of this population are housebound or in nursing homes and cannot attend foot clinics.

This is further complicated by classification errors, as can be evidenced by the recent introduction of pressure ulcers as “never events” (National Patient Safety Agency, 2010). While nurses are reporting all incidents of pressure ulcers, it is clear that there is a lack of a consistent approach as to whether it is a pressure ulcer or a foot ulcer when it is on the foot of a person with diabetes (Tissue Viability Society, 2012). We need to ensure that we adopt a consistent approach and that, for example, pressure ulcers on the heels of people with diabetes are reported, investigated where appropriate and referred to specialist services. It is at this crossover that patients are often missed. Primary care nurses are good at managing wounds and often viewed as the experts in pressure ulcer care, but are not podiatrists and

do not have the same skill set. Therefore, we need to encourage integration and collaboration of services that benefit patients. What is clear is that education of staff is paramount.


## EDUCATION

Access to good quality, simple-to-use education has not always been easy for NHS staff. The challenge is to balance the conflicting demands of the service with personal and professional development. Fortunately, thanks to the Scottish government's introduction of the Foot Risk Awareness and Management Education project (FRAME, 2011), there is now an e-learning resource for foot screening. FRAME uses a standardised approach to diabetes foot screenings performed by healthcare professionals. The website aims to provide interactive learning and uses animations and case scenarios. There is an optional assessment at the end of the module which, if passed, gives a certificate of completion.

## SUMMARY

Foot screening is the cornerstone of good diabetic foot care. The purpose of screening is to carry out a quick, simple and evidence-based check to determine the risk of developing a diabetic foot ulcer. The patient should be made aware of their foot risk status and have an appropriate treatment and management plan agreed and implemented if or when required.

SIGN (2010) states that: "Diabetic foot screening is effective in identifying the level of risk of developing foot ulceration in patients with diabetes." The guideline also focuses on keeping the screening process simple and ensuring that all the main risk factors are screened for. It advocates that foot screening can be carried out by any clinician or worker involved in the care of a person with diabetes, for example, podiatrist, podiatry technician, practice nurse, support worker, district nurse, GP or any other competent healthcare worker. It is not important who undertakes the screening process as long as the individual has the competence and training to do so and is aware of what action to take depending on the results and the patient's risk status.

The challenge for organisations is to decide how to train staff to ensure that patients receive the right treatment at the right time by the right professional in the right setting for them that helps avoid complications of diabetes and reduces overall healthcare costs. 

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