

Do you refer all newly occurring foot ulcers for specialist assessment within one working day?

As a reader of *Diabetes & Primary Care*, what would you do if you learnt that one of your parents (who, let us say, has type 2 diabetes but is relatively fit and active at the age of 72 years) has a sore on their foot?

It is reasonably safe to assume that a large majority of readers would either look at the foot themselves within a day or would arrange for someone else to do it. It is also safe to assume that if the wound proved to be worrying – with a large ulcer, for example, or with signs of infection or peripheral artery disease – they would want the foot to be assessed within the day by someone who was a specialist in the field.

If, on the other hand, the foot had just a smallish, clean ulcer with no signs of infection,

the majority are likely to agree to its being dressed and then reassessed in a day or two – unless, that is, it has already been present for a week or more and has shown no sign of getting better. If the latter is the case, you would contact someone you knew and ask for an expert opinion.

If these assumptions are correct and this is what we would do for a relative, then this is what should be the standard of care for any person with diabetes, irrespective of diabetes type and comorbidity. This accepted standard of care is the basis of NICE guidance that recommends referral of all diabetic foot ulcers for specialist assessment within one working day (NICE, 2019).

The risk posed by foot ulcers in diabetes, and the cost

A new foot ulcer will occur in 2–3% of all people with diabetes in any calendar year, but the incidence is very much higher in those who have had one before. Once an ulcer occurs, the likelihood of its healing (even when under the supervision of a specialist team) is approximately 50% at 3 months (and 65% at 6 months; NHS Digital, 2019). While unhealed, the ulcer can be the source of considerable incapacity and distress, and management requires regular visits from/to healthcare professionals for review and dressing changes. The ulcer also carries with it the risk of infection, worsening distal circulation, hospital admission, surgery (including major amputation) and increased risk of death. The mortality following the onset of any foot ulcer is 40–50% at 5 years: the same as that of carcinoma of the colon.

While hospital admission and surgery are expensive, it is the cost of having the wound dressed that dominates. In a recent update

of an earlier meticulous review, Marion Kerr and colleagues (2019) have calculated that the healthcare cost of diabetic foot ulcers approaches a staggering £1 bn each year – almost 1% of the *total* NHS budget for England – and is greater than the cost of carcinoma of the breast, lung and prostate combined. They also calculated that 60–65% of the total cost of ulcers was borne by community, outpatient and primary care – principally from dressing changes and regular checks.

The need for early specialist assessment

While many ulcers do not present an immediate threat to either the limb or the patient and can be managed with simple wound care for long periods without seeming ill-effect, some will deteriorate rapidly – especially in those with infection, peripheral artery disease or other comorbidity, and this is the rationale behind the emphasis on early specialist assessment. There is also clear



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evidence from the National Diabetes Foot Care Audit of England and Wales (NDFCA) that the sooner people are formally assessed, the better is the outcome (whether in terms of early healing, hospital admission, limb loss or death; NHS Digital, 2019). Of over 33 000 ulcer episodes presenting between 2015 and 2018, healing occurred within 12 weeks in 49% of those formally assessed within 2 weeks of first presentation to a healthcare professional, compared with only 35% of those who waited more than 2 months before first specialist assessment.

In this respect, it is worth noting the findings of a recent review of the incidence of healing in a sample of patients identified from The Health Improvement Network (THIN) database (which collates activity from 11% of general practices in UK) and who were managed primarily in the community and primary care. In this study the *overall* rate of healing appeared to be remarkably poor at just **35% within 12 months** (Guest et al, 2018).

The feasibility of compliance with NICE guidance

The NICE recommendation that all people newly presenting with diabetic foot ulcers should be referred within one working day will obviously seem a bit heavy-handed when the ulcer is small and the person is relatively fit and well. In such circumstances, the patient may also be surprised and worried by the need for urgent review, and many will also have difficulty in making the necessary arrangements for transport, etc. The data currently available, however, indicate that the clinical outcome is significantly better in those who are assessed by a specialist within 2 weeks of presentation. The specialist assessment may be made by a member of a hospital-based multidisciplinary service or by a community podiatrist who works in close collaboration with them.

Geographical variation in time to first specialist assessment and in clinical outcome

Nevertheless, it must be acknowledged that, in some areas, clear pathways for prompt assessment may not yet exist. Such patchiness of healthcare delivery is suggested by the NDFCA finding that the median percentage of new ulcers being

assessed within 2 weeks of first presentation varies enormously – from 12% to 97% – between different parts of England and Wales (NHS Digital, 2019).

There are also major differences in clinical outcome, with a seven-fold variation in the incidence of major amputation – from the lowest to the highest – across England. This means that a person with diabetes is seven times more likely to lose their leg in one part of England than those who live elsewhere, even when comparing case-mix-adjusted populations (Jeffcoate et al, 2017). And while there are several possible factors that are likely to contribute to this variation, all seem to hinge on differences in the accessibility and delivery of quality care. Prompt specialist assessment is an essential component of care of foot ulcers in diabetes, together with the close collaborative working that exists between hospital, community services and primary care. ■

Guest JF, Fuller GW, Vowden P (2018) Diabetic foot ulcer management in clinical practice in the UK. *Int Wound J* **15**: 43–52

Jeffcoate W, Barron E, Lomas J et al (2017) Using data to tackle the burden of amputation in diabetes. *Lancet* **390**: e29–e30

Kerr M, Barron E, Chadwick P et al (2019) The cost of diabetic foot ulcers and amputations to the National Health Service in England. *Diabet Med* **36**: 995–1002

NHS Digital (2019) *National Diabetes Foot Care Audit, 2014–2018*. NHS Digital, Leeds. Available at: <https://bit.ly/2vA4tD5> (accessed 24.01.20)

NICE (2019) *Diabetic foot problems: prevention and management (NG19)*. NICE, London. Available at: <https://www.nice.org.uk/guidance/ng19> (accessed 24.01.20)



This ulcer is the result of someone with deformity of the first metatarsophalangeal joint which is causing increased pressure under first metatarsal head. The skin has ulcerated because peripheral neuropathy with loss of protective sensation has meant that the person has felt no pain or discomfort and has continued to walk on it. There are associated signs to suggest infection of the ulcer, leading to probable underlying osteomyelitis. NICE guidance suggests that all people with a newly presenting foot ulcer in diabetes should be referred for expert assessment within one working day.