A new campaign to put feet first

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Despite its clinical burden and cost, disease of the foot has been the most neglected complication of diabetes and this is evidenced by the widespread differences in the outcome of management. In an attempt to address this problem, a new integrated care pathway has been launched by Diabetes UK for the management of people whose feet are at risk because of diabetes, and encompasses prevention, treatment and long-term care. This pathway hinges on heightened professional awareness of the size of the problem, and prompt and effective communication, leading to care for individuals that crosses conventional professional boundaries.

Background

Disease of the foot in diabetes does not rank high in the minds of non-specialist doctors and nurses. One reason is that few have had any specific training in the field and therefore many have restricted insight into what is involved in both assessment and treatment. When this is combined with a professional reluctance to look at feet (often matched by an individual's reluctance to have their feet examined), it is hardly surprising that the diabetic foot tends not to be well managed. A rash of guidelines have been published in an attempt to grapple with this situation, but in the current top-down culture that prevails in the NHS, many professionals feel that they have been exposed to more guidelines than they can currently handle and have adopted a coping strategy which is largely based on putting a telescope to a blind eye.

A Nelson-like approach is, however, inappropriate in a condition such as the diabetic foot – which can threaten both limb and life, and which needs early, expert assessment. The risk of missing major treatable disease is quite considerable, and there is evidence that ulcer duration at the time of first referral correlates directly with healing time (Margolis et al, 2002; Ince et al, 2007).

A person with diabetes who develops an inflamed foot needs more than the repeated courses of flucloxacillin that are as much as many will be offered; the mistaken diagnosis of infection is commonplace in limb-threatening conditions such as critical limb ischaemia, or the acute Charcot foot. There is one simple maxim for any healthcare professionals who are uncertain about the speed with which a person with foot disease should be referred for expert advice. They should ask themselves what they would do if the individual was their own mother or father: they would pick up the phone.

New integrated care pathway

The need for a speedy referral to a specialist team has been encapsulated in the new integrated care pathway released by Diabetes UK at their *Annual Professional Conference* on 7 March 2012, under the banner of Putting Feet First (*Appendix 1*; Diabetes UK, 2012). The pathway collates guidance from the four key documents that preceded it: the NICE (2004) clinical guideline (CG10), Diabetes UK documents Putting Feet First (Diabetes UK et al, 2009) and the National Minimum Skills Framework (Diabetes UK et al, 2011), and the latest NICE (2011) guidance on the management of the inpatient diabetic foot (CG119).

Despite the wide brief of the pathway – which has been endorsed by NHS Diabetes, the Society of Chiropodists and Podiatrists, Foot in Diabetes UK, the Association of British Clinical Diabetologists, the Scottish Diabetes Foot Action Group, the Welsh Endocrine and Diabetes Society and the Primary Care Diabetes Society – its entire content is contained on only two sheets (see *Appendix 1*). Diabetes UK has also produced patient information on footcare as part of this campaign (visit http://bit.ly/yhXxHu).

Together, these documents summarise the care that every person with diabetes should expect with regard to the prevention and management of foot complications, including ulceration, infection, ischaemia and the acute Charcot foot, but not painful neuropathy – for which separate NICE (2010) guidance exists (CG96). The pathway is broken down into three parts: (i) prevention of active disease of the foot in those at increased risk; (ii) treatment of active disease of the foot; and (iii) management of the person whose foot disease has been treated.

Part 1: Prevention: Referral to the Foot Protection Team for people at increased risk

All people with diabetes should already expect to have their feet examined by a competent practitioner each year (NICE, 2004), but the change to Quality and Outcomes Framework (QOF) indicators from April 2011 now also requires that their individual risk of future ulceration is documented (British Medical Association and NHS Employers, 2011). Some commentators regretted that the 2011 changes to QOF did not include a requirement to refer those found to be at increased risk of ulceration (Gadsby, 2011). Although this is indeed unfortunate, it should make little difference in practice for three reasons: (i) the requirement to refer people at increased risk is already covered by preexisting NICE guidance (NICE, 2004); (ii) people with diabetes will be increasingly aware that this is their right; and (iii) healthcare professionals who fail to refer risk litigation should things go badly wrong.

Podiatrists providing care under the new "any qualified provider" (AQP) scheme will not – in the majority of cases – be sufficiently skilled for care of the diabetic foot at increased risk of ulceration, which is reflected in the AQP Podiatry Service Specification: "[this specification covers] elements of core podiatry defined as the scope of practice obtained at graduation ... *excluding* ... people with diabetes assessed under NICE CG 10 as [being] at increased risk or above" (Department of Health, 2012).

What, some may ask, should general practice staff do if there is no Foot Protection Team in their area? The answer is simple: there should be one, and they should be aware of how to contact that team. A Foot Protection Team should be in the portfolio of services provided by those who are commissioned to provide specialist diabetes care, and it is the responsibility of commissioners to make sure it is available.

Part 2: Active disease: The key role played by commissioning in implementing the pathway

Commissioners also have to ensure that those providing specialist diabetes care have access to an established multidisciplinary footcare team (MDFT), as outlined in the National Minimum Skills Framework (Diabetes UK et al, 2011) and NICE (2011) guidance (CG119; 2011). The creation of such teams has previously been shown to reduce the incidence of diabetes-related amputation to between a fifth and a quarter of its former level (Canavan et al, 2008; Krishnan et al, 2008). Anyone who presents with newly occurring, or newly deteriorating, disease of the foot should now expect to be referred to a member of the MDFT within 24 hours of being seen. In some cases this will be inappropriate – especially in older, frailer people, and those with multiple disabilities. However, prompt referral should be the default.

Part 3: Long-term management

The third and last component to the pathway relates to long-term management of the person with foot disease, even after healing. The person with diabetes who has had a foot ulcer faces two major threats. The first is the onset of new ulceration, which occurs in up to 40% at 12 months, even when specialist preventative footwear, podiatry care and education are provided (Lincoln et al, 2008). The second is early cardiovascular mortality; mean 5-year survival of people presenting with a new foot ulcer is only 50% – the same as with carcinoma of the colon, and three times worse than with carcinoma of the breast (Robbins et al, 2008) – and there is evidence that mortality risk in this population may be improved by aggressive attempts to reduce cardiovascular risk (Young et al, 2008).

This increased mortality risk is not limited to those with peripheral arterial disease; there is an average 14-year reduction in life expectancy among those with a history of diabetic foot ulceration, even in the relatively younger population with a neuropathic foot ulcer (van Baal et al, 2010). This means that the person who has had an episode of foot disease should remain under continued close surveillance (in community or secondary care, or both).

Conclusion

It is obvious that the needs of the person with diabetes who has (or is at risk of) foot disease not only are complex but have been relatively neglected in the past. This may be one reason for the enormous variation in outcome that exists throughout England, with the incidence of major amputation currently varying 10-fold between PCTs, from the lowest to the highest (Holman et al, 2012). Such variation probably results mainly from variation in the provision of care and would not be tolerated in any other condition, especially not in one associated with such high mortality. ■

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Appendix 1. Putting Feet First (Diabetes UK, 2012).

PUTTING FEET FIRST

Commissioning/planning a care pathway for foot care services for people with diabetes

BACKGROUND

- The consequences of poor management of the foot in diabetes are considerable: prolonged ulceration and ill-health, gangrene and amputation, depression and death. The annual costs to health care agencies in the UK are estimated to exceed £1billion.
- Good management requires close coordination between different groups of health care professionals. Such coordinated management is not yet widespread.
- Three UK centres have shown that by changing the structure of care, it is possible to reduce the incidence of limb loss by amputation to as little as 20 per cent of its baseline level.
- It is imperative that such re-organisation is implemented in order to improve health outcome and reduce costs.

THE STRUCTURE OF AN EFFECTIVE FOOT CARE PATHWAY

The essential elements of an effective clinical service have been described in *Putting Feet First* (2009), and *Putting Feet First National Minimum Skills Framework* (2011), both released jointly by Diabetes UK and NHS Diabetes. These documents define the services to which each person with diabetes should have access – for both prevention and treatment of foot disease. The National Minimum Skills Framework also defines the constitution and responsibilities of the teams necessary to provide these services: the Foot Protection Team (FPT) with a primary responsibility for prevention, and the Multidisciplinary Team (MDT) which should coordinate the management of all new disease. The FPT and MDT must work closely together.

Pathways of care must ensure prompt and effective transition of care across health care boundaries, including traditional boundaries that exist within the community, between community and hospital, and between different specialist groups in hospitals. The publication in April 2011 of new QOF indicators for general practice, together with the *NICE Guidelines CG 119*, *SIGN Guidelines 116* and the *NICE Quality Standard 10* completes the picture for the minimum expectations for people with diabetes. The present document demonstrates the way in which these requirements can be brought together in an integrated pathway of care.

COMMISSIONING/ PLANNING

The central roles of the FPT and the MDT have been emphasised in *NICE clinical guidelines CG 10* (2004) and *CG 119* (2011), *SIGN guidelines 116* (2010), as well as in the *NICE Quality Standard Statement 10* (2011). The provision of effective ulcer prevention and wound management by such teams should be the basis of the commissioning /planning of foot care services in diabetes.

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NICE CG10: www.nice.org.uk/CG10

NICE CG119: www.nice.org.uk/nicemedia/live/13416/53558/53558.pdf

Nice Quality Standards Statement 10: www.nice.org.uk/media/FCF/87/DiabetesInAdultsQualityStandard.pdf

SIGN 116 Management of diabetic foot disease March 2010: www.sign.ac.uk/guidelines/fulltext/116/index.html

TRANSFORMING FOOT CARE SERVICES IN DIABETES

1 PREVENTION OF ACTIVE DISEASE OF THE FOOT IN THOSE AT INCREASED RISK

Referral of those at increased risk to the Foot Protection Team (FPT)* Foot risk status correlates closely with outcome. The need to document risk of each individual with diabetes was incorporated in QOF targets in April 2011. The 2011 NICE Quality Standard 10 and the Diabetic Foot Risk Stratification and Triage (SIGN 116) also states that all people at increased risk will receive regular review by a member of a FPT. People with diabetes should be aware of their risk status and this entitlement. All people at increased risk should be referred promptly to a member of the FPT.

Education of specialist staff and patients It is necessary that those who examine the feet to determine risk status have the necessary training and competence. Training will be a role which can be provided by the FPT. An essential part of the annual review of feet is patient education. The person with diabetes should be aware of the reason for the examination being undertaken, the results of the examination, the services to which they should have access if they require specific preventive measures and action to be taken if they develop a foot problem.

A free online training programme is available at www.diabetesframe.org

* Sometimes referred to as the Foot Care Team

2 TREATMENT OF ACTIVE DISEASE OF THE FOOT

Active disease of the foot includes:

- Ulceration, with or without infection and peripheral arterial disease
- Peripheral arterial disease without ulceration
- Acute Charcot foot
- Painful peripheral neuropathy
- Disease of the foot unrelated to diabetes.

Ulceration All ulcers should be referred to the MDT within 24 hours.

Peripheral arterial disease without ulceration People thought to have symptomatic peripheral arterial disease should be referred either to a vascular surgical unit for assessment, or to the MDT.

Acute Charcot foot People with diabetes and neuropathy who develop unexplained inflammation of the foot should be assumed to have an acute Charcot foot and referred by phone for urgent assessment by the MDT. They should be told not to take weight on the foot until they have been seen.

Painful peripheral neuropathy Guidelines for the management of painful neuropathy have been published (NICE CG 96 and SIGN 116) and this can be supervised in general practice, provided that the GP is confident that the neuropathy is the cause of the pain. Referral to an MDT may be necessary for assessment.

Disease of the foot unrelated to diabetes Symptoms or signs of other diseases should be managed appropriately.

3 MANAGEMENT OF THE PERSON WHOSE FOOT DISEASE HAS BEEN TREATED

Prevention of new foot disease The person who has had an episode of foot disease has a 40 per cent risk of a second episode within 12 months. This group is at highest risk and they should:

- remain under regular review by a member of the FPT or the MDT
- understand the importance of prompt assessment by the MDT of any newly occurring problem.

Reduction of cardiovascular risk The average survival rate at five years is just 50 per cent for people who present with active disease of the foot. Average life expectancy is reduced by 14 years – even in those with predominantly neuropathic disease. As the main cause of increased mortality is cardiovascular, it is essential that all necessary steps are taken to reduce cardiovascular risk.

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PUTTING FEET FIRST

A footcare pathway for people with diabetes

Annual Foot Review

Foot examination with shoes and socks/stockings removed

- Test foot sensations using 10g monofilament or vibration
- Palpate foot pulses
- Inspect for any deformity
- Inspect for significant callus
- Check for signs of ulceration
- Ask about any previous ulceration
- Inspect footwear
- Ask about any pain

ADVISE THE PATIENT TO:

- Check their feet every day
- Be aware of loss of sensation
- Look for changes in the shape of their foot
- Not use corn removing plasters or blades
- Know how to look after their toenails
- Wear shoes that fit properly
- Maintain good blood glucose control
- Attend their annual foot review

DIABETIC FOOT RISK STRATIFICATION AND TRIAGE/IDENTIFICATION OF RISK STATUS

	DEFINITION	ACTION
ACTIVE	Presence of active ulceration, spreading infection, critical ischaemia, gangrene or unexplained hot, red, swollen foot with or without the presence of pain, painful peripheral neuropathy, acute Charcot foot*	Rapid referral to and management by a member of a Multidisciplinary Foot Team (see over). Agreed and tailored management/treatment plan according to patient needs. Provide written and verbal education with emergency contact numbers. Referral for specialist intervention when required.
HIGH	Previous ulceration or amputation or more than one risk factor present eg loss of sensation or signs of peripheral vascular disease with callus or deformity.	Annual assessment or 1–3 monthly according to need* by a specialist podiatrist or member of a foot protection team*. Agreed and tailored management/treatment plan by a specialist podiatrist or the FPT* according to patient needs. Provide written and verbal education with emergency contact numbers. Referral for specialist intervention if/when required.
MODERATE (INCREASED*)	One risk factor present eg loss of sensation or signs of peripheral vascular disease without callus or deformity.	Annual assessment or 3–6 monthly according to need* by a specialist podiatrist or member of a foot protection team*. Agreed and tailored management/treatment plan by podiatrist or the FPT* according to patient needs. Provide written and verbal education with emergency contact numbers. Referral for specialist intervention if/when required.
LOW	No risk factors present eg no loss of sensation, no signs of peripheral vascular disease and no other risk factors.	Annual screening by a suitably trained Healthcare Professional. Agreed self management plan. Provide written and verbal education with emergency contact numbers. Appropriate access to podiatrist if/when required.

Risk status should be documented and the patient informed.

These risk categories relate to the use of the SCI-DC foot risk stratification tool. * NICE Guidance

Produced by the Scottish Diabetes Foot Action Group

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Appendix 1 (continued). Putting Feet First (Diabetes UK, 2012).