# FDUK: The NICE way to stay alive: key signs of best diabetes foot care

*Karl Guttormsen*

**This document presents a summary of the FDUK's 11th masterclass on the foot in diabetes, held on November 10, 2015 at the Harrogate International Centre, UK. The programme, held in conjunction with the hugely popular Wounds UK annual conference, offered a dynamic, interactive and enjoyable learning experience.**

Dr Paul Chadwick, consultant podiatrist at Salford Royal NHS Foundation Trust (SRFT) and chair of Foot in Diabetes UK (FDUK), introduced the day to the Bee Gees' 'Staying Alive' score. The musical styling set the theme of the 11th FDUK masterclass, which was a series of presentations, workshops and open discussions on how clinicians may best help save patients' lives, as well as their limbs. Dr Chadwick discussed the vital input FDUK is having on the political landscape of diabetic foot disease, highlighting its wide-reaching influence and recent involvement in helping develop current National Institute for Health and Care Excellence (NICE) guidance. He encouraged attendees to keep updated with the important work via 'LinkedIn' on: *https://uk.linkedin.com/pub/fduk-secretariat/92/a10/304*

## Have you got a NICE service?

Catherine Gooday, principle podiatrist, Norwich University Hospital NHS Foundation Trust, addressed why there was a need for a review of the previous national guidance and why NG19 has replaced NICE guidelines CG10, CG119, and the recommendations on foot care in NICE guideline CG15. She stated that currently there are 3.2 million people with diabetes in the UK and amputation rates vary widely from Trust to Trust. She also assesrted that there were certain groups and environments excluded from the previous guidelines. Consolidation of previous guidelines was imperative to enable each demographic to be fairly represented and care be delivered seamlessly across all settings.

She highlighted the need for parity in training and competency, of special arrangements for those with disabilities and the vital importance of establishing integrated pathways for screening, foot protection services, multidisciplinary diabetic foot care services and orthoses/footwear provision. Catherine outlined the key priorities for implementation of the new guidelines, which are: care within 24 hours of a person being admitted to hospital, care across all care settings, assessing the risk of developing a diabetic foot problem, managing and stratifying diabetic foot problems, diabetic foot infection and Charcot arthropathy.

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Catherine went on to discuss potential challenges of implementation, such as inadequate resources, poor integration, and training and competency issues. They advocated the participation in the National Diabetic Foot care Audit and extolled the virtues of such work. The speakers then gave the floor to Samantha Haycocks (advanced diabetes podiatrist, SRFT).

## Clinical audit in the foot clinic: recognising and integrating local/national audit

Samantha discussed critical event analysis and reflected on the aims of this in SRFT (i.e. to review above-ankle amputations, reflect on the care provided for individual patients, look at failures in systems of care, multidisciplinary team approach in a non-judgemental supportive environment, and develop an action plan to reduce further occurrences). Samantha shared some of the key learning outcomes of past critical event analysis, one of which was the identified need for specific training programmes for the multidisciplinary team (e.g. cardiovascular (CV) risk factor reduction). She reported on an audit around the 'Putting Feet First' initiative that demonstrated a significant shortcoming in its implementation. Samantha concluded that the results of the audit warrant further reflection and improvements. She also presented the results of a longitudinal audit of Salford foot ulcer patients between 2001 and 2012.

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Samantha concluded from the results that demographic characteristics of people presenting with new diabetic foot ulcers have not changed since 2001. However, presenting ulcers are less severe, less likely to be recurrent and the incidence rate has fallen. Short-term mortality is lower, but is still disturbingly high. Ulcer severity and mortality rate were associated; one in four people presenting with diabetic foot ulcers (DFUs) died within 2 years. This short-term mortality was very high, especially if peripheral arterial disease was present; which more than doubled the risk of dying.

Finally, Samantha presented the results of the (pilot) National Diabetes Footcare Audit between 2011 and 2013. She concluded from the results that prospective DFU audit is practicable, standardised comparative measurement is possible, the SINBAD severity score is valid and easy to determine, and quality of life (QoL; EUROQOL) is not practicable or useful.

## Painful diabetic neuropathy — a sufferer's perspective

Paul Chadwick then shared some current concepts of chronic illness and highlighted the need for painful diabetic neuropathy (PDN) to be incorporated under this umbrella term; in part, due to the chronicity of PDN, but also because of the uncertainty surrounding the diseases trajectory. He discussed the term 'illness narrative', stating that if a person's belief is that his or her pain is enduring and mysterious, he or she is less likely to use cognitive coping strategies and more likely to catastrophise. Paul explored the effect uncertainty has on patients' mental and physical health, stating that uncertainty is difficult to cope with and a lack of definition or understanding of a condition affects expectations about the illness, its management and the expected outcome.

*Chair of Foot in Diabetes UK (FDUK) Paul Chadwick, during his opening address.*

He also discussed some compounding statistics, such as, on average, 40% of patients who had seen a medical practitioner with symptoms of PDN had never received any treatment. Paul went on to share a patient's story: "I can't do my job like I used to; I'm in the building trade, if I have a bad night, then I can't get up early to get started, so I'm losing money. Then I'm knackered and can't drive the digger properly." Paul said this emphasised the importance of a holistic consultation approach. His take-home message was, listen to the patient's story, use care planning, negotiated goal setting, and do not just give them a pill. He concluded that PDN is a chronic illness that invades people's lives, altering their life trajectory, and our assessment should reflect the illness not just the disease.

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## Does the frequency of podiatry appointments impact DFUs?

Next Joanne McCardle, diabetes foot research fellow, Royal Infirmary of Edinburgh, presented her unpublished post-graduate clinical research. Joanne wanted to allay attendees' fears about entering into research and demonstrated how academic research is relevant and the positive impact it can have on patient care. Joanne introduced the research she has conducted by first lamenting that the biggest risk factor associated with developing a DFU is the patient already having had a history of ulceration/amputation. Joanne referred to re-ulceration as a revolving door and intimated that recurrence rates are around 50%. She suggested that the three main reasons for this are that patients have already demonstrated risk behaviours due to the occurrence of their previous DFU, poor footwear choice (either through insufficient education, not wearing prescribed footwear or not having access to footwear) and that it 'just happens' (i.e. it is insidious).

Joanne looked at how re-ulceration could be avoided and chose to see whether the frequency of podiatry care could play a part. She highlighted there is limited evidence to whether or not screening/examination of the foot prevents complications. Joanne concluded that current evidence does seem to indicate that podiatry input, review and assessment, may ultimately benefit patient care. However, she then considered how we put this into practice and make best use of the finite resources at our disposal; which posed the question: 'How do we know what the optimum time between appointments is?'

The 1-year randomised controlled trial looked at three groups; group one was seen every 2 weeks, group two every 4 weeks and group three every 8 weeks. Joanne reported that there was no 'statistical significance' in preventing secondary DFU or in time to re-ulceration with increased frequency of podiatry appointments. Once healed, there was no evidence to suggest that more frequent appointments were necessary and, therefore, these may be extended. Services can thus potentially offer free appointments and allocate them based on need rather than potentially inconsistent clinical judgement.

## Appropriate use of larval debridement therapy: consensus

Paul Chadwick and Duncan Stang, national diabetes foot coordinator for Scotland, FDUK representative, Lanarkshire, discussed the consensus recommendations in *The Diabetic Foot Journal* (Chadwick et al, 2015).

They suggested that in wounds requiring rapid debridement of devitalised tissue that is delaying wound healing, consideration should be given to using larval debridement therapy (LDT) as a first-line treatment, either as a stand-alone option or alongside other debridement methods. When deciding whether LDT is appropriate, practitioners should take into account wound factors and patient factors, along with cost considerations.

Paul and Duncan advocated LDT in moist, sloughy/necrotic wounds, including wounds that have re-sloughed after surgical/sharp debridement, wounds with sloughy/necrotic tissue underlying thick eschar (after first removing the hard 'cap' with another intervention, e.g. sharp debridement or hydrogel), wounds that are not on a satisfactory healing trajectory with other debridement measures and also in infected wounds (in conjunction with antimicrobial therapy). They gave examples of when to consider LDT (i.e. in patients not suitable for surgical debridement and patients with peripheral arterial disease, among others). They listed various contraindications, i.e. wounds with dry hard eschar/callus (prior to removal of eschar or softening with hydrogel) and wounds in close proximity to a large blood vessel.

They went on to discuss competencies. One method for acquiring such competency was the Larval Academy, a free online learning platform that is accredited as 5 hours of learning (*http://larvalacademy.com*).

## Diabetic foot disease — the past, present and the future

Keynote speaker Professor Andrew Boulton (President of the European Association for the Study of Diabetes; Professor of Medicine, University of Manchester; Visiting Professor, University of Miami; Consultant Physician, Manchester Royal Infirmary) discussed the journey of diabetic foot care from the conception of the Malvern diabetic foot meetings in 1986 to 2015 heralding the 7th international meeting. Andrew acknowledged the pioneering works of doctors Brand and Corrigan. He advocated the Ipswich touch test and then discussed the European group on Diabetes and Lower Extremity (Eurodiale) study — a study in 14 European centres that has produced new insights into the management of DFU and how care can be improved. He lamented the current lack of robust evidence in the prevention of DFUs. Andrew stated that current work around the identification of heat/inflammation using infrared thermography shows some promise in reducing re-ulceration rates.

Andrew asserted that there is observational evidence that a podiatry-led diabetic foot service reduces ulcer rates. He postulated that patients with diabetes and renal disease (i.e. an estimated glomerular filtration rate <30) are at greater risk of ulceration than other groups and pointed to the work and recommendations of the American Diabetes Association. He discussed the importance of offloading, and also stated that Department of Health offloading walkers are just as effective as total contact casts as long as they are made non-removable, as patient compliance is the key factor in efficacy. He stated there is no difference in outcomes for treating osteomyelitis with antibiotics alone compared to antibiotics and topical antimicrobials. He also pointed out that there remains low, poor quality evidence for dressing selection and reminded attendees that dressings do not heal ulcers, they merely keep them clean. He conceded that topical negative pressure can be a useful non-invasive therapy. Andrew highlighted the perils of prophecy, but stated the future needs good systematic reviews by true experts.

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## Urgo award winners 2014

Attendees then made their way back to the previous meeting room for the Urgo Award 2014 winners and launch of the 2015 award. The Urgo Foundation DFU award of £20,000 is granted every year to healthcare professionals who have innovative ideas, initiatives and practices for the prevention and management of DFUs. This year, the prize of £20,000 has been split equally between the two winners, which has helped them conduct their prosed initiatives.

### Alex Whalley, advanced podiatrist, Bolton Diabetes Centre: 'Preventing diabetic foot ulcers: back to basics'

Alex's focus was on root cause analysis of all cases referred to Bolton Diabetes Centre presenting with a foot ulcer for the first time. Her main objectives were to assess the quality of care for people with diabetes, clinical pathways, empowering patients to understand their condition, ensure podiatric care is of the highest quality and meets the patients' clinical needs, sharing the findings with others. Her initial findings are that there are delays in referral to the multidisciplinary diabetic foot care services, patients were not aware of their risk status, it highlighted patients are not reading supplied literature, there are discrepancies in screening results between technicians and podiatrists and few knew what to do in a 'foot emergency'. Alex said that an awareness of the problems has helped her service start to address them.

### Martin Fox, vascular specialist podiatrist, Pennine Acute Hospitals Trust: 'Empowering patients and clinicians to save more limbs and lives'

Martin's *raison d'être* is to raise awareness of clinicians' potential to impact on CV risks in people with lower-limb disease. He reminded attendees that the modifiable risks associated with DFUs are early death, heart attacks and strokes along with amputation. He lamented the lack of information in existing patient information leaflets on the actual risks associated with DFUs and evidence-based risk-reducing interventions. Martin reviewed the current published evidence; highlighting that the 10-year outcomes for people with DFUs are that 15% will undergo an amputation, while 70% will die, with over half of the deaths being CV-related. Martin's initiative focused around raising awareness of CV risk management, and empowering patients and clinicians to discuss and negotiate changes in lifestyle and therapy. The campaign incorporated posters and

educational leaflets that do just that; they help patients know their risks, support clinicians to negotiate better management and contain targets to work towards. Martin's work could greatly benefit patients' survival rates and he encouraged attendees who would like to know more or participate in the pilot to contact him at Martin.Fox@nhs.net.

### The 2015 Urgo Foundation Diabetic Foot Ulcer Award winners

URGO announced The Urgo Foundation DFU Award winners for 2015. These were Dr Heidi Siddle, Thomas Dickie and David Russell (Leeds Teaching Hospitals NHS Trust): 'The use of high resolution ultrasound imaging to detect the early signs of soft tissue infection in patients with diabetic foot ulcers'; and Dr Jane Lewis, Professor Rose Cooper and Dr Rowena Jenkins (School of Health Science, Cardiff Metropolitan University): 'A feasibility/pilot study to investigate the relationship between antibiotic use and the incidence of two representative bacteria in antibiotic resistance in diabetic foot ulcers.'

## Hypoxia, the immune system and chronic wounds

Next John Brew, Head of Biology, SEEK Group, presented a brief, but interesting, talk about hypoxia in DFUs and the adverse effect this has on wound healing and the immune response. John stated that introducing oxygen back into the wounds via haemoglobin, the natural carrier of oxygen, is the obvious choice to remedy these adverse effects.

Sharon Hunt, Advanced Nurse Practitioner, independent specialist in tissue viability, then presented the results of her randomised controlled trial. She explained that patients were split into two cohorts; those that had Granulox applied and those that did not. Sharon shared her results, stating that in the Granulox group *versus* the control group, more than double the rate of healing was seen, nearly three times more wounds closed within 8 weeks, there was 96% pain-reduction by week 4, 100% slough elimination by week 4, and improved efficacy, regardless of glucose level. Sharon concluded by saying: "Oxygen therapy is another tool in our tool box in the fight against delayed wound healing."

## Workshops

The conference then split into three exceptional interactive workshops on X-rays, offloading and the Charcot foot.

## Staying alive: CPR for feet

Duncan Stang ended the day by discussing the various pressure ulcer prevention strategies from across the UK. He added that NICE had published a costing statement in April 2014, which gave a strong economic argument for prevention. He discussed those who are most at risk of developing an avoidable foot ulcer (i.e. patients with diabetes, peripheral arterial disease, bed-bound, malnourished, frail and older). Duncan then addressed what CPR for feet stands for, with every patient with diabetes on admission to hospital:

1. Having their feet Checked
2. If their feet are at risk, they are Protected
3. If they are discovered to have an existing problem then they are Referred appropriately.

*"The responsibility to discuss patients' survival rates with them lies with each and every clinician."*

Duncan also explained he feels that HeelSafe and SoleSafe (both ICF) may be useful pieces of kit for offloading bed-bound patients.

## Morbidity and mortality: just how grim is foot disease?

The final session of the day saw Martin Fox return to explicate further on morbidity and mortality in relation to foot disease. He began by posing two questions:

1. Whose role is it to discuss morbidity and mortality outcomes with our patients?
2. Is it time to use the principles of cardiac rehabilitation to save more lives and limbs?

Martin suggested that all patients attending high-risk foot clinics are at high modifiable risk of early death and clinicians have known this for decades. He pointed out clinicians are too foot and ulcer focused and that very few are clearly informed on CV management and have set a simple, defined risk reduction plan with patients. He emphasised that the related CV mortality in this cohort is higher than that of patients suffering with breast cancer, prostate cancer or Hodgkin's disease.

Martin left no room for doubt that the responsibility to discuss patients' survival rates with them lies with each and every clinician. He critiqued the recent updated NICE NG19 guidance, stating he feels it does not adequately cover CV risk factor management. He extolled cardiac rehabilitation and the benefits of CV exercise, quoting Sakamoto et al (2009): "Cardiovascular death reduced 80% vs 58% at 10 years and cardiovascular events reduced 46% vs 23% at 13 years." He also advocated the benefits of ensuring CV medication is optimised.

The obvious answer to Martin's second question is that he feels clinicians should use the principles of cardiac rehabilitation, which comprise of a range of effective interventions for people with arterial disease. He quoted Matthew Young's observation that halving the 5-year mortality would prolong the lives of 40,000 people annually. The challenge for most clinicians is deciding if, when and how to deliver difficult news. The SPIKES consultation model described by Kaplan (2010) is perhaps one that all podiatrists can use in foot clinics.

He finished by proposing that as preferred by patients in a review of the cancer literature, prognostic information should be provided openly, honestly and clearly to people with lower-limb disease who have elevated mortality risks. ■


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