

# Diabetic foot care training in the absence of podiatrists



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The staggering shortage of podiatry education programmes throughout the world, especially in developing countries, was highlighted in a recent issue of *The Diabetic Foot Journal* (Bakker, 2009; Tulley et al, 2009). Only 19 of the world's 212 countries have licensed schools of podiatry, producing woefully inadequate numbers of podiatrists to address the diabetic foot problem on a global scale, with the estimated prevalence of diabetes expected to rise to 380 million by 2025 (International Diabetes Federation, 2007). The anticipated shortfall in diabetic foot care is an alarming prospect.

Evidence suggests that the multidisciplinary team (MDT) model provides the best level of diabetic foot care (Morbach, 2006; Apelqvist, 2007). Furthermore, an MDT approach that includes preventative strategies, patient and staff education, and multifactorial approaches to the management of foot ulceration has been reported to reduce amputation rates by more than 50% (Apelqvist, 2007). However, given the above facts, the MDT remains the ideal, rather than the norm, in most parts of the world.

The International Working Group on the Diabetic Foot (IWGDF) has identified that in many developing countries there is a lack of healthcare resources, both in human and economic terms. Not only is there an absence of podiatry services, but the concept of an MDT may not even exist (Bakker et al, 2006). Thus, the IWGDF has suggested that setting up an MDT may have to be a staged process, introducing the various disciplines on a step-by-step basis (Bakker et al, 2006). They have suggested that, in all countries, three levels of foot-care management are required: level 1 includes a GP, diabetes nurse and podiatrist;

level 2 a diabetologist, surgeon, diabetic nurse and podiatrist; and level 3 a specialised diabetic foot care centre (Apelqvist et al, 2000).

A number of diabetic foot care specialists have recognised that podiatry is a core component of good diabetic foot care (Young, 2002; Bakker, 2009). Jeffcoate (2009) has suggested that podiatrists are potentially the best placed healthcare professionals to supervise diabetic foot care, but may have limited access to important medical details and lack a close working relationship with other healthcare professionals and the resources to provide optimum care. The arguments raised by Jeffcoate are pertinent and provide key discussion points for consideration during the development of any training programmes for healthcare professionals in the field of diabetic foot care.

Bakker (2009) and his colleagues (Tulley et al, 2009) have identified the need for diabetic foot care education to be made available in every country, and have suggested a training programme for developing countries where the rising incidence in diabetes is accompanied by limited healthcare resources. The proposed education programme will be offered to interested healthcare professionals to develop their knowledge and skills in the treatment of the diabetic foot.

On behalf of the IWGDF, the Diabetic Foot Care Education Working Group (DFCEWG) has developed two curricula for diabetic foot care training for this purpose (Tulley et al, 2008). These were described in a previous issue of *The Diabetic Foot Journal* (Tulley et al, 2009). The IWGDF are to be congratulated on this initiative.

Any healthcare training programme has to consider the structure, organisation and

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culture in which the care will take place. Certainly, a “one size fits all” approach may not be appropriate if the programme is to be used in a variety of countries. It may be useful to review the diabetic foot training and education picture in the UK, and the external influencing factors that are driving the curriculum, before considering the DFCEWG’s proposed programme.

In the UK, vocational education programmes are highly complex, dynamic structures, and are constantly subjected to scrutiny from various stakeholders and external agencies to ensure that the students who participate can evidence the desired range of skills, knowledge, competencies and attitudes that are commensurate with the qualification. The quality assurance process often involves both validation and accreditation by higher education institutions and professional bodies, respectively. All healthcare professionals involved in diabetes care are also expected to engage with continuous professional development to retain regulated status and membership of professional bodies.

### Training in the UK

Traditionally, the BSc (Hons) Podiatry degree programme has always included the study of diabetes and its associated foot complications, but a difficulty had been the identification and acknowledgement of the various competencies in this area that the podiatrist ought to possess on qualification. This lack of standardisation led to uncertainty about the role of the podiatrist, especially at postgraduate level.

Many developments towards a specialist diabetic foot care podiatrist workforce were taking place in the NHS, often enabled by dedicated consultant physicians. However, no formal routes of appropriate training were available to the postgraduate podiatrist specialising in diabetic foot care. There have been a number of initiatives over the past 13 years that have influenced the

development and evolution of the specialist podiatrist in diabetes role.

Following the St Vincent Declaration in 1989, an independent group (Training and Professional Development in Diabetes Care) was established in the UK to provide professional training recommendations. The remit of this group was to review the existing facilities for training healthcare professionals in diabetes in England. In addition, recommendations were made for the provision of training and continuing education (Apfel et al, 1996).

The review process was quite a humbling one, and it soon became apparent that there were areas for improvement for all professional groups. Interestingly, one of the other specialist groups, notably the Diabetic Foot and Amputation Group, identified the specific roles of the team members including the chiropodist. This provided a useful resource for those charged with the development of education programmes for podiatrists specialising in diabetic foot care (Edmonds et al, 1996)

The group made a number of key recommendations. Training in diabetes should be provided locally and should be practical, cost-effective and encourage local ownership. Most of the training should be delivered by those actively providing clinical diabetes care, in collaboration with academic and voluntary bodies, where appropriate. If the diabetes team was to increase its training role, additional resources would be required to maintain clinical care (Apfel et al, 1996).

It is arguable that the group’s recommendations, made over a decade ago, remain pertinent and are yet to be fully realised. However, there have been considerable advances in diabetes podiatry training since the publication of the group’s report (Keen, 1996).

There have been a number of catalysts that have enhanced podiatry training and, indeed, the training of all healthcare

professionals. Prominent service failures brought quality improvement to the top of the healthcare agenda and a number of key health policy documents, namely *Health of the Nation* (Department of Health [DH], 1992), *Our Healthier Nation* (DH, 1998), and *The New NHS: Modern, Dependable* (DH, 1997), led to target setting and the development of healthcare standards. Other key reforms included the *National Service Framework for Diabetes: Standards* (DH, 2001), *Agenda for Change* (DH, 2004) and the subsequent *NHS Knowledge and Skills Framework* (DH, 2004).

*Skills for Health* (DH, 2009) includes a number of competencies that are specific to diabetes. For example, to be able to examine the feet of a person with diabetes and advise on their care, 32 items of knowledge and understanding are required. In addition, the *National Minimum Skills Framework for Commissioning of Foot Care Services for People with Diabetes* (Foot in Diabetes UK et al, 2006) has also helped to identify key skills that are required for the management and prevention of diabetic foot disease.

There is no doubt that increasingly explicit expression of the evidence-based skills and knowledge required for diabetic foot care has informed the universities and professional bodies who provide courses for podiatrists interested in furthering their education. However, despite the many excellent Masters level courses available to enhance theoretical knowledge, there remains a requirement for podiatrists and other healthcare professionals to further develop their clinical skills.

Developing clinical skills is a complex process and requires significant resourcing. Clinical centres and key staff will have to be accredited to facilitate the acquisition of the desired skills and the subsequent assessment of the students. This will require collaboration between university and NHS staff.

While improvements can always be made, significant progress has been made over the past 30 years, leading to a system that is increasingly clear about the skills and knowledge that all healthcare professionals are required to have, and will enable them to deliver high-quality diabetic foot care in the complex NHS environment. This is an evolving, dynamic process and is far from complete.

### IWGDF Diabetic Foot Care Education Programme

The complex, bureaucratic process of podiatry education and training in the UK contrasts with the IWGDF Diabetic Foot Care Education Programme (Tulley et al, 2008). The training programme proposed is to certify diabetic foot care assistants through a basic, and an advanced, course. In the programme's introduction, the courses are described as being "below the level of podiatry". Perhaps the course could more accurately be considered an adjunct to, or extension of, a healthcare professional's existing training that includes specific elements of podiatric care.

#### Basic course

The rationale for the basic course was not specified by Tulley et al (2009). The basic course is targeted at physicians, nurses, beauty industry practitioners and allied healthcare professionals, and competencies appear to enable participants to examine and manage simple diabetic foot problems and provide preventative advice.

#### Advanced course

Prerequisites for this course include completion of the basic course and experience in a diabetic or wound care clinic, or surgical or medical ward.

#### Participants

The courses are designed to attract healthcare professionals currently

managing the diabetic foot without specific training in this area. Perhaps the DFCEWG could consider a needs analysis to tailor the courses. This should include determining the pre-existing diabetes knowledge, current practices and infrastructure available in the locality of the participants. For example, teaching foot screening is only beneficial where there is some form of structured service available.

Accreditation of prior learning would also help to tailor the course to the participants. For example, physician participants will already be aware of the concept of glycaemic control and, therefore, may not be required to attend this part of the course. It may be that one of the desired competencies of the other participants is to be able to recognise the signs and symptoms of a hypoglycaemic episode and treat appropriately.

#### Course leaders

The DFCEWG suggests that podiatrists who wish to become course leaders, may wish to take the course themselves. The DFCEWG have identified that the course leaders may require teaching and learning skills and have suggested an "educate the educators" course. However, this will require funding. The enormity of the challenge must be fairly daunting. The population figures provided (Saudi Arabia is used as an example) suggests the potential demand for the courses may outstrip the ability to supply.

Perhaps the biggest teaching challenge will be to allow for the different levels of education and experience of the participants. For example, it will be entirely new for basic course participants from the beauty industry to develop clinical reasoning and reflective practice skills, while the physician and nurse will already possess these.

#### Competencies and assessment

The proposed programme has yet to be completed and is currently in a

fairly traditional format and appears rather content focused. Currently, the competencies are not specific and are therefore open to interpretation. Participants will benefit from specific competencies, especially if they are to demonstrate that they possess the competencies by the end of the course.

There is no mention of how the competencies will be assessed, nor are the competencies mapped against the teaching programme. If the competencies were written as measurable outcomes, and valid level descriptors were used to help determine the level of academic requirement, the course content, teaching and learning strategies and assessment could be more easily identified. For example, "the student will be able to perform a vascular assessment on the lower limb and foot and identify the presence and severity of peripheral arterial disease".

Many of the academic quality issues can be overcome via a process of validation and accreditation. Perhaps when the group explore an implementation strategy, they will revisit the competencies and describe them in a measurable format.

#### Course structure

There are 36 contact hours, and many lectures, planned for the course. The proposed diploma level course has 160–200 hours of contact time to cover a significant number of topics. From an academic perspective, it is quite difficult to determine the level of study that will be required to achieve the stated competencies, many of which appear to be a set of tasks.

#### Additional content

Two vitally important skills required for any of the participants are clinical reasoning and critical reflection. This needs to be identified and included in the programme of study. While infection control and instrument

sterilisation are described in the competencies, there is no mention of these topics in the programme.

### Discussion

From a podiatry perspective, while the IWGDF acknowledges the importance of podiatry and the need to continue to encourage all governments to develop podiatry education programmes and to employ podiatrists, the outcome from the proposed programmes could have a negative impact on the campaign for a fully trained podiatry workforce.

The proposed advanced course, if successful, may lead to a more skilled non-podiatric workforce and a subsequent reduction in foot ulceration and amputation. This may weaken the argument, especially in developing countries with low healthcare budgets, to invest in podiatry education programmes. This would be regrettable, as the evidence suggests that an MDT that includes a podiatrist is the best model for diabetic foot management.

The unique contributions that podiatrists bring to foot care are explained by the entire education of podiatrists and are not limited to those competencies directly related to diabetes. It would be an unhappy situation if true MDT diabetic foot care is only ever available in the wealthier nations of the world.

There are a number of consultant physicians who are great advocates for the podiatry profession. However, podiatry programmes must also be supported by professional podiatry bodies. The Fédération Internationale des Podologues needs to be consulted by the IWGDF in this effort to address the international shortage of podiatrists. There is a great deal of expertise available throughout this organisation and, together with representatives from those countries that have university level podiatry programmes, this consultation

could help develop and strengthen the proposed IWGDF programme.

### Conclusion

This excellent initiative needs support and there are a number of issues that the IWGDF will be aware of:

- There is a need for a supporting infrastructure to quality assure the entire academic process proposed in this programme.
- There is a requirement for a needs analysis of the number of potential participants, their prior learning, and the culture of, and infrastructure for, diabetic foot care in their region.
- The competencies need to be framed in a format for skill level and assessment.
- There is a need to accredit the course and possibly undertake a pilot study.
- Student support mechanisms, clinical teaching support mechanisms and staff need to be identified.

Karel Bakker is a retired internist and endocrinologist from the Spaarne Hospital (Heemstede, the Netherlands) and is Chairman of the IWGDF. He led the 2005 World Diabetes Day campaign on the diabetic foot to raise awareness of this serious complication of diabetes worldwide. His contribution to the prevention and management of diabetic foot disease, both nationally and internationally, is immense. In 2001, Bakker was knighted in the Order of the Dutch Lion of the Netherlands for his lifelong commitment to the care of people with diabetes, and particularly the care of those with diabetic foot disease (*The Lancet*, 2005).

This article has been written in the spirit of collaboration and support, and in full awareness of the sterling efforts of the IWGDF. While there may be major differences of opinion as to the best way of addressing the worldwide shortage of diabetic foot care and podiatrists, we all are united by the goal of reducing the burden of diabetic foot disease everywhere. ■

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