Promoting foot care education in developing countries: the Caribbean Diabetic Foot Care Programme

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There are 285 million people living with diabetes worldwide, the number of affected people is predicted to reach 438 million by 2030. Because of the rapid increase in diabetes prevalence, the number of diabetes complications is rising equally quickly. Amputation is one of the most feared of these complications. People with diabetes are at risk for nerve damage and problems with the supply of blood to their feet. Nerve damage results in a reduced ability to feel pain and, as a consequence, injuries often go unnoticed. Moreover, poor blood supply can slow down the process of wound healing. These factors can lead to ulceration. Infected foot ulcers can ultimately result in amputation. In this article, an international team of authors reports on an ambitious new initiative aimed at reducing the burden of diabetic foot problems in the Caribbean.

Diabetes and diabetic foot problems have a significant impact in the Caribbean. Countries throughout the region have a high prevalence of diabetes (up to 20%) and some of the world’s highest rates of diabetes-related lower-extremity amputations. These amputations are life-threatening and may involve life-long dependence upon the help of others, as well as an inability to work and much misery. Amputations and foot problems in general are among the most costly complications of diabetes. In developed countries, treating diabetic foot problems accounts for an estimated 15% of total healthcare resources. In developing countries, it has been estimated that diabetic foot problems may consume as much as 40% of available healthcare resources for diabetes. This means that programmes aimed
at early intervention and prevention are of paramount importance for people living with diabetes in the Caribbean.

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Walking barefoot is common in the Caribbean. This, combined with the use of inappropriate footwear, contributes to injuries that lead to foot infections, and often result in amputations. The situation is exacerbated by late referral to hospitals, poor reimbursement systems, low awareness of the impact of diabetes on feet, and limited access to foot care. In Caribbean countries, podiatry services are mostly unavailable; many people with diabetes report that they treat their own cuts and blisters.

**The Rotary/IDF Caribbean Diabetic Foot Care Programme**

In 2008, the International Diabetes Federation approved funding to support a collaboration between the Rotary Club of Ledbury, UK, and the Federation’s Consultative Section on the Diabetic Foot. Led by the Rotary Club of Ledbury, funding has been raised from Rotary Clubs, Districts and Rotary International. The project team secured additional funds through a grant from the World Diabetes Foundation.

**Rotary Club of Ledbury**

The Rotary Club of Ledbury was chartered in 1955 and is an active dual gender club with 36 members in a rural market town. Their main area of international activity is the Caribbean Diabetic Foot Care Programme – due in part to their twinning with the Tobago Rotary Club. Members of the Ledbury Club have been inspired by first-hand experience of the devastating impact of diabetes in the Caribbean. Since 2001, a number of them have visited Tobago, Trinidad and some other islands, where they attended Foot Care Clinics and visited other islands in order to build up contacts. The achievements of the programme resulted in the Rotary Club of Ledbury receiving the 'Ordinary Rotarians Doing Extraordinary Things' Award in 2008.
Other Caribbean islands and Rotary Clubs in the UK and the Caribbean began to show an interest in the training programme. Projects have started on the islands of Montserrat and Nevis with financial support from Rotary International and a Canadian Rotary Club. The success of programmes implemented in Montserrat, Nevis, and Trinidad and Tobago, brought the Rotary Club of Ledbury to the attention of the global diabetes community. This led to the launch of a joint project with IDF to extend foot care programmes throughout the Caribbean.

"The Rotary Club of Ledbury and IDF are engaged in a joint project to expand foot care programmes throughout the Caribbean."

Step by Step
The programme is based on the IDF Step by Step model, which aims to improve diabetes foot care in the developing world by providing education for people with diabetes and healthcare providers in the prevention and treatment of diabetic foot problems. The Step by Step model has already been effective in improving diabetes foot care in a number of developing countries, including India, Tanzania and Pakistan.

In the summer of 2008, a survey to identify sites for the Caribbean courses was undertaken by a Ledbury Rotarian, and IDF. The local healthcare authorities and local Rotarians were approached to gauge their interest in setting up and supporting a Step by Step foot care programme. Five islands were selected for the first phase: Barbados, St Lucia, St Maarten, St Kitts, and the British Virgin Islands.

"Caribbean healthcare authorities and local diabetes associations confirmed their support."

Visits to these islands were carried out in December 2008 and January 2009. International medical experts and Rotary representatives met with relevant local and national stakeholders in order to ensure the sustainability of the programme. Healthcare authorities and local diabetes associations on the islands confirmed their support.

For geographical and cost-related reasons, it was decided to combine the training courses for Barbados and St Lucia, and those for St Maarten and the British Virgin Islands. The programme started with the first group of islands in July 2009 and moved to the second group in September 2009. Unfortunately, due to a lack of funding, St Kitts...
Health delivery

was dropped from the programme – hopefully merely a temporary measure.

Funding
The Rotary Club of Ledbury has successfully applied for matching grant approval for Montserrat, the British Virgin Islands and St Maarten. Unfortunately, all applications for matching grants were put on hold by Rotary International due the current economic crisis. The application for Barbados and St Lucia was cancelled. However, thanks to funding from IDF and the World Diabetes Foundation, the first part of the programmes was carried out – albeit at a more modest level.

The basic courses
The Step by Step project, led by international experts in the field and local faculty members, initiated basic courses in Barbados and St Lucia in July 2009 and in St Maarten, and in the British Virgin Islands in September 2009.

Despite some initial problems, all four courses were successful. These consisted of two or three days of lectures, practical sessions, treatment of people with diabetes, and teaching of educational techniques. In St Lucia, there were 35 participants – including 8 doctors; in Barbados, there were 33 – including 9 doctors. In St Maarten and the British Virgin Islands, the numbers were 25 and 24 – including 8 and 4 doctors – respectively. Good media coverage was achieved through television and press reports. This is a very important aspect of the programme in terms of its effective implementation.

At the official launch ceremony of the basic course in Castries, St Lucia, IDF’s North America and Caribbean Region representatives were present together with representatives of the healthcare authorities. On all four islands, the evaluations by participants and local faculty were very positive.

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All participants are expected to attend the second, ‘advanced’ courses in 2010. The same members of the international faculty will return not only in order to teach but also to see the results. It is, therefore, essential that data on the people with diabetes seen with foot problems be collected. In the British Virgin Islands, data-collection software will be used for this purpose. Elsewhere, it will be carried out by hand.

Expectations
The expected outcomes for the project include: sustainable improvements in foot care in the target countries; increased awareness of diabetes and its complications; improved links between civil society and diabetes healthcare professionals; and increased government involvement. Key objectives include a reduction in the number of amputations and improvements in the quality of life of many people living with diabetes in the Caribbean.

It is expected that the success of the programme will result in a knock-on effect throughout the Caribbean, which will open up access to further sources of funding. If more funding is forthcoming, the programme will be expanded to St Kitts and Antigua, and hopefully to other islands in the region.

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Further reading