

Diabetes education: strategy for improving diabetes care in Nigeria

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Introduction

Chronic diseases are now the major causes of death and disability globally. According to the World Health Organization (WHO), 60% of all deaths in the world are attributable to chronic non-communicable diseases (NCDs), about half of which are cardiovascular diseases.¹ The increase in this global burden is a result of the rapid increase of risk factors for NCDs caused by lifestyle changes, especially in the developing countries. WHO² estimated that chronic diseases accounted for 24% of all deaths in Nigeria in 2005 and that over the next 10 years death from chronic diseases will increase by 24% – most markedly, death from diabetes will increase by 52%.

Diabetes mellitus is now one of the most common NCDs globally with an estimate of 366 million in 2011 (projected to increase to 552 million by 2030), and is undoubtedly one of the most challenging health problems in the 21st century.³ The diabetes pandemic has evolved in association with rapid cultural changes, an ageing population, increasing urbanisation, dietary lifestyles, and unhealthy behavioural patterns without prevention and control preparedness. Even though the prevalence of infectious diseases such as HIV/AIDS, malaria, and tuberculosis

has a major effect on the economy of developing countries, diabetes seems to be the world's most threatening epidemic, which is beginning to be a problem in the developing world. Diabetes maims the sufferer slowly but surely as it damages the vital organs in the body, especially when not properly managed. The potential severity of diabetes is such that some epidemiologists predict that its economic impact and death toll will surpass the ravages of HIV and AIDS in the near future.⁴ In 2005, it was estimated that Nigeria lost 400 million dollars in national income from premature deaths due to heart disease, stroke and diabetes and these losses are projected to increase such that, cumulatively, Nigeria stands to lose 8 billion dollars over the next 10 years.²

The prevalence of type 2 diabetes (T2DM) in Nigeria in 2011 is 4.0% (with 81% undiagnosed according to a 2012 update).³ In absolute terms, Nigeria has the largest number of people with diabetes in Africa (about three million), and it is one of the countries with the highest mortality rate due to diabetes³. The prevalence of impaired glucose tolerance (IGT) which is a forerunner of T2DM is even more alarming, 6.8% in 2011.³ Thus, Nigeria is one of the countries that face the greatest burden of diabetes. Fortunately, T2DM and its complications are preventable. Primary prevention of T2DM has been shown to be possible in susceptible individuals by healthy diet and physical activity.⁵ In individuals who already suffer from diabetes, diabetes self-management education (DSME) has been shown to have positive effects on knowledge,

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Figure 1 Diabetes camp in Ogun State, Nigeria (© WDF SIDCAIN)

frequency, and accuracy of self monitoring of blood glucose, self-reported dietary habits, and glycaemic control. There may also be beneficial effects on lipids, physical activity, weight, and blood pressure.^{6,7} Prevention of complications of diabetes is also possible by DSME since improved glycaemic control is associated with reduction in the long-term complications of diabetes.^{8,9}

Strategies for improving diabetes care

Following the Alma Ata declaration of 1978 on the appropriateness of 'primary healthcare' as the key to the provision of 'health for all by the year 2000', in August 1987, the federal government of Nigeria launched its Primary Health Care (PHC) plan, which was intended to be the cornerstone of health policy. The PHC is a very useful means of disseminating information in Nigeria as well as achieving health-related goals. Through the PHC, immunisation against deadly childhood diseases has been made possible, and information about HIV prevention is being disseminated regularly.¹⁰ Thus the PHC can be expanded to include diabetes prevention. Many of the educational posters on diabetes in the country are written in English, focus on diabetes care, and could be found mainly in secondary and tertiary care centres. Educational posters on diabetes prevention in English, and at least the three other major languages (Hausa, Igbo, and Yoruba) should be available in all primary health centres and private hospitals across the country, as well as the secondary and tertiary care levels.

Incorporation of community health workers into the care of persons with chronic NCDs, such as asthma, hypertension, and diabetes, has been shown to be beneficial.¹¹⁻¹³ In Nigeria, community health workers could be trained to penetrate the community with appropriate information on diabetes awareness and prevention. Furthermore, community leaders and leaders of organised groups such as market women, drivers, etc. could help mobilise their members for diabetes awareness campaigns.

The mass media can positively change health behaviour.¹⁴ Therefore, in addition to the above, the print and electronic media should be explored to reach out to the populace at large with special emphasis on T2DM prevention. However, the quality of the information being passed to the public should be screened by important bodies such as the Diabetes Association of Nigeria (DAN) and the Endocrinology and Metabolism Society of Nigeria. Hitherto, diabetes awareness campaigns in the print and electronic media were limited to the celebration of World Diabetes Day, but it should be a regular event if the impact is to be widely felt across the nation.¹⁵

The availability of the global system for mobile communication has revolutionised information dissemination in Nigeria. Studies have shown that not only are wireless messages useful in the management of chronic illnesses, they also serve as a powerful preventive and behaviour modification tool.¹⁶⁻¹⁸ Thus, if the health ministry or non-governmental organisation (NGO) partner

with the telecommunication companies, millions of Nigerians, especially the urban dwellers, who are more likely to indulge in unhealthy lifestyles, can be reached simultaneously with important messages on diabetes prevention. However, the majority of rural dwellers in Nigeria (who constitute about 80% of the population and of whom about 90% are illiterate) do not have access to newer information technology resources and are thus cut off from the global scene.¹⁹ The primary healthcare system is still the most appropriate option in this setting since rural dwellers have previously shown a positive response to the services of information agents such as agricultural extension workers and rural health workers.¹⁹

The aforementioned strategies are useful if there is an unwavering commitment by the appropriate authorities. However, it is unfortunate that (according to the 2009 International Diabetes Federation report), there are no data to suggest a national diabetes programme in Nigeria.³ There is a high unemployment rate in the country, where poor income, lower rate of education, and physical complications adversely affect the quality of life of patients with T2DM.²⁰ The management of diabetes and its complications is very expensive, and not affordable by many sufferers in developing countries such as Nigeria. For example, the current minimum wage for civil servants is US\$113 (18 000.00 Nigerian Naira) per month.²¹ However, haemodialysis for a patient with renal failure costs about US\$400 per week, excluding the cost of medications, transportation, and laboratory investigations. While sufferers of AIDS and TB receive medications and do some laboratory tests free, there are no subsidies for diabetes care.²² This underscores the need for aggressive preventive measures against the development of diabetes on the one hand, and its complications on the other hand.

The positive impact of diabetes education on glycaemic control and other aspects of diabetes care is well known.⁶ Training in diabetes care is one aspect that virtually all of sub-Saharan Africa lacks. It has been shown that the lack of proper training of health professionals in diabetes care accounts for the high non-compliance rates and serious complications.²³ The knowledge of diabetes and hypertension care among healthcare professionals in Nigeria is poor, especially those at the primary and secondary care level.²⁴ The knowledge of diabetes care is expected to be worse among patients living with diabetes. The dearth of diabetes educators is a major limiting factor against education of patients in Nigeria. Thus, the clinician also doubles as the diabetes educator, and sometimes as the dietitian. Fortunately, it has been shown that other healthcare givers can also educate the patient with attendant positive results.²⁵ This means that nurses, laboratory scientists, pharmacists, etc. can also play a valuable role in educating patients with diabetes. However, as stated earlier, there is need to train the care givers in order to ensure that appropriate and uniform information is being disseminated. At the same time,

efforts should be made to produce certified diabetes educators in the country.

Both individual and group education have a positive impact on blood glucose control in the short term.²⁶ In Nigeria, the Diabetes Association of Nigeria organises regular group sessions where patients with diabetes are educated on various aspects of diabetes care, and this has been shown to positively influence glycaemic outcomes.²⁷ These activities are however restricted to some tertiary and secondary centres, which care for less than half of the diabetic patients in Nigeria. There is a need to strengthen diabetes club activities, at the primary care level and in the public and private sectors, for the impact of education to be felt nationally. Besides, the education given should be culturally acceptable for it to achieve its intended goals.⁶

Support of the World Diabetes Foundation

The above underscores the importance of the activities of the World Diabetes Foundation (WDF) in supporting improved care of people living with diabetes through the re-training of healthcare givers in Ogun and Oyo States of Nigeria. The WDF currently supports two projects (WDF 08-321 and WDF 10-515) in the southwest of the country. Through the support of the Foundation, diabetes and hypertension treatment guidelines were developed²⁸ to enhance protocol-driven care of people living with diabetes and were made available for healthcare givers in the project areas in Nigeria (see Figures 1 and 2). In developing the guidelines, major references were made to the T2DM Clinical Practice Guidelines for sub-Saharan Africa published by the International Diabetes Federation, Africa region. The guidelines were developed to meet the needs of the primary and secondary healthcare givers both at the urban and rural areas of the country. At the end of these projects, it is expected that there will be better diabetes and hypertension education among healthcare workers, prevention of diabetes and its complications and massive community diabetes awareness, which will be useful in implementing preventive strategies.



Figure 2 Treatment guidelines being distributed by the WDF SIDCAIN project team

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