Dental education in the rural community: a Nigerian experience

Abstract

This is a report of the Dental School at the University of Ibadan, Ibadan, Nigeria where dental students are prepared not only for the familiar responsibilities of a dentist to individual patients but also for responsibilities to the whole community as a whole. It describes the steps taken to establish the rural posting programme for dental students. Towards the end of the academic session, all fifth year dental students of the University of Ibadan, Nigeria are required to undertake a rural posting at Igboora about 80 kilometers from Ibadan. This posting provides students’ opportunities to learn life skills required for rural area living via an immersion experience in which they live in and carry out community oral health services in the host community for six weeks. Recommendations for initiating, sustaining and expanding rural dental education programme are mentioned.

Keywords: Dental education, rural posting, underserved and underprivileged areas.

Introduction

Nigeria is a large country with a population of well over 150 million. It is diverse in its geography, ecology, culture, language and pattern of health and disease. Oral health services are sparse and concentrated in the cities. The Federal Government of Nigeria adopted the primary health care as a system of health care that will improve the health and wellbeing of Nigerians particularly those in rural areas. However, oral health care has not been properly integrated into it. Despite the acknowledgement and adoption of the Alma-Ata declaration by majority of the countries of the world as a strategy for achieving Health For All, medical education systems often remain as ivory towers from the health service system[1]. Traditionally, basic medical education in African countries was mainly hospital-based, high-technology-oriented and focused on the cure with little attention given to preventive and promotive care[2]. This has resulted into production of medical doctors who could only work in secondary and tertiary health centers thereby leaving the primary health care centers underserved or not served at all. This traditional system of medical education does not adequately prepare doctors in developing countries for their expected leadership role in meeting the health care needs of the entire population particularly those in the rural areas[1]. Several governmental and nongovernmental agencies have supported the establishment of medical schools that will be more community oriented and train doctors that will have a great sense of service and a strong inclination to broad community care and preventive medicine[3]. Sequel to this many medical schools have established rural or remote areas posting for medical students to tackle ill-health within the community[3]. Likewise some dental schools such as the University of Ibadan Dental School Ibadan, Nigeria rose up to the challenge of establishing rural dental education posting for dental students to tackle the nation’s major oral health problems. In addition, this rural element of undergraduate dental curriculum was to enable dental students see firsthand practice and lifestyles of inhabitants of rural communities with a view to being stimulated to want to work in areas of unmet oral health needs.

The Dental School University of Ibadan, Nigeria was established in 1975 to produce dentists that will apply knowledge and skills in dental sciences to the management of oral diseases and conditions of Nigerians. The clinical dental training programme was based at the Dental Center University College Hospital Ibadan, the capital of Oyo State, Nigeria. Community Dentistry was taught as part of the undergraduate curriculum but there was no rural or remote area exposure for dental students to appreciate and apply knowledge and skills acquired in underserved communities. However, the medical education programme of the University of Ibadan had a rural...
posting programme which serves as rural immersion experience for medical students. This programme was established in the 1960s at Igboora, a rural community in Ibarapa District in Oyo State, Southwestern Nigeria. Figure 1.

Igboora, the headquarter of Ibarapa Central Local Government Area of Oyo State is situated about 80 km south of Ibadan and is inhabited by about 60,000 people whose main occupations are farming and trading. The rural posting programme of the medical school of the University of Ibadan is part of the Ibarapa Community Health Programme, a joint programme between Ibarapa communities, the three Local Government Areas (LGAs), the Oyo State Government, the University College Hospital and the University of Ibadan. Medical students during their community medicine posting live in and carry out community health services in Ibarapa and its environs for 6 weeks. This rural medical posting has contributed greatly to the training of medical doctors since they are able to better understand the complex relationship between people’s way of life and health. In addition, the programme has also led to the improvement of the wellbeing of inhabitants of Ibarapa.

The beginning

In 2007, the Department of Periodontology and Community Dentistry Faculty of Dentistry University of Ibadan established the Ibarapa Community Oral Health Programme with a view to providing oral health care for the inhabitants of Ibarapa and its environs. Similarly, this programme was established to provide location for community based dental education so that dental students can observe the various determinants of ill-health in underprivileged communities and meet patients in a real primary health care setting. The programme was funded by the MacArthur Foundation and strongly supported by the Vice Chancellor of the University of Ibadan, the Provost College of Medicine and the Director of the Ibarapa Community Health Programme. A committee comprising of consultants in community dentistry, resident doctors in community dentistry, dental officers, a public health nurse and an administrative officer was constituted to manage the activities of the Community Oral Health Programme. This committee had several meetings which mapped out ways of achieving set aims and objectives. The committee also had several meetings with the management of the Ibarapa Community Health
Programme so as to ensure the effective integration of the oral health programme into the existing health facilities at the General Hospital Igboora. In addition, discussions which were strongly supported by the Dean Faculty of Dentistry University of Ibadan were also centered on how dental students could begin a rural posting especially when their medical students’ counterparts were undergoing their rural posting. Undergoing the programme with medical students was to enable both group of students share ideas and knowledge about health care needs of needy population.

A familiarization visit was made to the General Hospital Igboora by both the Ibarapa Community Oral Health and the Community Health teams. During this visit, the consulting clinics, laboratories, pharmacy, wards, theatres, lecture rooms, games room, staff quarters, dormitories, canteen and water collection points were inspected. After the visit, a meeting was convened where two rooms for the dental clinic, two blocks of four rooms self-contained apartment for the dental surgeons, female and male dormitories for dental students during the rural posting at this health facility were allocated to the Community Oral Health Programme. These facilities were renovated and put into proper condition so that students can be well motivated to perform their duties. A report on rural practice preferences among medical students in Ghana showed that medical students valued rural job attributes that enabled them to perform well clinically and live comfortably[5]. Dental materials, instruments and equipment were purchased and placed in the dental clinic. The service of an in-house trained clinic assistant who is an indigene of the local community was engaged. The dental clinic was later commissioned by the traditional ruler and chiefs of Igbo-ora in the presence of administrative heads of the Ibarapa Central LGA and the Dental School University of Ibadan. The commissioning of the dental clinic was followed by an oral health care training programme for school teachers and community health workers in Ibarapa Central LGA. This training programme was to create awareness about oral health care among them. In addition, it was to increase their capacity to identifying people with oral diseases and make adequate referral thereby making them sign posters. This training programme has also been carried out in other LGAs in Ibarapa district.

The rural dental education posting

The rural dental education posting of the Dental School University of Ibadan, Nigeria was started in 2008 at Igboora Ibarapa Central Local Government Area of Oyo State, Nigeria. Towards the end of the academic session 35 to 40 fifth year dental students after acquiring adequate clinical training in Dentistry and Medicine each year are scheduled to go for this posting which last for six weeks under the supervision of consultants in community dentistry and assisted by dental officers and resident doctors in Community Dentistry. This posting is usually undertaken when medical students are also undergoing their rural medical posting thereby allowing for academic and social interactions among the two groups of students. Before travelling to Igboora, dental students spend the first week of the posting at the Dental Center University College Hospital Ibadan receiving lectures on research methodology, developing a group research, receiving briefings on the rural dental education programme and collection of posting booklets. At the beginning of the second week, on arrival at Igboora, they are usually received by a senior registrar in Community Dentistry and the administrative officer of the Ibarapa Community Health Programme. The administrative officer provides them with accommodation in the dormitories and shows them the canteen where they can buy their foods. This officer also shows them taps and tanks where they can fetch water for drinking and bathing. The second day after arrival, a rotation chart or work schedule is read and given to them by the senior registrar to allow for effective and proper coordination of the rural dental education programme. The students led by the senior registrar then pay advocacy visits to administrative and traditional leaders in the community so as to establish trust and good will. In addition, the aim and objectives of the rural dental education programme are explained to these leaders so that they can gain community participation. From an ethical perspective, community involvements in matters that fundamentally affect the delivery of health services at a local
level is desirable and appropriate[6]. Similarly, support from the community is one of the factors that were perceived to influence undergraduate medical student's willingness to work in rural communities[7].

Guided by the work schedule, the dental students visit various populations in immunization clinics, antenatal clinics, market places, schools, local government area secretariats and venue of meetings for the various artisans. During such visit they carry out community diagnosis by screening for oral diseases. Patients with oral diseases are referred for routine dental treatments at the Dental Clinic in the General Hospital Igboora. Patients who require specialist dental care are referred to the Dental Centre University College Hospital Ibadan. They also provide oral health education on prevention and treatment of common oral diseases with emphasis laid on oral diseases that are prevalent among people of low socioeconomic group. An oral health education folk song has been developed by some group of dental students and this song is sung in both primary and secondary schools in and around Ibarapa. This song is focused on proper oral hygiene maintenance and a research is underway to determine the effectiveness of this song among children. Dental students also carry out their group research which is relevant to the needs of the community. The Senior Registrar in Community Dentistry assists students in organizing their surveys and interpreting their findings. However, the main initiative remains with the students. All these activities are performed under the supervision of lecturers and consultants in Community Dentistry and are assisted by Dental Officers on rotation in Community Dentistry so as to guide and motivate the students. Supportive supervision has been noted to improve motivation among health workers and quality of care[8,9]. The activities performed by the students are problem-based, self-directed and student-focused. Schmidt and colleagues[10] reported that problem-based, self-directed and student-focused learning approaches are based on the observation that when students are confronted with community health problems, rather than bits and pieces of fact learning, they are highly motivated to acquire the necessary skills for problem solving.

Lectures in oral disease epidemiology, research methodology and biostatistics are given to the dental students by the lecturers in Community Dentistry during their scheduled visits to Igboora. This is to complement the structured community observation and investigation. Dental students are divided into groups and given topics on oral health issues in rural communities as assignments which they present and are scored. These lectures and presentations are interactive and guide students in their activities. A study[7] reported that medical students perceived absence of guidance as one of the negative views on community-based training. They have clinical laboratory demonstrations and hands-on-practicals on basic investigatory procedures such as PCV and full blood counts by the laboratory scientists. They are taken through some environmental health and community development programmes by environmental health and community development officers. Two days before the end of the posting, students carry out a research-to-policy programme, where they give feedback to the community on outcome of the survey or group research. They give suggestions for actions to be considered by individuals, the government and health care providers. This programme is believed to effect policy change that will improve oral health. During this research-to-policy programme, members of the community representing various population groups, community leaders and administrative heads of the LGA are invited. A social or cultural night is usually organized for both medical and dental students by the Chairman of the Ibarapa Central LGA to show appreciation of the community to the services rendered by the students. On their return to Ibadan after the rural posting, dental students also give oral presentations of their group research and are scored by heads of the various departments in the Faculty of Dentistry, University of Ibadan, Nigeria who are present. The group research is also submitted as a thesis to the Department of Periodontology and Community Dentistry, Faculty of Dentistry University of Ibadan, Nigeria and scores are awarded. All these scores form part of the continuous assessment for the final Bachelor of Dental Surgery Examination in Preventive Dentistry. Students are generally excited and satisfied about being able to make presentations before of their teachers. This probably gives them confidence in presenting some research findings in both local and international conferences as evidenced by one of the
presentations winning the Hatten/Unilever undergraduate poster competition at the 3rd Conference of the African and Middle-East Region International Association for Dental Research.

Administration of the rural dental education posting

The rural dental education posting is administered by the Department of Periodontology and Community Dentistry. The head of the department delegates the academic planning of the programme to the Community Dentistry unit. This unit also ensures that the curriculum is developed and reviewed. The unit also ensures that transportation of students, their accommodation and field-work arrangements are made. The Head of Department reports directly to the Dean of the Faculty of Dentistry.

The impact of the rural dental education programme

This rural posting enables students to make real difference in the community rather than the usual method of reading textbooks and not applying the knowledge gained. Non-application of knowledge makes knowledge acquired not to appear real. The posting enables students to get close to the patients and understand their illness. It allows them to understand how the community works and they are able to observe the various determinants of oral health. The communities benefit immensely from the rural dental education programme, not only from the oral health care provided but from the understanding of what might be available through the oral health service and oral health education. Anecdotal reports have shown that the majority of dental students who attended rural posting reported that the rural dental education experience met their expectations by identifying and sensitizing them to community needs. In addition, they mentioned that they were able to work as a team, developed problem-solving and self-directed skills and the rural dental education was relevant to their present function. A research that will report rural posting experience among final year dental students of the University of Ibadan, Nigeria is ongoing. In the future, a research that will systematically and comprehensively evaluate the rural dental education programme should also be carried out.

The posting allows dental students to be trained in having the ability to solve oral health problems based on available resources, the ecology, the culture and traditions of the people. This posting helps to transform the image and practice of the dental profession, making dental students most acceptable to the people and making dental education relevant to community needs. This rural, community-oriented and problem-based educational strategy is an immersion experience that will better prepare dental students and help to address shortages of dentists in cross-cultural and underprivileged communities. In the long term, it will help in recruiting and retaining dentists to rural and remote areas. A previous report[11] shows that rural placements will enable health professionals who are unwilling to work in rural areas to do so since they will acquire experience in health systems and services in rural areas. Exposure to rural health care during training is one of the predictors of health professionals’ choices for recruitment or retention on jobs in rural areas[12-14]. The impact of this community-based and problem-based Primary Oral Health Care (POHC) educational strategy on dental education and practice in Nigeria cannot be overemphasized. It will result in the training of dentists with a strong orientation towards priority oral health problems and community programmes. It will also help students to adopt a holistic approach in their future clinical work. Furthermore, this will strengthen the performance of newly-graduated dentists who are posted to PHC facilities in rural communities for one year National Youth Service Corps in provision of oral health services. Rural-based training placements might enable trainees to overcome the cultural shock of those who have never been to other areas of the country, or to rural areas [van Diepen et al[15].

Challenges of the rural dental education programme
Kaye et al[7] mentioned inadequate support facilities such as internet and good libraries as challenges to rural medical programmes. This was also observed in this programme however recommendations have been made to the authorities on the need to provide these facilities. Providing these facilities will better position rural medical and dental education postings to meeting their goals. The majority of final year medical students of the University of Lagos, Nigeria who had rural exposure in the PHC programme of their school reported that the programme should not be scrapped rather it should be better funded to achieve desired objectives[16]. Government should fund these programmes so as to motivate students to attend them. This will ultimately translate into the development of interest in working in rural and remote areas. One other challenge was the inability of some students to understand the local language and culture of the people, however this was managed by dividing students into groups which comprise those who can speak and understand local languages and cultures and those who cannot. The former were informed of the importance of helping to translate the local language to English to the latter.

Conclusion

This rural dental training programme of the University of Ibadan Dental School has been successful since its establishment and it is believed that it adequately prepared dentists who are exposed to this programme for their expected leadership role in meeting the oral health needs of their communities. The programme as part of the undergraduate dental training could be one of the ways of producing good community dentists. Dental schools especially in developing countries that are yet to develop a rural dental education programme should do so thereby demonstrating their role in providing oral health for all. This will also enable students to have enough confidence in providing routine primary oral care services independently in a setting where there are no multidisciplinary supports or advanced diagnostic device. Exposure to rural health care and other factors such as good remuneration and good working condition could help in the recruitment and retention of dentists in rural areas.

References


