

POSTGRADUATE DENTAL EDUCATION IN GHANA: PAST, PRESENT AND FUTURE

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Summary

The origins of formal postgraduate dental education in Ghana may be traced to 1986, when three dental surgeons, who had passed a Ministry of Health qualifying examination, were enrolled in the department of Oral and Maxillofacial Surgery of the Korle-Bu Teaching Hospital. This was to enable them prepare for both the primary examinations of the Royal College of Surgeons of England and the West African College of Surgeons. Twenty-six years later, the Ghana College of Physicians and Surgeons, which is only ten years old, has produced sixteen Members and recently, two Fellows. The West African College of Surgeons

(WACS), on the other hand, is yet to produce its first batch of Ghanaian Fellows by examination following training in Ghana, although it has been holding examinations since 1988. With the establishment of two dental schools in Ghana, and the resultant improvement in retention of dental graduates in the country, the need and demand for postgraduate dental education has become pressing. No known review of postgraduate dental education has been carried out in Ghana. This paper seeks to give a historical overview of postgraduate dental education in Ghana and to describe its current status.

Key Words: Postgraduate education, Dental Surgery, Ghana, West African College

Introduction

Though the prevalence of oral disease in Ghana is relatively low¹, its impact is extensive, often resulting in suffering, impaired function and a reduced quality of life. Traditional treatment of oral disease is expensive and in most industrialized countries it is the fourth most expensive disease to treat². Yee et al, report that in most developing countries, investment in oral health care is low, and resources are primarily allocated to emergency oral care and pain relief³. In their report, they also conclude that if treatment were to be available, the costs of treatment of dental caries in children alone would exceed the total health care budget for children. Yet dental caries and periodontal disease, the two leading causes of oral morbidity, can be prevented or controlled by a combination of community, professional and individual action⁴. Furthermore, inadequate application of preventive measures, inadequate oral health care delivery systems including inadequate manpower and inadequate oral health facilities make control of these oral disease conditions ineffective^{1,5}. It is important, therefore, to

educate dental professionals in such a manner that they can competently and equitably provide oral healthcare to all citizens of Ghana.

Postgraduate study has generally been recognised as a means of training specialists to provide service in these oral health care delivery systems and also to train the next generation of mentors, educators, researchers and administrators. It also helps to increase the number of oral healthcare workers, thereby reducing the continuous dependence on expatriates. Availability of a viable local postgraduate training programme has also been identified as one of the means of curbing the brain drain phenomenon that plagues Ghana⁶. It ensures that most dental graduates stay at home for postgraduate training and thus, addresses the situation whereby most overseas trained Ghanaian dental specialists fail to return home.

Currently, the Ghana College of Physicians and Surgeons (GCPS) and the West African College of Surgeons (WACS) are the two Colleges that are responsible for the local training and certification of Ghanaian dental specialists. These two Colleges have accredited the Korle-Bu Teaching Hospital (KBTH) in Accra and the Komfo Anokye Teaching Hospital (KATH) in Kumasi for the training of Dental Surgery residents in the country. The purpose of this paper is to review the historical evolution of postgraduate dental education in Ghana, describe its current status, and discuss factors influencing its further development. To achieve this, information was collected through direct

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interviews with selected individuals, from published reports of the postgraduate Medical Colleges, secretariats of both the WACS and GCPS and also information from the two dental schools in KBTH and KATH.

Historical overview

The West African College of Surgeons started as the Association of Surgeons of West Africa (ASWA)⁷ and was inaugurated in 1960 with 25 surgeons. It later became the West African College of Surgeons in 1973, when together with the West African College of Physicians (WACP), West African College of Nurses (WACN) and West African Postgraduate College of Pharmacists (WAPCP), formed the West African Postgraduate Medical College (WAPMC), an umbrella college, overseen by the West African Health Community.

The West African College of Surgeons at its inception consisted of six faculties with 41 Fellows. Currently, there are seven faculties, namely: anaesthesia, obstetrics and gynaecology, ophthalmology, otorhinolaryngology, dental surgery, radiology and general surgery. The first examinations under the WAPMC programme took place in October 1979 with examination centres in Ibadan, Nigeria; Accra, Ghana; and Monrovia, Liberia. The dental surgery faculty however, conducted its first graduating examination in April 1988.

In September 1979, Nigeria established the National Postgraduate Medical College of Nigeria (NPMCN). Its first convocation was held in February 1982, when elected Fellows were inducted into the College. It currently has 15 faculties including: anaesthesia, obstetrics and gynaecology, ophthalmology, otorhinolaryngology, radiology, surgery, dental surgery, family medicine, general dental practice, paediatrics, pathology, internal medicine, public health and orthopaedics. The NPMCN was the first in the sub-region to graduate dental surgery specialists, with the first examination held in 1984. Three Ghanaian dental surgeons joined the residency training programme in Nigeria due to lack of a local residency training programme in dental surgery in Ghana at that time. Two of these (Drs. Alhassan Emil Abdulai and Ebenezer Anno Nyako) were registered with the WACS and one (Dr. Eric Asamoah) with the NPMCN. Dr. Eric Asamoah passed out in May 1989 after satisfying all the requirements of training in oral and maxillofacial surgery. He subsequently obtained a fellowship by reciprocity from the WACS in 1993.

In April 1988 the first fellowship examination of the Dental Surgery faculty of the WACS was held in Ibadan, Nigeria and Dr Alhassan Emil Abdulai, became the first fellow to graduate from the WACS dental surgery faculty by examination, in oral and maxillofacial surgery. Dr Ebenezer Anno Nyako graduated from the College in 1989 also in oral and

maxillofacial surgery. All three of them subsequently returned to Ghana to help in the expansion of dentistry in the country and also in the establishment of the newly created University of Ghana Dental School. Since then, 6 other Ghanaians who trained abroad as specialists have been elected as Fellows of the Faculty of Dental Surgery, WACS. In Ghana, the birth of formal postgraduate dental education was made possible by the presence in the country of Dr Robert Ofori-Gyebi (FDSRCS), of blessed memory, a oral and maxillofacial surgeon trained in the U.K. He was the first Ghanaian dental surgeon to be elected Fellow of the West African College of Surgeons in 1970. He then set out to mentor and train residents locally in oral and maxillofacial surgery. However, being the only mentor at the time, and with limited infrastructure for training, he encountered many difficulties.

In 1986 three dental surgeons who had passed a Ministry of Health qualifying examination, were enrolled at the department of oral and maxillofacial surgery of the Korle-Bu Teaching Hospital to prepare for both the primary examination of the Royal College of Surgeons of England (RCS) and the West African College of Surgeons. They were Drs Grace A. Parkins, Albert Coleman and Kweku Okanse.

In 1987, two of them passed the primary examinations of both Colleges, however a year later in 1988, the programme of the RCS was discontinued in Ghana, leaving only the West African College of Surgeons as the only institution responsible for local postgraduate dental training in Ghana. Thus, the two residents who had passed their primary examinations and were preparing for their part I examination had to focus on the WACS programme. They however, later obtained scholarships and left Ghana to continue their residency training abroad. Since then, a total of 40 candidates have enrolled with and taken at least one examination of the WACS. Of these, 28(70%) have discontinued the programme, with 12 of them still progressing at different stages, yet none has completed the Fellowship of the West African College to date.

In 2003, the Ghana College of Physicians and Surgeons was established by an Act of Parliament in Accra. A Faculty of Dental Surgery was then established under the division of surgeons. With its establishment, 26 Dental surgeons were inducted into the College as foundation fellows and between 2003 and 2012, ten more have been elected as fellows of the College. With regard to examination by the College however, by the end of December 2010, eleven residents had successfully passed their Membership examinations, out of which number five had enrolled and started the Fellowship programme. This was the highest number recorded by the College for its Fellowship programme at that time. By the end of 2012, 32 dental residents had enrolled with the College. Of these, 16 members and 2 fellows had

passed out by examination and 3 had discontinued the programme. The rest are still in training.

Current Status of Postgraduate Dental Education in Ghana

Currently, there are 39 dental surgery specialists in Ghana, 16 of whom are training and mentoring 46 residents of both the Ghanaian and West African Colleges. This number is grossly inadequate for a population of about 25 million (Table 1).

As previously stated, the pathway to specialization in dental surgery in Ghana is either through the Ghana College of Physicians and Surgeons or the West African College of Surgeons. While the requirements for entry into both Colleges have been the same, there are some differences in the curricula and structure of their training programmes. Admission into a residency training programme follows prescribed houseman ship training after graduation as Bachelor of Dental Surgery and full registration with the Ghana Medical and Dental Council.

Admission for training requires a pass in the Primary examination of either the WACS or part I examination of the GCPS. Both examinations comprise multiple-choice questions (MCQ's) in basic dental and surgical science.

Training programme of the West African College of Surgeons

After qualifying to enter the College, a candidate has to complete both the Part I (Membership) and Part II (Fellowship) examinations after training in approved hospitals. The training at the intermediate level requires that the candidate complete prescribed rotations in accredited hospitals and training centres over a minimum of 2-years. Progress of training is monitored through the compulsory use of approved logbooks. In

addition residents are expected to attend update courses, revision programmes, and a number of prescribed skills courses before applying for the Part I examination at the end of the rotations. The examinations consist of MCQ's, essays, bedside long-case examinations, short cases and a viva voce.

After passing the Part I examination, the candidate spends the last 2 to 3 years of senior residency training in a chosen subspecialty, after which they sit the Part II Final examination which is mainly specialty based and for which a dissertation is required as part of the assessment at this exit examination.

Training programme of the Ghana College of Physicians and Surgeons

After entry into the College, specified clinical rotations are undertaken in accredited hospitals and training centres over a period of 3 years. Progress of training is monitored through the compulsory use of an approved logbook. In addition, residents are expected to attend update courses, revision programmes, and a number of prescribed skills courses as with the WACS programme. However, with the GCPS, the curriculum is structured such that after the first three years of the programme, by which time all the rotations would have been completed, the candidate applies to take an exit examination, the Part II examination. Successful candidates are awarded a "Membership" diploma, which permits them to practice as specialists under the Ministry of Health's (MOH) career structure. They are then required to spend one year doing a district posting. They may then continue on to do the fellowship training if they so wish. The Fellowship training takes three additional years. The fellowship examination requires the candidate to carry out a project and submit a dissertation, in addition to a clinical case he or she has treated.

Table 1: Number of Dental specialists in the different Colleges in Ghana at the end of 2012

Dental Surgery Specialties	Elected Fellows (WACS)	Exam Fellows (WACS)	Residents (WACS)	Elected Fellows (GCPS)	Exam Fellows (GCPS)	Members (GCPS)	Residents (GCPS)
Oral Surgery	2	3	3	13	1	8	8
Restorative Dentistry	0	0	5	7	1	3	7
Orthodontics	0	0	0	3	0	2	7
Periodontology	0	0	1	0	0	1	4
Paediatric Dentistry	0	0	0	0	0	0	1
Oral Pathology	1	0	0	1	0	2	2
Community Dentistry	1	0	0	11	0	0	0
Oral Medicine	0	0	0	1	0	0	1
Oral Biology	0	0	0	2	0	0	0
Oral Radiology	0	0	0	1	0	0	
TOTAL	4	3	9	39	2	16	

The successful candidate is then awarded a Fellowship and becomes eligible for appointment as consultant in their subspecialty or in an academic faculty.

Though the two structures look similar, residents with the GCPS spend more time in rotations in their subspecialty compared to the WACS programme.

There are eight recognised subspecialties for which residents may train, namely: Oral and maxillofacial surgery, Restorative dentistry, Orthodontics, Periodontology, Paediatric dentistry, Oral pathology, Community dentistry and Oral medicine.

Over the years, enrolment into the various Colleges has shown some variations. Before the University of Ghana started graduating dental surgeons in 1997, the numbers of dental surgeons enrolling for postgraduate training were few. This was because dental surgeons were then trained abroad and very few of them returned home to practice and to continue their education. After 1998 however, there has been a gradual increase in the numbers enrolling for the WACS programme. There was a significant increase in enrolment when the WACS primary examination was held locally for the first time in 2006. This increase has however, not been sustained and the numbers are now falling (Fig 1).

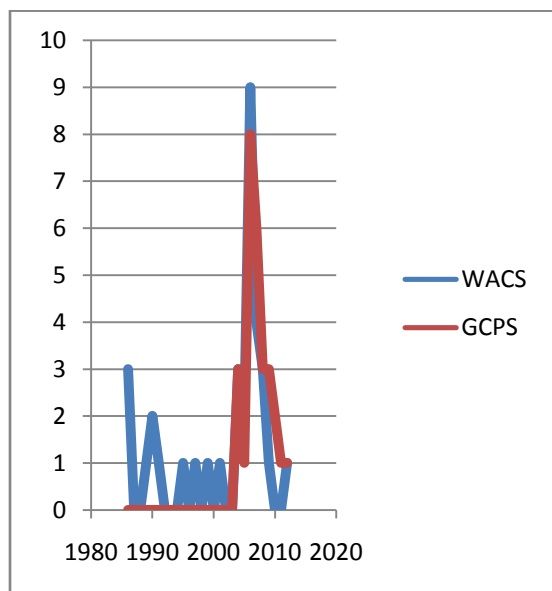


Fig 1. Trends in enrolment from 1986 to 2012 for the two colleges

The GCPS started quite well with increasing numbers, but it has also not been able to sustain the trend with the number of residents falling. Further studies may therefore be needed to explore reasons why the number of residents who enrol are falling despite the fact that more graduates are being

produced each year. It would be useful also to ascertain the cause of the high attrition rate especially with the WACS programme.

The primary objective of the postgraduate residency, training programme is to produce highly trained specialist dental surgeons with skills relevant to the dental care needs of Ghana. Furthermore with the establishment of two dental schools in Ghana, these trained specialists will be in a position to train the next generation of specialists. Currently there are about 245 dental surgeons providing dental care for the 25 million citizens of Ghana. Of these, only 38 are specialists in the different fields of dentistry and have been accredited in Ghana to provide specialist Dental services (Table 2). Out of this number, 11 are unavailable, leaving only 27 to provide specialist service for the whole country, a situation that is highly undesirable.

Table 2: Distribution of Specialist Dental Surgeons in Ghana

Location	No	%
Tertiary / Teaching Hospital	19	50.0
Secondary Level Hospital	4	10.5
Private Sector	1	2.6
Full Time Administration	3	7.9
Left The Country	5	13.2
Retired	5	13.2
Dead	1	2.6
Total	38	100

Over the last few decades, increase in knowledge of and advances in dental technology have raised oral health care to a new level. Dental educators and the profession as a whole have put increasing demands on the clinical competencies expected of graduates. The medical profession has reformed radically with its evidence-based and problem-based approach to teaching, and patient care. The extension of these to the post-qualification training of dental surgeons means that universities, colleges and postgraduate institutions are obliged to develop new strategies to meet these needs.

Currently, there is a growing interest in postgraduate dental education and specialization in Ghana. This is because the premier dental school, the University of Ghana Dental School has already produced 183 dental surgeons from 15 graduating classes. The Kwame Nkrumah University of Science and Technology Dental School in 2012 graduated its first batch of 8 dental surgeons. With the increasing number of dental graduates, the quest for career development and its associated better remuneration for specialists has been a motivating factor

encouraging these graduates to enrol for postgraduate training.

The Future

The future prospects for postgraduate dental surgery education in Ghana are bright. However, several challenges need to be addressed and overcome urgently. These include reducing the attrition rate following enrolment and also addressing the decreasing numbers at enrolment. It is hoped that more dental surgeons will be encouraged to take up the challenge to go into postgraduate training to improve the number of specialists available to the population and thus reduce the huge workload on the few available.

The Colleges and especially their Faculties of Dental surgery may need to review some of their policies. The district rotation policy required to be carried out by dental surgeons before they are accepted into postgraduate training may have to be reviewed in certain instances especially for “deprived” disciplines. With regards to Faculty of Dental Surgery, once these dentists go out to practice and they settle down, social issues take precedence and few return to pursue postgraduate training. Furthermore the one-year district rotation requirement after the membership examination for qualification for Fellowship training may need to be waived for deprived subspecialties in the dental programme. This will ensure that adequate numbers of specialists are quickly trained to help train the next generation of specialists. Besides, the majority of the current specialists may be retiring soon.

Within the faculty itself, the training of dental specialists has also tended to be skewed towards a few disciplines, especially oral and maxillofacial surgery, to the disadvantage of the other less popular ones such as, paediatric dentistry.. Targeted policies may thus have to be formulated and implemented to recruit and retain residents for these “deprived” subspecialties. This can be done by providing incentives or exemptions to residents who want to enrol in these deprived disciplines. Furthermore, for some of these deprived disciplines with no local consultants to train residents, sponsorship may have to be sought for these residents to train outside Ghana. They in turn, can train the next batch of trainers.

The major stakeholders in Ghana in charge of oral healthcare, including the training institutions, the leadership of postgraduate dental training, the Ministry of Health and the leadership of the dental schools, need to build consensus and develop a viable manpower policy to guide the training of more dental personnel. This policy must take into consideration

the current shortages, the future projections for population increases as well as changes in population profile. Also important are changes in the economic status and the expectations of the population, changes in the pattern of oral diseases and changes in the demand for sophisticated treatment.

The output of the WACS programme has not been very encouraging considering that after 26 years of training candidates in the College, no locally trained dental surgeon has acquired its Fellowship by examination. Apart from the financial and psychological costs to both the College and the candidates, it has also taken its toll on the country, considering the fact that the Ghana government until recently had been sponsoring residents to Nigeria to take each part of the examination. The GCPS programme looks more promising with more residents enrolling in the Ghana College relative to the WACS, having so far, produced 16 Members and in addition, recently graduated 2 Fellows. But even the GCPS is suffering from a reduction in enrolment numbers. The output of both Colleges thus leaves much to be desired.

Finally, mentoring may also need to be intensified to make this training process more effective and attractive Akinyemi et al⁸ concluded that “The Hippocratic oath suggests a patriarchal relationship between the trainer and his trainees. True mentoring requires a father’s heart. There should be reciprocal respect and total loyalty on the part of the trainee. This type of trainer – trainee relationship will enhance a more effective training process.”

Conclusion

Postgraduate Dental training in Ghana has come a long way, nevertheless after 26 years, there is not much to show for all the effort and money spent. This may be partly because a lot of attention had focused, in the past, on establishing and sustaining the two dental schools in Ghana. That having been accomplished, it is time now to re-focus our energies into training the next generation of trainers. Not only would this ensure that highly skilled and competent providers are produced to keep the reproduction chain going, but also that it is the only sure way of sustaining the two dental schools by providing a constant source of well-qualified faculty.

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