

DEVELOPMENT OF POSTGRADUATE EDUCATION AT THE 37 MILITARY HOSPITAL

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Summary

Postgraduate medical education outside the traditional teaching hospital promotes decentralization of postgraduate training. The 37 Military Hospital established one of the earliest postgraduate medical education outside a teaching hospital in Ghana. Prior to this, the hospital faced a problem of external staff training, long training duration, and the inability to train large numbers of doctors at a given period. The article describes the evolution, impact and challenges of establishing postgraduate education at the 37 Military hospital.

The postgraduate medical education evolved out of the need to increase the specialist doctors output and retain doctors during training. It started in 2006 with four pioneer students and now has 173 students at various years of residency. The immediate clinical

impact of the postgraduate medical education was the reduction in emergency mortality rate and an increase in emergency admissions in the first 2 years. Subsequently, an undergraduate training programme commenced with a current student turnover of 200 per annum. The foreign student pass rate in the national Medical and Dental Council examination for foreign trained graduates has consistently been well above the reported national pass rate per exam. The challenges encountered were myriad but with administrative support a postgraduate unit was established for the postgraduate medical education at 37 Military hospital.

In conclusion, the development of postgraduate medical education is feasible outside tertiary teaching facilities with a dedicated and funded postgraduate unit/college.

Introduction

The development of postgraduate training at the 37 Military Hospital marks one of the earliest attempts to establish a postgraduate training programme outside the traditional university teaching hospitals in Ghana and under a non-university administration. The development of postgraduate training in non-teaching hospitals has evolved in many places and disciplines.^{1,2} This article by the Coordinator of the Postgraduate programme gives an account of the evolution, impact, challenges and lessons from the development of postgraduate training at the 37 Military hospital.

Evolution

The idea to establish a postgraduate training at the 37 Military Hospital was borne out of observations and discussions in 2005 on the need for a postgraduate training in surgery in the hospital. The 37 Military Hospital at the time had two systems of postgraduate training for doctors which were either by a scholarship abroad or local training at one of the teaching hospitals in the country. This approach generated a low turnaround of specialist for the hospital as only a few were training at any particular point in time. This resulted in a lack of retention of middle level workforce in the hospital in their pursuit of formal postgraduate medical education and general apathy by those who had

to stay and acquire skill by observation and apprenticeship. Additionally, the surgical department was a large single unit undertaking the services of all subspecialties in surgery. Confronted with these problems, the head of the surgical department, Col. S.D Mante, initiated discussion on establishing a postgraduate medical education programme in surgery to train the middle level staff to specialist level and to expand the scope of surgical services in the Military Hospital. The was aimed at developing subspecialty units within the surgical department and to deal with human resource challenges. The programme started at the surgical department for medical officers. The original intended name for the postgraduate training was 'Postgraduate Residency Training Programme in Surgery'. The initial interactions and communication were therefore with the Department of Anatomy of the University of Ghana Medical School for a basic sciences training in course in anatomy. This marked the beginning of formal postgraduate training at the 37 Military Hospital.

Coincidentally, the return of other locally trained specialists to the 37 Military Hospital in the early 2000 had rekindled the need for a postgraduate training in other departments of the hospital albeit at a slower pace. As a result, the evolution of postgraduate training in surgery was favourably received by the hospital administration and military high command as complimentary and strategic to the vision of the Ghana Armed Forces Medical Service (GAFMS). It was, however, agreed that the scope of the training programme had to be expanded to cover all departments of the hospital. A proposal to the Ministry of Defence was accepted, given the needed support and a consultant

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was engaged to assist in the establishment of the postgraduate training for doctors at the 37 Military Hospital. The desire to establish postgraduate training in surgery will reflect in the initial activities of the college and its future direction. On the 21st June 2006 at the Burma Hall, the postgraduate training at the 37 Military Hospital was inaugurated with the keynote address by the 23rd President of the West African College of Surgeons Prof. E.D Yeboah. The launch established the – ‘Military Postgraduate Residency Training Programme’ and the ‘Postgraduate College’. The postgraduate college became the training centre for membership and fellowship awarding colleges in Ghana and West Africa by implementing the Military Postgraduate Residency Programme. The idea was to have a college which in future will provide postgraduate training for all medical and paramedical staff. The head of surgery, Col S. D. Mante was appointed the first Coordinator for the programme and College. The author and current Coordinator, Dr. E. Asumanu was appointed the Deputy Coordinator for the programme and the college. The effect of this was the creation of the first semi - autonomous postgraduate training within a tertiary hospital system and outside the administration of a mainstream university in Ghana.

The college started as a postgraduate office created in the hospital’s library with the librarian as the administrator, a deputy coordinator and coordinator as its principal officers. Subsequently, a new postgraduate building with administrative offices for permanent staff was provided and named the Postgraduate College. The college’s administrative structure now had a governing board, a coordinator reporting to the Director General of GAFMS (the equivalent of Director General of the Ghana Health Services) and two deputy coordinators in charge of academic and administration. A dedicated funding source was also made available for the smooth running of the programme. External faculty members were engaged as part of the requirements for accreditation and to ensure the programme becomes fully functional. With the complement of both internal and external faculty members, the programme had a successful official take off in 2006 with two programmes namely Surgery as well as Obstetrics and Gynaecology for the West African College of Surgeons and the Ghana College of Physicians and Surgeons. The postgraduate college has remained a purposely built postgraduate training centre for these and other colleges in Ghana and West Africa. The foundation faculty members had to teach basic science courses and introduce regular assessments. The teaching and learning activities have continued to be structured along regular continuous and formative assessment with mock examination prior to each college examination. Faculty training in teaching and learning has been held with support from University of Ghana’s College of Education through a workshop to improve capacity in teaching. The workshop has enabled faculty members to adopt innovative teaching methods in their engagement

of students as well as the incorporation of best teaching practices. In order to enhance its capacity in research, the postgraduate programme has established an Institutional Review Board on 26th April 2012. Chaired by a bioethicist, the seven - member panel meets quarterly and in emergencies to consider proposals for approval. A total of 705 local and international proposals have so far been reviewed.

Over the past 16 years, the postgraduate training has expanded from two to nine training programmes namely Anaesthesia, Paediatrics, Internal Medicine, Surgery, Obstetrics and Gynaecology, ENT, Ophthalmology, Maxillofacial Surgery and Radiology. These are programmes accredited by colleges in Ghana and West Africa for postgraduate training. The postgraduate college acts as a training centre for the Ghana College of Physicians and Surgeons, West African College of Surgeons as well as West African College of Physicians. The college now admits residents from the hospital, other institutions in the country and foreign students for these colleges. The programme started with four pioneer students in 2006 and as at 2021 a total of 173 residents had been admitted for both the Ghana and West African colleges. The trainees from the colleges in Ghana are admitted following placement by their respective colleges into the military postgraduate training. The trainees from the West African colleges apply individually to the military postgraduate training to be admitted into the appropriate programme.

Our postgraduate training thrives on collaboration with the hospital, local and external institutions for mutual benefit. Here are a few examples: A strong collaboration with the 37 Military Hospital has been key to the survival of the college and the success of the postgraduate education. Our continued collaboration with the Korle Bu Teaching hospital and University of Ghana Medical School has provided an avenue for enhanced training. As part of the external collaboration, the West African College of Surgeons conducted its membership examination in surgery at the 37 Military Hospital when staff of its traditional examination site in Ghana embarked on an industrial action in October 2011. Our college partnered with the Komfo Anokye Teaching Hospital and the Liverpool School of Tropical Medicine in the implementation of the research training programme dubbed ‘Diploma in Project Design and Management’ in the southern zone of Ghana. This programme has now been adopted by the Ghana College of Physicians and Surgeons as a diploma course in its curriculum. The postgraduate college has also collaborated with many other international institutions for mutual benefit.

Impact

The impact of the postgraduate training is summarized under the following themes: specialist output, quality of emergency service, membership enrolment and examination outcome as well as undergraduate training.

Specialist Output

The postgraduate training achieved its objective of providing trained middle and senior level staff for care delivery. Compared to the pre-postgraduate programme period, the number of specialist and senior specialist has seen an exponential growth. The average specialist/senior specialist output has been five per year compared to the pre-postgraduate period of about one in five years. As most of the founding faculty have retired or are retiring, it is gratifying to note that the programme has resulted in the creation of many specialty units under the leadership of its trainees.

Of particular mention are the creation of new speciality units as well as the presence of specialists and senior specialists who are products of the postgraduate residency training programme at the 37 Military hospital. The following indicates the numbers per speciality – Paediatrics (5), Plastic Surgery (4), Urology (3), Cardiothoracic (1), General Surgery (3), Orthopedics (3), Obstetrics and Gynaecology (7), Anaesthesia (3), Internal Medicine (6). This is by far the largest pool of in-house trained specialist outside the teaching hospitals in Ghana.

Quality of Emergency Services Delivery

The immediate impact of postgraduate residency programme was evident in the quality of healthcare outcomes. A study comparing outcomes a year before and after the programme at 37 Military Hospital reported emergency mortality reduced from 27.8% to 7.9% in surgery, 46.3% to 23.2% in medicine, 50.0% to 8.4% in paediatrics and 17.5% to 0.8% in gynaecology³. The second observation in the study was the increase in emergency cases recorded at the hospital. Surgery and Medicine had a three - fold increase, Gynaecology had a ten - fold increase and Paediatrics had a 20-fold increase.³ This was attributable to the change in the structure of the emergency care system from a single unit (known as No.1 Reception) to individual specialized units to align with training.

Membership Level Enrolment and Examination Outcome

A pioneer candidate was presented for the exam in surgery in 2008 and now the programme presents averagely 20 candidates per year in examination since 2019. The uptake in the number of residents increased after 10 years of implementation of the postgraduate programme was due to two reasons (Fig1). First, the initial cohort of trainees who graduated after six years added to the faculty of trainers having acquired the necessary experience. The other reason was the success of the initial trainees in surgery as well as obstetrics and gynaecology which resulted in the progressive inclusion of Anaesthesia, Paediatrics, Internal Medicine and Radiology as training posts. The postgraduate programme has achieved a 100% pass rate at the membership level in Surgery as well as Obstetrics and Gynaecology yearly for the past five years in both the

Ghana college and physicians and surgeons and the West African college of Surgeons. The other departments though have lower intakes and have also achieved a pass rate of between 50% - 100%.

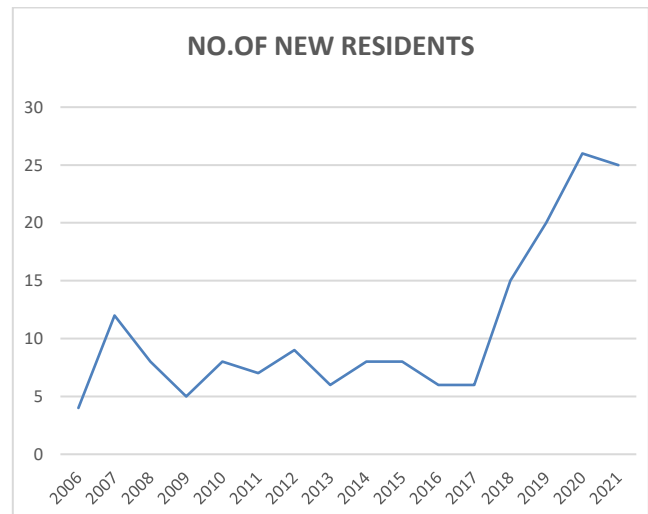


Fig 1. New Residents Enrolment: 2006- 2021 at the 37 Military Hospital Postgraduate Residency Programme.

Undergraduate Training

The success of the postgraduate medical education led to the introduction of undergraduate medical education in the area of clinical training in 2015. Currently, the college provides practical clinical training in modules for three local universities and over 43 foreign medical universities. It is worth noting that the postgraduate college established the unit for undergraduate training after 10 years of postgraduate training.

This allowed the college to have its core teaching staff from specialists for undergraduate training programme. This has been a mutually beneficial addition and has improved trainee performance at the membership and fellowship level. The benefit of the postgraduate medical education underscores an unsuccessful attempt at establishing an undergraduate medical school by the military previously as efforts to seek faculty locally and from external donor partners did not materialize.

The student turnover at the hospital was about 200 per year with a ratio of about 1: 1 for local and foreign trained students during the 2020/2021 academic year. As an indicator of our performance, the pass rate for the Medical and Dental Council (MDC) examination for foreign trained doctors in 2020 were 73% and 82% in February and October respectively compared to a reported pass rate of 30.2% by the MDC in 2019. Currently, the hospital regularly receives students from local public and private medical schools for their clinical internship. Their post rotation assessment reports to their universities describe the clinical rotations at the 37 Military Hospital consistently 'as one of the best'.

Challenges

The development of the postgraduate medical education was not without its challenges at the initial stages, some of which were legitimate. The pioneer group of trainees had to be encouraged to accept the in-house postgraduate programme as good enough and this took some time and effort. The way of skills acquisition by observation and apprenticeship had to be changed to a more evidence based medical practice.

The challenge with faculty members was the reluctance of some to accept the change to an academic structure of teaching with its rigour and supervision. There was a legitimate concern on remuneration demand by some faculty for the full-scale teaching and learning required to successfully pass the college examination. This has not been fully resolved and will require a policy change.

Lessons

The development of postgraduate medical education outside the mainstream teaching hospital is feasible but requires commitment and collaboration. The establishment of a postgraduate training college/unit in a hospital is critical to a successful postgraduate medical education.

To be effective, it must be a stand- alone postgraduate college/unit with a clear vision, a functional administrative structure, a dedicated appointed staff and an appropriate budget line. The third lesson learnt is the improvement in the quality of health indices of the hospital.

Finally, postgraduate medical education outside the teaching hospitals can play a complimentary role in undergraduate training for the mainstream medical universities and is a viable option for establishing distance learning or city campuses for clinical training.

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