CORRESPONDENCE

POLICIES FOR IMPROVING ACCESS TO AND QUALITY OF ESSENTIAL BASIC SURGICAL CARE AT DISTRICT HOSPITALS IN GHANA*

To the Editor: The authors set out to make proposals for improving access to, and quality of basic surgical care, based on assumptions of the current state of district hospital surgical care throughout the country. These arose from a survey conducted by the same investigators, presumably a few weeks earlier. The information came from a study of ten randomly selected district hospitals. The claim that the physical infrastructure and supply of surgical and anaesthesia equipment are reasonably good for a developing country (Ref. No. 4 in paper) is indeed surprising and runs counter to findings of surgeons and other specialists working on behalf of the Medical and Dental Council and the Ghana College of Physicians and Surgeons, in district hospitals earmarked for training of house officers and residents. Attainment of middle income status clearly has not yet been reflected on health care infrastructure.

It is the daily experience of emergency personnel at the Korle- Bu Teaching Hospital that simple surgical emergencies (strangulated hernias, appendicitis, peritonitis from typhoid) are sent in from major district hospitals (and some regional centres) in the Greater Accra, Central and Eastern regions on account of deficiencies in supplies (especially anaesthesia) and inadequate theatre equipment.

Having apparently established reasonable adequacy of infrastructure the authors go on to state that access and quality of surgical care can most readily be improved by fast-track professional training, additional to specialist outreach programmes, continuing professional development, surgical mentoring of young doctors and middle level manpower training. This reviewer is totally agreeable to these measures, much of which is already on-going and could be enormously enhanced.

This writer however regards the inclusion of non-physician clinicians (NPCs) among middle level manpower, as far as surgical care is concerned, as a non sequitur. It is important to draw a distinction between medical officers undergoing a year to two years vocational training and NPCs acquiring surgical skills on the job. The latter cannot be middle level manpower for surgical care. What of the problems of diagnosis in acute or elective cases, and the identification and management of post-operative complications? It would be more productive to channel resources into vocational training and support for medical officers to supervise surgical care than investment in NPCs being touted by this paper.

Besides it would be unscientific to deploy NPCs as surgical middle level manpower just because it has been done successfully in Mozambique, Tanzania, Uganda, Malawi and Zaire. At least a well monitored pilot study is a prerequisite.

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To the Editor: That *"surgical services are provided by non-specialist-medical officers, many of whom are most often without formal surgical training,"* to quote from the article is, without doubt, a worrying reality that needs to be faced and for which appropriate solutions should be sought. It is a pity though that the authors "did not ascertain the morbidity and mortality rates after the various surgical procedures performed by these medical officers for lack of documentation to that effect"; the unbiased assessor of any solution proffered will be robbed, in future, of the essential "reference point(s)" for comparison with what is happening now.

The statement that reads *"As a result, the available medical officers and nursing and paramedical workers in these hospitals were required to perform a wide range of surgical procedures, often with inadequate training and experience"* needs to be looked at critically from point of view of "responsibility for the outcome" in terms of what the Medical and Dental Council would say when faced with a complaint from family members of a patient. One such scenario being both ureters cut during a caesarean section by a medical officer who had never previously done such an operation but was "required to do it".

"Training of middle level health providers (e.g. non-physician clinicians or physician assistants have been successfully carried out in countries such as Mozambique..." This is a useful piece of information for which a few more details should be provided. How long did the training take and how was "success" measured? The Faculty of Surgery of the GCPS, not so long ago, did not consider training of their residents for twelve months full-time in surgery, as adequate for them to be posted to the district hospitals, so one wonders how long "generalist" medical officers and "non-physician clinical assistants", in our setting , would take to be "adequately trained" for the district hospital.

I defer to the senior surgical specialists who did not contribute to the article, to comment on *"According to Wilhelm et al, non-clinician physicians when adequately trained and supervised can safely perform major surgical procedures."* In our setting who is going to do the supervising in the district hospital?

The concluding remarks, in the article, are an accurate description of the unfortunate and sometimes desperate situation in most of our district hospitals but the suggested remedy needs to be critically looked at; it should not end up worse than the "disease" it seeks to cure.

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To the Editor: Increasing geographic and financial access to basic services is one of the major pillars of the strategic objectives of the Five Year programme of Work 2002-2006. The paper appears to capture this strategic objective as a basis for the proposal for improving quality of basic and essential surgical care at district hospitals in Ghana. The paper establishes the strategic role that the district hospital plays in the decentralized health care system of Ghana and attempts to describe the woefully inadequate human and material resources required for effective basic and essential surgical care at district hospitals. Successive national governments have faced the problem of shortage of trained health professionals as well as their mal distribution between the urban and rural communities. The finding of this study does not come as a surprise to any keen observer of the health care scene in Ghana.

Twenty years prior to the adoption of the 5-Year Program of Work, the Ghana government had adopted the policy of training paramedical staff to undertake some clinical duties. Attempts at training multipurpose primary health care (PHC) workers and traditional birth attendants (TBA) have also been tried in an effort to provide preventive health care to communities outside the catchment areas of the district hospitals .Currently, the Community Health Planning and Services (CHPS) is directed at accomplishing this important health care objective. Along the same vein, the training of non-physicians to carry out clinical duties has occupied the attention of planners of human resource for health, particularly in the low income countries for many years. This paper has reviewed the literature on this subject in Africa and the rest of the world and underscored the relevance of the policy to the Ghanaian situation. The four interim measures proposed by the authors to expand these services appear reasonable. However, in the light of the country's recent history, the measures that can be implemented through the mandate and activities of the Ghana College of Physicians and Surgeons are likely to be successful in the immediate and medium term.

The 13 measures that the study has recommended to the government and development partners are very reasonable. For the immediate and medium term, I believe that under the mandate of the newly established Ghana College of Physicians and Surgeons, the accelerated training of anaesthetists and surgeons, combined with the proposed short training in surgery for selected medical officers should be a feasible policy to be considered by the government. In the long term, the strategy of training non-physician clinicians should be considered.

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To the Editor: I read with interest the above paper by Abantanga et al and would comment that a carefully planned effort, involving the available specialists at the various hospital levels in specialist outreach programmes, the medical officers at the district hospitals, non-physician clinicians and visiting specialist teams would help address the need in the interim. Training of non-physician clinicians alone would not be optimum. The deployment of specialists outreach teams could be additionally used for auditing the facilities for surgical care, as well as in-situ, in-service team training at the district. Short term intensive training lasting up to two weeks at a time, in order not to disrupt work unduly, utilizing dry lab and animal lab skills training, as obtainable at the Medical and Surgical Skills Institute of the West African College of Surgeons, in addition to real patients at various times would be essential. The WHO Integrated Management for Emergency and Essential Surgical Care tool kit would be a valuable resource.[1]

Training programmes of the post graduate colleges should be targeted to providing specific numbers with adequate funding in order to make up the surfeit. That of the non-clinician physicians also should be reviewed to include essential surgical care at the district hospital level. Equipment levels should be reviewed to include patient monitors while surgical and laboratory supplies is also assured. Financial incentives and support for the programme cannot depend on internally generated funds at the current insurance reimbursement for surgical procedures. A definite budget would be required.

Reference

WHO Integrated Management for Emergency and Essential Surgical Care (IMEESC) tool kit

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To the Editor: After reading the article by Abantanga et al. I base my comments on my experience in Ghana spanning seventeen years.

A tremendous improvement of service in rural areas came from the requirement of the Ghana College that trainees gained at least one year"s experience in rural areas. I would wish that it is increased to 2 years. For those who are sent to "one man" hospitals however, there must be training for about 6 months in surgical procedures and obstetric complications, local and spinal anaesthesia, and intubation. Battor did that training for a number of young doctors in some sister hospitals and also helped to establish support systems via telephone, e-mail, sharing of protocols and short term experienced visiting volunteer specialists to continue the support.

In view of the increasing numbers of Ghanaian specialists one may have to demand a certain time from them to support a doctor in a rural set upone may have to think of payment…

Concerning training in surgical procedures for non-doctors, in the present time, with increasing numbers of lawyers, we may be late with training of such categories. In the early years we trained our theatre staff to do hernias and caesarean sections, but there was the more experienced doctor or the specialist in the background. They may be useful to support the work of a specialist, thus helping the overburdened doctor to be free for other work.

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To the Editor: Congratulations on the much awaited inaugural issue of the Postgraduate Medical Journal of Ghana (PMJG).

I read with deep interest the article entitled "Policies for Improving Access to and Quality of Essential Basic Surgical Care at District Hospitals in Ghana". Some of the points raised need more in-depth analysis as they have serious implications for the future role of the medical profession in Ghana. Thus it must be discussed further by the generality of doctors in Ghana.

I will like to comment on some of the findings and recommendations. More than 65 % of major surgeries performed were related to Obstetrics and Gynaecology and a better picture of minor Obstetrics and Gynaecology operations would have been presented if the episiotomies had been removed from suturing of wounds, which was 61%, as I suspect the episiotomies made up a substantial percentage of it. Therefore few operations requiring a Surgical Specialist were actually performed. Was it because there was no Surgical Specialist? Or the Doctor had had no training in surgical skills? Data on the number of surgical cases referred to the Regional or Teaching Hospitals would have shown better the magnitude of the problem and would have answered the question of whether it would be worthwhile to send a Surgical Specialist to a District where the number of surgical cases seen is low?

Specialist Surgical teams of all kinds, such as General Surgeons, Orthopaedic Surgeons, Paediatric Surgeons, Urologists, Obstetricians and Gynaecologists were absent in the Districts. The question to ask is, will the District Hospitals be able to integrate all of them if they were sent there as permanent staff, looking at their bed capacities and blood banking capabilities? Though the research found that most of the District Hospitals are reasonably equipped to handle surgical cases in terms of physical infrastructure and availability of anaesthetic and surgical equipment, are these equipment suited to the needs of all these different categories of surgeons? The availability of Blood Banking capabilities "at least some of the time" is not good enough. What kind of surgery can any Surgical Specialist or even junior doctor perform under such a situation? Would it not be better to improve access by improving road and transportation so that the patients can easily access surgical services in another district or region? Many of the surgical procedures which were cited as being considered by WHO to be Essential Basic Surgical Care can be managed by any category of medical officer (MO, SMO, PMO) if properly trained.

I therefore agree with most of the recommendations offered, which are laudable indeed and which if implemented, would address my concerns. I however have a problem with their recommendation of the Training of Non-Physician Clinicians (NPCs) who are supposed to perform specific and limited surgical procedures under supervision in the District Hospitals. Under whose supervision? Who makes the diagnosis and decides on what type of surgical procedures they should undertake? The same overworked one or two doctors at post or will a new cadre of supervisors be created? Will the training of these Non-Physician Clinicians (NPCs) be free or will they pay as I now understand residents are supposed to pay for their training?
I do not pretend to know what went into the projections that suggested that "It is unlikely that District Hospitals in Ghana will be fully staffed with Surgical Specialists and Anaesthesiologists in the near future (5-15 years from now)" and I think it is a bit pessimistic. If the current training programs are not matching the demand, have we tried to find out why? Is the problem so difficult to solve that we have to deploy a "rapid task force" as it were? Have we considered the peculiar problems the Non-Physician Clinicians will bring along? Let me give some real life examples:

1. Korle Bu Teaching Hospital in the 80's was short of anaesthesiologists. There were 2 very old male Nurse Anaesthetists who got on very well with the rest of the staff but another young Nurse Anaesthetist who was posted to the department after one year

training in Okomfo Anokye Teaching Hospital brought so much conflict because of her attitude and comments that she was eventually asked to leave the Hospital. Another recently said boldly that the Doctor anaesthesiologist did not know anything. There is always conflict when people are allowed to exceed their proper limits.

2. Some Medical Assistants (Physician Assistants) answer to the title 'Doctor' and one of them went so far to say that Doctors do not know anything and so her salary should be more than the doctors she was working with. This is a source of more conflict.
3. This perception that Doctors do not know anything has gradually filtered down to the nurses on the wards who choose which orders given by the Doctors to follow. We are all aware of the subtle suggestions that we all do the same work and hence must have the same pay. Such attitudes cause more conflict, insubordination and grumblings on the wards!
4. All males in the Hospital who wear a white coat and even those who do not, respond to the title Doctor and there are many Laboratory Technicians, Pharmacy Assistants and male Nurse Anaesthetists who are being so addressed. They are attending to patients at the Hospitals and in their homes and giving all sorts of treatment and advice.
5. As said in the article, more than 65% of the major surgeries are OB/GYN related. I assure you no doctor is sent to the District Hospital or even the Polyclinics without being adequately trained to manage such cases. At least not in the Western Region. Even so, some of these young doctors go beyond their limits by performing operations that they are supposed to refer to Specialists at the Regional Hospitals. They refer them when they have problems. Who is supervising them?

Surgery is no different. If you train Non-Physician Clinicians to perform surgery, I am afraid we will be introducing another breed of Service Providers ('Drs') who will make the lives of Surgeons posted to their District Hospitals in the future very difficult. Apart from the conflict which will be generated between these two groups, the Non-Physician Clinicians who were drawn from the localities might go underground, set up private clinics which might be difficult to control. And who do they call when there are complications?

There is also no guarantee whatsoever that they will stay in their localities permanently. Even so, some of these young doctors go beyond their limits by performing operations that they are supposed to refer to Specialists at the Regional Hospitals. They refer them when they have problems. Conflict! Who is supervising them?

All these categories of staff see Doctors as competitors and since they have not sworn any Hippocratic Oath, feel free to do things that even a Consultant would not dare to do! If the Non-Physician Clinicians go beyond their limits by performing operations that they are supposed to refer to the Specialists, I am ready to bet my last pesewa that nothing will be done or said about it because it will cause a lot of friction, animosity and conflict. We must beware of delayed referral of their cases that develop complications.

I wish to remind you of what happened to some Staff who were trained as Malaria Control Officers in the 80s and 90s. When the program ended, they were sent to the laboratories in some hospitals as Laboratory Technicians but all they knew how to do was to identify malaria parasites under the microscope! They had a very difficult time adjusting! We have had Doctors from Cuba who could do only venipuncture, anaesthetists who could only give spinal anaesthesia and specialists in Obstetrics and Gynaecology who could not even perform Caesarean Sections. Short cuts in medical training in my opinion are dangerous.

In conclusion, I suggest that we look ahead and think of the time when, with the many Medical Schools we are opening, we might have Surgeons in abundance. What will we do with the Non-Physician Clinicians then? The time and money to be used to train these people will be better used training more Doctors and more Surgical Specialists to man the District Hospitals and reduce the work load killing our colleagues in the District Hospitals.

Colleagues, what do you think? Let's have a discussion!

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Authors' Reply: Thank you very much for allowing us the opportunity to answer the issues raised about our article titled "POLICIES FOR IMPROVING ACCESS TO AND QUALITY OF ESSENTIAL BASIC SURGICAL CARE AT DISTRICT HOSPITALS IN GHANA" which appeared in the first edition of the Postgraduate Medical Journal of Ghana. We are grateful to all the reviewers for their comments – mostly positive – and we are happy that the article generated so much "heat!" We are pleased to see the level of interest in our article and we feel the debate raised by it is healthy.

There is understandably considerable concern about our proposal that one of the measures to "improve basic, essential and quality surgical care at district hospitals in the rural areas of Ghana and enhance health care delivery" includes the "training of- non physician clinicians (NPCs), such as physician assistants, to perform specific and limited surgical procedures in the district hospitals." This proposal is one of 13 which we consider to be appropriate for Ghana.

The bane of contention is mainly on the use of non-physician assistants to do some surgeries as summarized by Prof. Archampong below. We would like to address this problem in brief.

Prof. E. Q. Archampong wrote "…. it is important to draw a distinction between medical officers undergoing a year to two years [of] vocational training and NPCs acquiring surgical skills on the job. The latter cannot be middle level manpower for surgical care. What of the problems of diagnosis in acute or elective cases, and the identification and management of post-operative complications?" Our response to this question is simple. If one reads our article carefully, it is stated clearly that the non-physician clinicians should be formally trained and not that they should acquire surgical skills on the job. And Prof Archampong is correct – if they acquire surgical skills on the job, then they cannot be rightly said to be middle level manpower for surgical care. We are talking specifically about training such people in diagnosing and treating some specific surgical conditions listed in the article.

We may not like the idea, but some physician assistants are now being trained by a private university (Central University College, CUC) in this country in a 4-year programme. Central University College does not have a medical school; hence it has no physicians or surgeons, or paediatricians, etc and it is nonetheless training physician assistants for our health system. It has already produced between 70 and 100 graduate physician assistants who are now working in the healthcare delivery system of Ghana. At a recent stakeholders meeting in Accra, one Principal Medical Officer of a district hospital in Ashanti Region remarked "positively" that he could confidently attend the meeting because he had left behind a qualified physician assistant (PA) from Central University College to take care of problems in the hospital. He stated that the PA performed caesarean sections, repaired hernias, and carried out other types of surgical procedures. That is but one example, and there are many more now as these graduate physician assistants begin to enter our health system.

Since 2010, I spend about 10 - 12 days a year in district hospitals in the Upper East and Upper West regions participating in medical outreach programmes with a group of doctors, nurses, pharmacists, and other health personnel. The last outreach was from 21st December, 2012 to 2nd January, 2013. In one hospital, I learnt (and this was corroborated by the District Director of Health Services) that a very knowledgeable nurse anaesthetist (and this bit is from my personal experience with him. He gave general anaesthesia to patients including children for me to do some surgeries) performs caesarean sections, herniorrhaphies and also teaches all new medical officers who come to the hospital how to perform these procedures. Our residents tell me also that there is a female senior nurse in a district hospital in the Eastern Region who teaches new medical officers the same procedures as well as laparotomies. These are but two examples of health personnel who have acquired surgical skills on the job, and there are many more such examples in our rural district hospitals. We saw some additional examples of this nature when our research team visited 10 district hospitals in 2009.

However, these are not the type of non-physician surgical providers that our article has in mind. Instead, we are talking about the physician assistant from Central University College (and other such training institutions that train PAs) who has grounding in science who has had courses in anatomy, physiology, pathology, microbiology, etc (some preclinical stuff); who was sent to one of our hospitals for clinical training, and who eventually graduated as a physician assistant after 4 years of "medical training." Such a person has some grounding in the biomedical sciences and medicine. Can't such a physician assistant be given 2 –3 years of additional training in surgery to repair hernias, set bones, perform incision & drainage; or spend a similar number of years in obstetrics and gynaecology to perform caesarean sections, repair a ruptured uterus, etc? And imagine that this PA trained under Professor E. Q. Archampong for 2 – 3 years! And that Professor Archampong finds time to visit him once every 3 – 6 months in the district hospital to see how his trainee is faring and help out with more difficult cases.

Let's not forget that today's physician assistants are now registered and controlled by the Ghana Medical and Dental Council and hence can be supervised effectively, just as physicians in Ghana are.

We do not have non-physician clinicians (NPCs) yet in our country as they are known in Mozambique, Uganda, Tanzania, and other African countries. We should not forget that NPCs in those countries are specifically trained for a specific job. We have in our midst physician assistants who we, the authors, believe can be trained to perform the functions that NPCs carry out in those other countries to alleviate the unmet surgical needs in our rural areas. But, at the same time, we wholeheartedly agree with Prof Archampong that NPCs should not necessarily be deployed in Ghana just because they are used elsewhere. We also agree that a well-monitored pilot study is a prerequisite before any widespread adoption of non-physician surgical practitioners. And who should do the monitoring? The surgeons, of course, since they will (and must) be involved in the training of these "surgical" NPCs.

Lastly, but not the least, we should bear in mind that our paper made 13 or so suggestions for improving surgical care in Ghana; the introduction of NPCs was the fifth in the lot and not the first and most important. All the same, we have physician assistants now who have clinical training and are manning some health centres and are also working in some district hospitals

in the northern part of Ghana. In one hospital in Upper East Region, during our December outreach, I saw three of them! The only doctor in-charge (it was a one-man station) had gone on leave!!!

Now to touch a little bit on Professor A. Bruce-Tagoe's question about how long the training of NPCs take and how "success" was measured. Different countries have varying periods for training NPCs; this lasts from 3 to 4 years, with some adding a one-year internship to the training.[1,2,3,4] Success was monitored by careful review of the work done by these NPCs and sometimes comparing their work with that of surgeons and medical officers in these countries. The conclusions from these various reviews have held that there was no significant difference in the quality of the results (especially with reference to perioperative morbidity, mortality and postoperative hospital stay).[1,2] According to McCord et al.(5), among 1,134 complicated deliveries and 1,072 major obstetrical operations, there were no significant differences between assistant medical officers (same as NPCs in our article) and medical officers in outcomes, risk indicators, or quality.

We are happy to provide copies of the full articles for further reading to anyone who is interested. It will not be possible for us to address all the questions/concerns raised by the six or so reviewers of our article exhaustively in this short reply.

As for nurse anaesthetists, nurses, medical assistants, or other paramedical workers calling themselves doctors (or being called doctors by the populace) there is nothing we as doctors can do about it. We cannot stop them and we dare not try. Herbalists are calling themselves doctors!

Finally, we would like to thank all the contributors to this debate on our paper and hope the discussion will continue and that something positive will come out of it to help bring surgery to the doorsteps of our rural folk, who refuse to go to Komfo Anokye and Korle-Bu Teaching Hospitals and the regional hospitals whenever they are referred because they, and their families, feel very intimidated in such facilities or cannot afford the expense for treatment or the time away from the families. Let us remember that much of rural health care in northern Ghana is now provided by medical assistants[3] who are now called physician assistants.

We think that with the help of fully qualified senior Ghanaian surgeons, physician assistants can learn to provide basic surgical care to our rural folk to prevent the tragedy of so many people dying or suffering from readily treatable surgical conditions such as inguinal hernias to prevent patients with such conditions dying from obstructed/strangulated hernias!

We again would like to thank the Editor-in-Chief for giving us the opportunity to reply to the comments made by our colleagues.

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