Through the Eyes of a General Surgeon: Why Surgical Specialists in Sub-Saharan Africa Need to Train in General Surgery First

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Abstract

The world burden of surgical disease is disproportionate to the supply of health professional with surgical skills. This disproportion is more pronounced in the developing countries due to low numbers of trained personnel and high burden of disease. Surgical subspecialisation is gaining momentum leaving general surgery with few staff. As a result, the provision of essential surgical care, usually a responsibility of the general surgeon remains below par. In order to bridge this gap, not only do we need to train more general surgeons, it will be productive that all specialists trained as general surgeons first as this will give them an overall understanding of general surgical needs and the agility to respond to a general surgical emergency even when they are practicing as specialists.

Keywords: General surgery; Surgical care; Surgical specialisation; Surgical training; Residency; Primary healthcare; Developing countries

Introduction

What defines a good surgeon? Is it the quality of training (degrees and certificates) or the outcome of his operations? While colleagues might consider both, to patients and the general public, it is surely the latter.

No wonder all surgical residency programmes will insist on case logs as part of the assessment for a surgical resident during training. The is founded on two premises; First, the more you operate, the better you become. In other words the ‘cutting time’ or ‘cutting hours’ is to surgeons what flight minutes are to pilots. Of course it is accepted now that it’s more of the quality of cutting time, not the quantity that really matters [1].

Second, it is easier and more applicable to ‘read around’ a patient. The theory makes practical sense when what is in literature is applied to the patient. It becomes more difficult to forget the learned steps of a procedure as the knife meets the skin. This in a nutshell has been the theory behind the philosophy of surgical training since its birth in the Halstead era to present day formal residencies [2,3].

Formal surgical training began with general surgery training. Now residents enter subspecialty training directly or transit through general surgery enroute to subspecialty training. Deveney et al [4] observe that up to 80% of general surgery residents join subspecialty fellowships as soon as they are done with general surgery. Whether general surgery adequately prepares residents for a subspecialty fellowship is a matter of debate in the scientific world [5].

What started as a noble urge to supply adequate specialists and subspecialists to provide tertiary surgical care has now been decried as denying the rural population the all-important general surgeon [1,4]. This is a concern world over. It is even more of a concern when you think of the sub-Saharan Africa.

Statistics show that sub-Saharan Africa bears the greatest burden of surgical disease yet it has the lowest number of health professionals [6,7].

Need for Surgical Services in the Developing World

The magnitude of need for surgical service in sub-Saharan Africa is insurmountable in the near future. Galukande et al. [8] have demonstrated the emergencies encountered across east Africa. They observe that majority of cases in need of elective surgery end up being referred to higher level facilities. This delays care; no wonder most of the operations are emergencies to address complications from elective surgical diseases left unattended for too long. Farther east, Maru et al. [7] have criticised the WHO integrated essential and emergency surgical care as being insufficient to address the rural surgical needs of a developing country in terms of explicit mechanisms of community based follow-up and quality improvement [7]. They have proposed a programme that enlarges on this and called for a massive global scale up of surgical capacity to close the gap on surgical accessibility. That there is a huge gap between the need and supply of surgical care world over is no breaking news [6,9].

The situation is even worse in sub-Saharan Africa due to decreased volume of training, brain drain, violence, civil war, high rates of road traffic accidents etc. [6,9,10]. Various mitigation strategies have been employed to attempt to address this. They include a strategic 4-pillar intervention proposed by the Bellagio essential Surgery group [9], training of general physicians to provide surgical (especially emergency) care [11] to desperate measures like training nurses and clinical officers to do what should be done by a surgeon [11,12].

The 3rd pillar by the Bellagio group entails ample supply of quality health workers with surgical skills [9]. Although they argue that you don’t need a surgeon to provide emergency surgical care, they concede that the presence of a surgeon to oversee surgical care in a rural health facility is paramount [9].
Why Surgical Specialists Must Begin by Training as General Surgeons

Kenya, and by extension sub Saharan Africa, is yet to hit the required number of general surgeons to meet the population need for surgical care. But just like in the developed world, the trend in surgical training is now towards subspeciality training. There are direct entry programmes for neurosurgery, orthopaedic surgery, plastic surgery and ENT surgery. In addition, general surgical residents are joining subspecialty fellowships immediately upon graduation. As such, while the west is crying because the once saturated field of general surgery is now threatened with extinction [4], Kenya and her sub Saharan counter parts cry because they are losing on general surgeons even before they have had enough of them [10,13].

It is good to specialise as this improves the quality of care to world standards (from the human resource perspective). However, we still need the general surgeon to handle general surgical cases at the district level. Elective surgical cases are delayed during the referral chain attrition because of change of mind or financial fortune along the way, joining subspecialty fellowships immediately upon graduation. As surgery and ENT surgery. In addition, general surgical residents are year or two, just to wait to be licensed as a general surgeon. During fellowship, the staff will work as a general surgeon. This would take a deficit of general surgeons in the general population in two ways. Can we therefore have curricula that ensure everyone must train as a general surgeon before subspeciality fellowship? This will help bridge the deficit of general surgeons in the general population in two ways. First, in the interlude between general surgery and subspecialty fellowship, the staff will work as a general surgeon. This would take a year or two, just to wait to be licensed as a general surgeon. During this time, the general surgeon will offer advanced service akin to what medical interns provide for one year before recognition as medical officers. Secondly, the transit to subspecialisation may undergo attrition because of change of mind or financial fortune along the way, and in this way an extra general surgeon is added to the workforce.

After all subspecialisation is not always the better option and does not always result in better patient outcome [1]. It has been associated with boredom, high surgeon to patient ratio, high cost of care and inadequate cover for surgical emergencies (e.g. trauma) [1].

Conclusion

General surgery as a specialty is losing grip as more and more surgeons opt for subspecialisation. As a result, surgical care in rural Kenya and other Sub Saharan African countries continue to be neglected. If the specialist surgeons are trained in general surgery first, they can provide invaluable advise to the medical officers who carry out most surgeries at the district hospital as well as overseeing the overall surgical care provision at their centres of practice in case a general surgeon is not available. It will be productive to have a system that ensures surgeons train in general surgery before subspecialisation as this gives them cross cutting knowledge especially in terms of supervision of surgical care and reaction to surgical emergencies.

References