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Surgical Training in Pakistan: Time to Move to Specialty Based Practice

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IMPORTANCE Surgical training in Pakistan has been following the Halstedian model of training. Today the number of hospitals training surgeons in Pakistan has increased. Although commendable this has a huge downside to it. There is a growing perception among the surgical community that we are not moving fast enough to adapt to the rapidly changing needs. College of Physicians and Surgeons of Pakistan (CPSP) has commendably incorporated such elements of the structured training program however quality assurance of these programs at the training institute level has struggled. There is a growing need for improving the quality assurance of residency programs especially at the training institute level.

KEYWORDS Surgical Training; Pakistan; Structured training.

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Perspective

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Pakistan is a country where the burden of surgical conditions is increasing. With more and more people having access to health care there is a need to provide adequately trained surgeons to the system[1]. This has led to an increasing number of hospitals providing training in surgery. At the time of its establishment in 1947, Pakistan had only three undergraduate medical colleges and no local pathways for postgraduate certification[2]. Today the number of hospitals training surgeons in Pakistan has increased to 123[3]. Although commendable this has a huge downside to it. There is a growing perception among the surgical community that we are not moving fast enough to adapt to the rapidly changing needs.

Training in Pakistan was considered to be at par with internationally trained surgeons in the 80s and 90s. But we have failed to adequately adapt to changing times. Why is our surgical training lagging behind and how can we quality assure it? There is a multitude of reasons being cited. Is it the system, the trainers, or the trainees? While all factors can be accounted for and there is extensive debate regarding this suboptimal adaptation to change; however, one thing is unanimously agreed that the system needs to improve. In fact, this change has now become inevitable.

Surgical training in Pakistan has been following the Halstedian model of training[4]. The "see one, do one, teach one" model of training has been training surgeons for almost 100 years. The acquisition of surgical skills in this model relies on a model based on apprenticeship. Trainee surgeons spend a fixed amount of time in a surgical unit and rotate through a few other specialties to acquire surgical skills. During these attachments, surgical trainees are supervised by senior trainees and the consultants running the unit. The acquisition of skills through this method is difficult to guarantee, measure and test. There are a lot of varying levels of training among units and the system has struggled with standardization. The exposure to laparoscopic and minimally access surgery and recent advances in neither standardized nor optimal. The assessment methods need improvement and need to test the skills and clinical judgment apart from a cognitive portion of learning in a more robust manner. Failure to do so affects the overall performance of an independent surgeon or consultant, especially in the periphery where supervision and lateral support is minimal or none.

There is a growing thought and inclination to change our residency structure in the surgical community and everyone feels the need for it. Fortunately, we can look at the West and the Far East for incorporating changes in our residency programs. Although, there are differences in the dynamics of our healthcare structure, however, still these structural changes can be adapted to our requirements. Surgical training in the UK has undergone major reforms over the last few decades. The UK has given up on the Halstedian model. They have not completely abolished it but have defined goals. The long protracted unstructured career path has been slowly replaced by a shorter more structured surgical

curriculum. The program has been improvised by the achievement of competency-based education, simulation-based training, periodic assessment, and non-technical skill enhancement. The introduction of the Specialist Registrar grade in 1993 was the first step in these reforms[5]. This was followed by the introduction of the new Intercollegiate Surgical Curriculum Program (ISCP) in 2007[6].

Another very important step taken up by the NHS is how the in-training doctors are assessed. One single exam can never assess surgical competence. The move towards work placed based assessments has increased accountability among the surgeons and has led to better-trained surgeons. Workplace-based assessment (WPBA) has ensured that each trainee is evaluated while in training. This puts pressure on the supervisors as well as the trainees and leads to improvement in training. WPBAs ensure that the system produces adequately trained surgeons with a focus on competence rather than just volume[7].

College of Physicians and Surgeons of Pakistan (CPSP) has commendably incorporated such elements of the structured training program however quality assurance of these programs at the training institute level has struggled. There is a growing need for improving the quality assurance of residency programs especially at the training institute level. The training units need to have an adequate number of these procedures which have been defined as part of their curriculum. Another issue is the number of trainees. What used to be 4 to 6 residents per unit is now 20 plus residents in each unit[8].

Another important issue is the duration of training. Pakistan has one of the shortest training time for becoming a surgeon, which leads to under-exposure to the number of procedures required to achieve the required competence level. Elsewhere the training period ranges from 5 to 7 years[9]. The UK has introduced a 2-year foundation training followed by 3 to 4-year specialty training. The introduction of specialty training came with improved evaluation and assessment of surgical training. This new curriculum added the concept of competency-based training and assessment. The curriculum has set standards for what trainees should know, be able to do, and be committed to. The training program assesses the progress of trainees in terms of clinical judgment, technical and operative skills, specialty-based knowledge, and generic professional skills.

So how do we bring about an acceptable change in the system? One preposition which has been abuzz for a few years among the surgeons across the country but has never been taken seriously is to make a dynamic shift from General Surgery to supra specialty surgery. The main reason for not having further training programs is the lack of specialized units. The idea is to limit every surgeon to focus only on one supra specialty. So each hospital instead of having different general surgery units will have specialty-based units namely colorectal, upper GI, breast and endocrine, vascular, HPB, and transplant surgery. Each unit will still be dealing with surgical emergencies and basic surgical procedures such as cholecystectomies and hernias. Similarly, one hospital might not have all the specialties and will need to refer special cases to other hospitals. Such as transplant surgery, vascular surgery, etc.

This has a lot of advantages. It will enable the units to develop into high-volume units for a chosen specialty. Higher volumes improve surgical outcomes[10,11]. The residents will be a part of a common pool and will be required to rotate for the first 2 years in their parent unit and then for 3 or 6 months through each of the specialties; namely, colorectal, upper GI, breast and endocrine, vascular, thoracic, HPB and transplant surgery. So a resident must complete all his rotations and be adequately exposed to all specialties. The rotations can be on-site or at another hospital but no resident should be allowed to sit the exam unless he/she has completed all the rotations in supra-specialties and scrubbed in a minimum number of required cases to achieve competence.

Similarly having dedicated units can pave the way for supra-specialty training or fellowships in these fields. Currently, CPSP offers supra specialty training in Vascular Surgery, Breast Surgery, and Surgical Oncology[12]. Only breast surgery is being offered in public sector hospitals. No public sector hospital is offering training in surgical oncology or vascular surgery.

The first step thus has to be division of patients among unit on the basis of specialties. This is a big sacrifice on the part of the currently 'in practice' surgeons but that is the only way forward. There is a fear that giving up on general surgery practice will lead to loss of skills and have a negative effect on practice but it has been proven time and again that focusing on supra specialty not only improves outcomes but leads to more referrals and is actually good for practice as well as training[13].

Everyone agrees that you cannot be good at every type of case you operate. The old saying of "Jack of all trades and King of none" holds true for the surgeons as well. Modern-day practice expects the highest possible standards in

patient management. These expectations are unlikely to be met by a general surgeon. If we want to excel and be at par with international surgeons we have to shift towards specialty-based practice. This is not only going to be good for the surgeons but also for the system and most importantly for the surgeons in training.

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