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# EDUCATION, TRAINING AND ACCREDITATION

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## The training of registrars from a consultant's perspective

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**D**uring the last few years we have experienced rapid changes in the teaching methods of medicine and surgery in general which will have a profound influence on academics and the teaching of registrars in orthopaedic training in future.

The primary objective of a consultant in a teaching capacity is to impart to the registrar the basic principles of musculoskeletal evaluation to enable him or her to accurately identify the problem in order to suggest or apply the appropriate treatment for the benefit of the patient. With the information technology explosion, the public is very aware of the management modalities for musculoskeletal disorders and, together with the increasing tendency to litigation and health care accountability, more people are looking over the shoulders of the orthopaedic surgeon monitoring treatment decisions, skills and results. These aspects, in conjunction with the rapidly expanding knowledge in the many subspecialties of orthopaedic surgery, leave the consultant with the daunting task of assisting the registrar to effectively prepare for his career.

The transition from teaching hospital practice to private practice is large and the registrars must be prepared to fit into a new world of health care delivery. This implies that the consultant should also be aware of the demands of a private practice.

### Selection of registrars

The successful completion of a teaching programme begins with the correct selection of a registrar. Interviews are essential but can be misleading. Ever so often unknown candidates discontinue their training for various reasons within the first year thereby upsetting the whole programme strategy. It is always comforting to be able to appoint a registrar who has completed his pre-graduate training at your institution as his or her worth and values are known. We have found that by rotating applicants through accredited secondary institutions under supervision for six months or a year the selection is easier. This allows for the evaluation not only of competency and patient care skills, but also preparation for the trauma load he or she will be expected to handle during the first six months of clinical rotation.

Age should also be a prerequisite. After the age of forty years registrars struggle with the rigours of the service and academic demands. Before the age of thirty years we find the level of experience and responsibility to be lacking to a certain extent.

### Programme requirements

The format of the present system of postgraduate clinical training seems to have survived the test of time but undoubtedly needs refining in certain areas. The development and implementation of outcomes-based study programmes is essential to keep abreast of newer teaching and study methods. We must not cling to a curriculum and values that may fast become outmoded. At the University of Stellenbosch, planning is already underway to establish an outcomes-based programme module.

The five-year period for training allows sufficient and relatively consistent exposure to the diverse facets of the musculoskeletal system. The six-monthly rotation system normally includes 18 months of trauma, 24 months of elective surgery and 6 months each in paediatric orthopaedics and hand surgery. The latter two rotations are more suited to enhancing registrar responsibility. Six months rotation through a general surgical discipline prior to the intermediary examination is a HPC prerequisite.

The primary examination, which includes Anatomy, Physiology and General Pathology principles, is essential and should be completed within the first year of the programme if possible, to allow the registrar to get down to the basics of orthopaedic surgery. Preferably this should be completed prior to admission to the programme if at all possible. The teaching of Anatomy and Physiology has become more applied to the musculoskeletal system and quite rightly so. The presentation and evaluation of these modules should remain the responsibility of the respective disciplines with orthopaedic programme observation. Lacking in the first year of training is a structured basic physical examination course and evaluation thereof which could possibly be incorporated in the primary examination.

The intermediate examination comes at the correct time in the programme - at the end of three years. I feel that three months spent in the surgical ICU brushing up on essential general surgical principles is imperative. The question as to whether the further three months should be spent rotating through neurosurgery or plastic surgery remains unresolved as both disciplines have principles to offer which are applicable to orthopaedic surgery. An outcomes-based curriculum is long overdue for this rotation in the programme concentrating on general surgical principles and not specific surgical pathology. The orthopaedic pathology section of this rotation also needs a more structured approach. The pathologists are not actively involved in the student preparation but expect the basic evaluation of a pathological slide in the examination.

## Clinical teaching material

The gradual but constantly changing profile of patients attending the teaching hospitals has had a profound effect on the teaching of postgraduate students. Trauma dominates the clinics and theatre lists at the expense of elective orthopaedics. Apart from the geriatric orthopaedic patient, the clinics are devoid of the pathology normally encountered in a private practice. The serious question therefore arises whether the available clinical teaching material sufficiently equips the newly qualified orthopaedic surgeon to confidently commence his private practice with the necessary expertise. The solution for the registrar lies in the compilation of the so-called "log book" ensuring exposure to the majority of and the essential clinical procedures thereby affording him or her clinical privileges.

## Clinical teaching

Registrars enjoy the teaching and flourish in the clinical environment. Ward rounds and clinics should be structured around this concept wherever possible. (It is however naive to think this implementation is always possible in our high service load hospitals.) Apart from assisting in applicable journal references, the consultant is not responsible for spoon-feeding the registrar but rather placing a clinical problem in perspective.

At Tygerberg Hospital approximately 8 hours per week is allocated to structured registrar teaching. This includes an hour every morning where x-rays of the previous day's admissions are reviewed and the day's preoperative cases are discussed. The teaching here is directed to problem-based solutions. Two hours are spent on clinical presentations and problem-solving and only one hour on structured lecturing. The emphasis in postgraduate teaching is moving away from long formal lectures towards shorter and more concise presentations. I believe that it is to the registrar's advantage to compile and present a short literature summary of the problem following his clinical case presentation.

An undeniable fact however, is that the expertise of many of the subspecialties have developed and blossomed outside the academic institutions. Regardless of the reasons for this trend, such expertise must at all costs be incorporated into our postgraduate teaching programmes. The answer to this lies in accrediting either outside institutions or surgeons to our teaching programmes whereby registrars in training are afforded rotation opportunities. This concept has been applied successfully at our institution regarding shoulder and knee problems. The ideal situation from a teaching perspective would be of course the development of such specialised clinics in the teaching hospitals.

## Research and educational activities

Most consultants and students feel that registrar and Departmental or even Faculty participation in research is insufficient and should be increased. A number of factors contribute to this situation. Although there is no paucity of clinical research material available in a predominantly third world country, the workload invariably offsets the time available for research activities. The research environment regarding data capturing, electronic infrastructure, secretarial assistance and appropriate funding is sadly lacking in the academic environment and could only become logistically viable should private funding be incorporated into research. An excellent example of this is the present multicentre study on the effect of growth hormone and BMP on the union rate of fractures in which our department is participating.

Very little encouragement to attend congresses and educational meetings is forthcoming from the hospital authorities, which is fully understood within a stringent budget environment and understaffed clinical departments.

The primary research project of each and every registrar at our institution is the compilation of a dissertation which constitutes one facet of the final examination. A prerequisite for registration is that the dissertation be evaluated and deemed acceptable by an external examiner. The objective is that the dissertation not be just an audit of clinical work done but a scientific document acceptable for publication. The standard of the dissertations has improved markedly during past years.

The focus of registrar training should primarily be on quality education, patient care and to a certain extent, research and academic productivity which pertain to our cultural and demographic environments. The service to education ratio is in jeopardy of favouring the former at the expense of education. I favour the MMed system of postgraduate orthopaedic training for a number of reasons. I feel the registrar should be evaluated in a number of core competency areas which not only include orthopaedic knowledge but also cognitive ability, affective ability and psychomotor skills. Patient care skills, professionalism, interpersonal and communication skills are under acute scrutiny of the public at large and in many instances are sadly lacking in the orthopaedic fraternity in South Africa. Deficiency in these areas can be identified and rectified early on in the course and should carry some weight in the final examination. The aspect of the final examination of the MMed candidate which incorporates plaster and surgical technique (the basis of our trade) is constantly under criticism but is one of the most important core competency areas and should be recognised as such.

Orthopaedic surgery at Tygerberg Hospital and the University of Stellenbosch is in the very fortunate position of still attracting registrars from the best talent pool and combining this with a fine education in order to contribute to the future of our specialty in the interests of comprehensive musculoskeletal care of our patients. **OJ**