Orthopaedic education and training in Europe

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Europe as a continent is a collection of countries with different backgrounds. The standards of medical education from undergraduate, through resident training, postgraduate training and to professional competence and independent practice are generally high, but vary between different countries and the standards of speciality training are also very demanding but different among European countries.

In 1958, with the foundation of the UEMS (Union Européenne des Médecins Spécialistes), the main concern was the study and promotion of the highest level of training of the medical specialists, medical practice and health care within the European Union in order to facilitate and promote the free movement of doctors as well as patients within the European Union. Harmonization of the different training programmes around Europe has been one of its major tasks since the beginning although still not fully accomplished at this stage.

Over the last fifty years the challenges for fulfilling these requirements are tremendous, taking into account that the developing paradigm of orthopaedic residency education is an area that remains frequently debated among educational institutions responsible for orthopaedic training. The constantly expanding body of knowledge and treatment options for musculoskeletal diseases demands a broad yet up-to-date theoretical knowledge base of both clinical orthopaedics as well as basic science.

The experience from the Fellowship examination of the European Board of Orthopaedics and Traumatology (EBOT) over the last two decades has shown that trainees and young specialists throughout Europe are exposed to different scenarios in their residency that explains the different outcomes at the end of training despite very standardized programmes of training in most European countries.

The scope of practice for the trained orthopaedic surgeon in Europe involves the safe and effective application of all competencies obtained through an effective programme of training.

Orthopaedic surgery is a demanding and sophisticated branch of surgery that like many other specialities has become very technical. The professional role of an orthopaedic surgeon may involve several domains, from simple clinical assessment to more sophisticated, involving modern minimally invasive surgical skills.

Besides the technical side of orthopaedics in general, speciality related cognitive skills is another area where professionals have to ensure the highest standards. Orthopaedic surgeons must have the cognitive skills appropriate to the speciality / subspeciality in which they will be providing care sufficient to satisfy the requirements of the profession, the government and the public at large.

In Europe most orthopaedic surgeons are board certified by their national boards although this is not rule across all different countries as it is closely linked to the health system in each country. Certification by an accredited body in a given area of a speciality denotes that candidates have successfully completed the assessment process designed to test their mastery of the minimum
knowledge and skills contained in the core of competency (a core body of knowledge that defines an area of specialization).

Core competencies are developed by literature review combined with review by medical experts in the field. The core knowledge and skills are compiled into a scheme of competencies that should be part of general training before final certification.

Certification of a qualification will ensure that surgeons have achieved the competencies required by the regulatory authority. Previously this was based on the timescale necessary to achieve these, but it is now recognised that competence rather than time in the specialty is the important factor in certification. Nevertheless, a certified orthopaedic surgeon in Europe will have accomplished at least five years of residency training following medical school and completed successfully the board (or equivalent) assessment at the end of training, usually by examination. These are the “basic” requirements for practicing orthopaedic surgery in the European Union (EU).

It has been agreed that all orthopaedic surgeons should achieve the high standards required in “The generality of Orthopaedics and Traumatology” before proceeding to subspecialty training in the subspecialty of their choice, which is undertaken at fellowship level. To be certified as a specialist in one particular area of orthopaedics / trauma, by an accredited body such as a Speciality Society, the orthopaedic surgeon must meet the high standards established specifically for that particular area and its related subspecialties. It does mean that the surgeon has acquired expertise and advanced surgical skills in that particular field.

Final assessment at the end of training has been structured in many ways although the tendency today will be to have three main sections – written, oral and clinical. Each part although with its own objectives, vary throughout Europe, but the most common among the European countries are the written and the oral part, as for the present format of the European Board Examination (EBOT Exam).

However, “evolution” has shown that in this present format, different qualities expected from an orthopaedic surgeon are left out and I would separate two main areas – the first should test professional behaviour, attitude and clinical skills and the second the expertise in surgical skills.

The first one can be assessed by a clinical exam with patient (or other) in a similar set up as for medical student where those clinical skills and attitude can be evaluated.

The second one I would separate it in two different phases. The phase 1 will have to be ensured by the head of training that the trainee has achieved the end of training and therefore has acquired enough clinical and operative experience as well as a broad knowledge basis required to apply for the final qualification (fellowship examination) as an Orthopaedic surgeon. Phase 2 is the advanced phase of the expertise in surgical skills – this should be a voluntary exam, more technical, based on surgical problem solving and performing certain procedures and therefore requiring either a simulation or cadaver laboratory. This could be supplemented by careful examination of the European electronic logbook.

Certification of surgical skills is a new trend with a supportive background! Certification of Surgical Skills will guarantee that the surgeon is not only an expert on those particular procedures (technical ability), but most of all he is qualified to make the appropriate and correct judgement all the way through until the patient resumes his/her normal activities.
The public does need the general orthopaedic surgeon but we also need the expert surgeon. Complex pathology should be referred to specialized centres where those skills should be concentrated. The network should exist and referrals should be enhanced, because this will be the best option to guarantee efficiency, patient safety and cost effectiveness.

In conclusion, Orthopaedic surgeons must maintain the skills, knowledge, attitude and judgement at the highest level and always endeavour to improve the profession to meet the many technological and procedural advances of the future.

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