



UNION EUROPÉENNE DES MÉDECINS SPÉCIALISTES EUROPEAN UNION OF MEDICAL SPECIALISTS

Association internationale sans but lucratif

International non-profit organisation

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Training Requirements in Orthopaedics & Traumatology

European Standards of Postgraduate Medical Specialist Training

(old chapter 6)

Preamble

The UEMS is a non-governmental organization representing the national associations of medical specialists at European Level. With a current membership of 37 national associations, operating through 43 Specialist Sections and European Boards, UEMS is committed to promoting the free movement of medical specialists across Europe while ensuring the highest standards of training, which will pave the way to improvement in the quality of care of all European citizens. The areas of expertise of UEMS notably encompasses: Continuing Medical Education, Post Graduate Training and Quality Assurance.

At European level, the legal mechanism ensuring the free movement of doctors through the recognition of their qualifications was established in the 1970s by the European Union. Sectorial Directives were adopted and one Directive specifically addressed the issue of medical training at European level. It was not until 2005, that the European Commission proposed to the European Parliament and Council a unique legal framework for the recognition of Professional Qualifications to facilitate and improve the mobility of all workers throughout Europe⁴. This Directive 2005/36/EC established the mechanism for automatic mutual recognition of the qualifications of medical doctors across all Member States; this is at present based only on the length of training in each Specialty and the title of qualification.

As part of the revision of the Professional Qualifications Directive of the European Commission, the UEMS Council has tasked each Specialist Section to produce a document: "Training Requirements in the Specialty of X", identifying European Standards for Postgraduate Medical Training in that specialty.⁵ These documents replace part of the Charter on Post Graduate Training, developed in 1994, relating to the recommendations for training in each specialty. The Training requirements include sections on Trainees, Trainers and Training Institutions. UEMS requires the addition of a European Curriculum in each Specialty, to provide a framework of standards common to each European Nation, whilst giving National Bodies the freedom to develop their own individual Postgraduate Training Programmes.

One of the major challenges in orthopaedics and traumatology is the ageing of the population. In recent years several documents have been approved by the European Commission, taking into consideration the ageing population and identifying the need to face this situation with an increased demand for the health care systems across Europe. Between 2008 and 2060 the population of the EU-28 aged 65 and over is projected to increase by 66.9 million and the "very old" (80+) will be the fastest growing segment of the population¹, whilst the population of working age taxpayers will contract.



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This will create an enormous challenge to the EU health care systems that have to perform a difficult balancing act, firstly between increasing demands on health services and restricted supply in a recent Editorial published in *The Bone and Joint Research*, Lars Lidgren et al 2 called attention to this growing problem. Today, musculoskeletal disorders (MSDs) including those resulting from trauma, directly affect the mobility, autonomy and quality of life of more than 100 million Europeans. Mobility from cradle to grave reduces the risk of cardiovascular disease, diabetes and stroke. Through the 'Bone and Joint Decade' initiative, at the beginning of the millennium, the World Health Organization attributed the high burden of MSDs on societies and the individual to an increasingly ageing population:

- 40% of people over the age of 70 years suffer from osteoarthritis (OA) of the knee.
- 80% of people with OA have some limitation of movement, and 25% cannot perform routine daily activities.
- Road traffic injury is the leading cause of death for people between the ages of 15 and 29, with a huge variation in incidence between EU countries.
- In a review of 27 trauma studies, the median cost per patient for acute trauma treatment was USD \$22 448 (IQR: \$11 819 to \$33 701). The acute treatment cost of trauma was higher than for any other disease group.
- Patients, especially women, aged over 65 years consume a disproportionate share of hospital resources for trauma care: particularly with fragility fractures.
- Surveys in developed countries indicate that, by the age of 70 years, more than one in four women had sustained at least one fragility fracture and the estimated lifetime risk for wrist, hip and vertebral fractures was estimated to be 15%; very close to that of ischaemic heart disease.

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Member States will have to assess what specialist skills they each need, taking into account that healthcare treatments change with the introduction of new technology, the effects of the ageing population on the pattern of disease and the increased number of elderly patients with multiple chronic conditions. A specific problem is that increased travel and mobility have also increased the risk of spread of diseases hitherto more prevalent in tropical countries. This is creating a new training requirement for clinicians and for those engaged in communicable disease surveillance.

Influencing factors and possible areas for action include:

- Ensuring that training courses are designed to take into account the special needs of people with disabilities (they should receive the same quality of care as able bodied patients and be provided with the specific health services they need).
- Focusing on health professionals' continuous professional development (CPD). Updating professional skills improves the quality of health outcomes and ensures patient safety.
- Developing training courses to encourage the retention or return to the workforce of mature workers.
- Providing management training for health professionals
- Fostering cooperation between the Member States in the management of staffing levels for health workers and enabling them to be more flexible.
- Developing possibilities for providing language training and assessments to assist safe medical workforce mobility.
- Creating European workforce Observatory which would assist Member States in planning future workforce requirements, training needs and meeting the demands imposed by technological developments.

¹ 2008-based national population projections, EUROPOP 2008 convergence scenario.

² European musculoskeletal health and mobility in Horizon 2020. SETTING PRIORITIES FOR MUSCULOSKELETAL RESEARCH AND INNOVATION. L. Lidgren, E. Gomez-Barrera, G. N. Duda, W. Puhl, A. Carr. BONE & JOINT RESEARCH, VOL. 3, No. 3, MARCH 2014; 48-50.

³ GREEN PAPER On the European Workforce for Health. COMMISSION OF THE EUROPEAN COMMUNITIES. Brussels, 10.12.2008. COM(2008) 725 final

⁴ Directive on Cross-border health cares adopted. Council of the European Union. Brussels 28 February 2011.

⁵ Training Requirements for Trauma & Orthopaedics. *European Standards of Postgraduate Medical Specialist Training*. info@uems.net

I. TRAINING REQUIREMENTS FOR TRAINEES

There is a wide variation in the way orthopaedic specialization is practiced in each European country. The particularities of each Association have been preserved but the broad principles of the curriculum have been developed to allow general applicability and the trainee will have the same core competencies.

Minimal requirements for Orthopaedic and Traumatology Training have been agreed by the European Union of Medical Specialists (UEMS).

Recently, updating of the Professional Qualifications Directive of the European Commission has required Europe-wide agreement of Training Requirements in all professional bodies, including all medical specialties, and this has contributed to an increased interest in the harmonization of training in orthopaedic and traumatology surgery.

The European Board of Orthopaedics and Traumatology (EBOT), on behalf of the Orthopaedic Section of the UEMS has been running an annual examination, conducted in the English language since 2001,

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and also in the Spanish language since 2016.

Over time EFORT (European federation of national societies of orthopaedics and traumatology) has become directly involved in this examination process by taking responsibility for much of the administration.

The EBOT exam is not (yet) mandatory, since all European residents can take their national examination, managed by their own Association, in their local language, where such an examination exists. The EBOT exam tests the generality of orthopaedics and trauma.

In December 2012, EFORT launched The **European Education Platform – (EEP)**, by inviting the National Associations to contribute to this process. The idea was to start with a small group to establish a framework and later to involve all Associations, in order to have wide representation across the European Union. At the same time UEMS, EBOT, the Specialty Societies and a representative of FORTE, (the trainees association), were invited to participate in the process.

A European Curriculum will fulfill all of these needs with training courses and syllabus.

At a time when Orthopaedic and Traumatology Surgeons are in the limelight due to several political issues and when there are financial constraints in most health care systems in Europe, it is fundamental to improve our capacity and consistency in producing well trained, competent orthopaedic surgeons throughout Europe.

1. Content of training and learning outcome

Competencies required of the trainee

A medical trainee is a doctor who has completed his / her general professional training as a physician and is in an accredited training programme to become a recognized orthopaedic and traumatology surgeon, OT surgeon. The “name” may vary among countries: intern, fellow, resident, registrar ...

The medical trainee must be fit to practice medicine and surgery

The medical trainee has to acquire competency: knowledge, skills and professionalism in orthopaedic surgery and traumatology.

The medical trainee must demonstrate their commitment in ethical and professional manner.

They should be dedicated to patient care and the highest standard and participate in all recommended activities.

They will abide by the rules and regulations of the training programme

At the ‘Learning Outcomes’ the trainee should know, understand and be able to perform with professionalism, skill and knowledge the specialty of Orthopaedics and Traumatology which involves prevention, diagnostic (including imaging techniques), non-operative, pharmacological and surgical treatments and rehabilitation of degenerative, inflammatory, infectious, metabolic and neoplastic pathologies, as well as the management of musculoskeletal trauma and its post-traumatic consequences.

Furthermore it encompasses contributions to the multidisciplinary management of congenital and acquired deformities and functional disorders at any age. Fundamentals of basic science, including applied biotechnology, evidence based medicine and ethics should underpin the educational process.

The trainee must also demonstrate communication abilities.

The trainee must be able to communicate with patients and relatives in a sensitive and caring manner.

The trainee must obtain informed consent from patients having explained in detail operative procedure (s), its benefits and risks.

The trainee must be able to record and convey the patients' medical information and findings.

The trainee must study international literature.

a. Theoretical knowledge

The main domains covered by the specialty that a trainee should master in the specialty are covered in the core curriculum (see below)

The specialty of Orthopaedics and Traumatology involves prevention, diagnostics (including imaging techniques), non-operative, pharmacological and surgical treatments and rehabilitation of degenerative, inflammatory, infectious, metabolic and neoplastic pathologies, as well as the management of musculoskeletal trauma and its post-traumatic consequences. Furthermore it encompasses contributions to the multidisciplinary management of congenital and acquired deformities and functional disorders at any age.

Fundamentals of basic science, including applied biotechnology, evidence based medicine and ethics should underpin the educational process.

Communication abilities and ethical issues are also necessary.

b. Practical and clinical skills

Training for OT surgeons should be a minimum of 6 years , being one to two years of basic education (or common trunk) , and four to five years of a specific orthopaedic and traumatology programme depending on national requirements.

The key skills to possess are acquired after a long education process.

The process of education should be guided and controlled by national authorities responsible for health care provision. There has to be the freedom to choose an appropriate training concept, which enables the doctor to obtain thorough knowledge of the complex field of Orthopaedics & Traumatology.

The educational process in the curriculum includes a basic clinical education and leads to a progressive increase in knowledge and skills in the specialty. Due to the different structures and facilities of clinical departments this process can be modified individually, but the concept of generalization and modularization should allow an appropriate programme to be established for each individual.

There should be established rotation periods covering all main area of the specialty.

The basic education (common trunk) will teach the trainee to cope with routine tasks in the healthcare system including the management of medical emergencies, first aid, the basics of perioperative and post-traumatic care, as well as further development of the skills of communication with the patient, health care personnel and medical colleagues, initiated in medical school and respecting ethical and humanitarian principles.

The trainee should also be sufficiently exposed to inpatient, day stay and outpatient management.

After this basic education (common trunk) the content of the curriculum covers the whole spectrum of musculo-skeletal pathology and comprises knowledge, experience, clinical skills and attitudes, and professional behavior. The educational process is related to the development of a level of competence in which the specific content is repeated in increasing levels of complexity, which can be thought of as a spiral developmental process, returning to the same topics repeatedly, at progressively higher levels of competence, throughout the years of residency. The different topics of the specialty also can be formed in blocks and modules supporting the development of competence. Four to five years will be required.

As the field is so vast, a strict “number” of procedures required is not relevant. During the process of training, the accent is more on the quality than the actual numbers. Procedures performed by the trainee will become more and more complex and supervised by a senior surgeon.

Throughout training an education programme will be followed by the trainee. This will include regular conferences, meetings, staff meetings, case discussion. Protected time must be given to the trainee for study and research

- Basic / advanced lectures by staff and visiting speakers
- Clinical presentations....including multidisciplinary presentations
- Pathology and radiology conferences
- Radioprotection
- Journal clubs
- Mortality and morbidity meetings
- research meetings
- Teaching in ethics, administration, management and economics

The trainee should be involved in these scientific activities by giving lectures, presentations both locally and at least on a national level.

Some type of “personal” scientific paper should be done during the training. This personal work should be at least be presented at a national/international meeting or published.

c. Competences

The different topics of the specialty also can be formed in blocks and modules supporting the development of competence.

The **levels of competence** in surgical or manual skills can be simplified as follows:

Level 1 - to know

Level 2 - to see

Level 3 - to perform with supervision

Level 4 - to perform without supervision

The content should be organized to achieve at first a general view of the wide spectrum of the specialty, followed by a modular process of developing knowledge and skills in more specific areas, bearing in mind that at first, particularly with respect to skills, the clinical situation will not allow simultaneous development to level 3 and 4 in all topics. These levels will therefore be

achieved in defined orthopaedic and traumatology modules according to the special interests of the hosting department, the demands of the health care that is required as well as the talents of the individual resident. Non-operative treatment, rehabilitation and prevention are also mandatory to underpin the development of comprehensive surgical skills and excellence.

At the end of training the trainee should have acquired a level 4 in all non operative issues and a level 3 + in the operative procedures (complete independent practice by a trainee being prohibited in more and more countries ..It will be the trainer who will assign a level 3 + and thus recognize his/her trainee as a level 4 and the supervision being “available on demand “) The trainer will have to recognize at the end of training that the trainee will be able to perform independently and thus recognize that the trainee has become entrustable. EPA Entrustable professional activity has been reached by the trainee.

The training must cover the full range of the specialty and end with the license to practice orthopaedic and traumatology surgery

2. Organisation of training

a. Schedule of training

To enter the programme in orthopaedics and traumatology trainees should have demonstrated competence in working as a team member, assessing emergency patients and initiating investigations and treatment, managing the perioperative care of patients and performing simple invasive and operative procedures: the basic clinical education (1 year minimum) The residents should have rotated through a basic surgical training programme that equips them to perform as a member of a surgical team, receive emergency patients, initiate diagnostic tests and management, manage the perioperative care of surgical patients and recognize and treat common complications. They should be a safe and useful assistant in the operating room and be able to perform simple procedures under minimal supervision. The basic part can be included in the overall curriculum or undertaken independently prior to embarking on OT training.

Selection for an OT training programme is usually competitive, after completion of basic medical/surgical foundation. The institutions providing training must provide the infrastructure (including the financial and administrative elements) to allow the trainee access to inpatients, outpatients and theatre settings. It should comply with relevant quality assurance and surveillance mechanisms designed to maintain the quality of training

This would be a minimum of four years.

In total, depending on the duration of the basic clinical education and the time to acquire “competency” one should thus count on a minimum duration of five to six years.

Specialization and expertise should be provided by a fellowship process after completion of the General Training provided in a residency and described in this document. The content and structure of these programmes is beyond the scope of this curriculum and should be developed by the Specialty Societies.

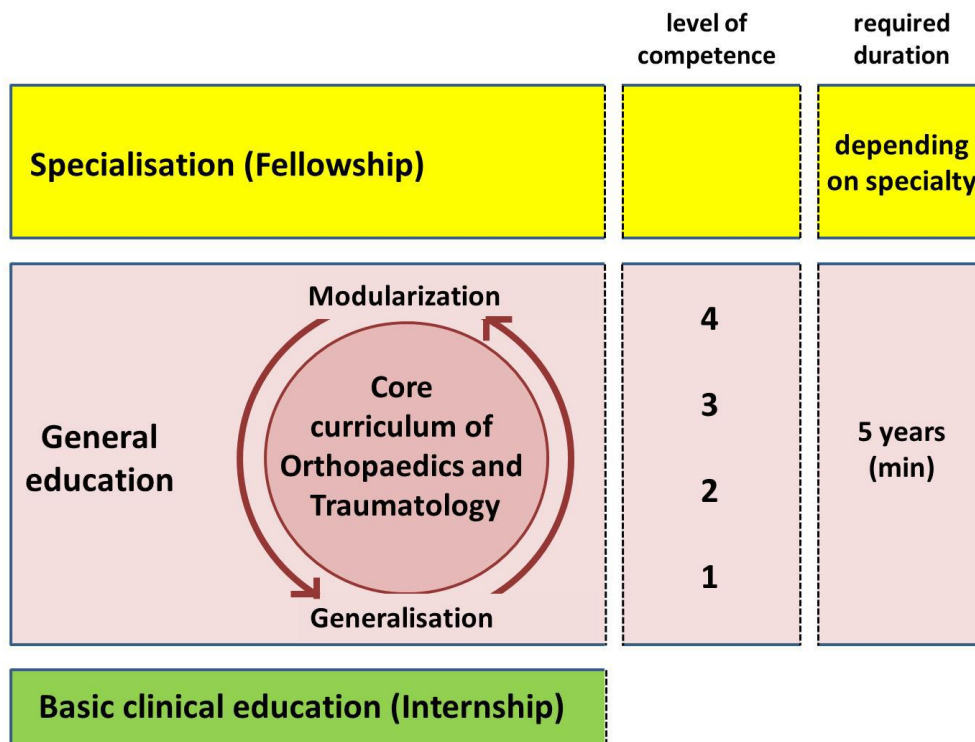
Fellowship level training will be related to the requirements of each specific specialty with its own reference points in terms of quantity, quality and structure.

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Fellowships are not part of these ETR. Fellowships are just mentioned here and shown on the diagram below since there are more and more OT surgeons who go in to one or another fellowship after their initial diploma.

The modularization of the OT curriculum should allow the resident to reach at least level three in most fields and allow him/her to deal with patients in a holistic way, providing diagnostic and first line treatment for the common conditions of the locomotor system, and to fulfil general on-call requirements in an orthopaedic and traumatology setting. The definitive surgical treatment of polytrauma for example is multidisciplinary and full competence is often not achieved in residency, but a fellowship in a high level trauma centre should serve this purpose and can provide the experience necessary to reach the highest standards in the treatment of this challenging problem. In summary, the concept of Training in the Generality of Orthopaedic Surgery and Traumatology, leading to Certification and followed by Specialist Training at fellowship level in fields of the Trainee's choice is essential in providing a universal standard of Orthopaedic Competence, providing the basis for specialist care.



b. Curriculum of training

The Core Curriculum in Orthopaedics and Traumatology



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Defined in Pathologies

- inherent
- growth associated
- caused by bone metabolism
- caused by infections
- caused by nervous system
- caused by systematic diseases
- caused by bone and soft tissue tumors
- caused by inflammation
- caused by sports
- caused by injuries
- cause by medical interventions

Defined in Areas

- shoulder, elbow, upper arm
- lower arm and hand
- pelvis, hip and thigh
- knee
- lower leg and foot
- cranium, body cavity
- spine

Defined in Patient groups

- neonates
- children and adolescents
- adults
- older people

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Differentiated in Diagnosis

- Imaging methods
- Specialist laboratory medicine
- Puncture and biopsy
- Investigation technique

Differentiated in Conservative Therapy

- Physical – medical measures, ergo therapy, manual medicine, complementary therapies
- Treatment with immobilizing or corrective bandage
- Orthoses, prosthetics, therapeutic products and medical aid
- Pain- relief therapy
- Non- Operative treatment (manipulation) of fractures and dislocations

Differentiated in Operative Therapy

- Arthroscopy
- Reconstruction procedures
- Osteotomies
- Osteosyntheses
- Resections
- Endoprosthesis
- Intervention in nerves, vessel and connective tissue (tendon-, muscle- and ligament repair/ reconstruction)
- Amputation

c. Assessment and evaluation

Regular assessment by the Training Program Director or members of his/her staff designated for such a matter should be done on a regular basis.

Each trainee must keep an official national trainee logbook. In this logbook the trainee will demonstrate that he/she has been sufficiently exposed to a wide range of cases as an assistant or supervised operator. Logbooks must be monitored regularly and undersigned by the trainee and the Training Program Director or the designated staff member.

A logbook/ portfolio will include not only the surgeries performed but also:

-details of previous training post, dates, duration and trainers

-details of examinations passed

-list of publications

-list of research/clinical presentations at a local, national and /or international meeting

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-list of courses attended

-cumulative operative totals

-copies of assessment forms for each training period, completed and signed by trainers for that period.

A training agreement will be signed by the trainee and the Program director if necessary or required by the specific country and will define the respective duties and obligations.

Assessment of trainees should include formative and summative elements. Some countries have already developed sophisticated annual appraisals including tests of knowledge whilst others do not even have a system for regular monitoring of trainee progress. Similarly some countries hold validated examinations at the end of training, which form one part of the assessment for certification, whilst others do not.

Formative appraisal in particular allows individual deficiencies to be addressed in a timely manner without prolonging the overall training time, or prolonging it minimally. It also allows Quality Assurance of the Training Centres and Trainers.

The Interim EBOT examination is available to assist those countries where annual appraisal systems are not well developed, and will give valuable feedback on the progress of individual trainees to help them and their trainers to focus on future training. Details of the EBOT Interim examination are set out below:

EBOT Interim Examination

It has been recognised for some time that MCQs are the most effective way of assessing the knowledge base, and an annual MCQ examination would be instrumental in encouraging trainees to improve their knowledge base. Examples of successful interim examinations include the AAOS OITE and the UKITE in UK.

Interim examinations of various types are already in use in many European programmes. The EBOT Interim exam has been running for 3 years and provides a similar incentive. It has already been shown to be a unique and useful tool that hospitals, training programmes and Regional and National Postgraduate Education Organisations can use in order to improve the quality of orthopaedic and trauma training in Europe.. The anonymised results of the interim test are returned to both candidates and Training Directors, and show the candidate's ranking relative to his/her peers, locally, nationally and internationally. The information gathered so far from each of the previous exams has been extremely useful for the trainees who have a yearly assessment of the 5 different areas covered by the MCQ exam.

Prior to a final exam they have a tool that can help them to correct deficiencies in their knowledge.. Heads of Training also receive a global assessment of how their residents are doing and have the opportunity of comparing their performance with the other hospitals in the country or elsewhere in Europe for the first time.

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Consistent deficiencies in particular areas also allow external assessment of the individual training programme and permit adjustments to be made.

With this interim exam we are able to improve the quality of orthopaedic training in Europe and get a better quality of care for our orthopaedic patients as well.

At present, the Interim written examination is set in English as we expect all European trainees to read English and also for the reason that translating an MCQ alters the sense and validity of the questions. The matter has been discussed at length with Board members and Trainers and it is agreed that for the time being the MCQ questions will continue to be in English, as are the questions in the Final examination. It may eventually become feasible to provide an examination in different languages.

The principle of an interim exam is that trainees at all levels of their programme should take it, and it should be sat without specific prior revision. It is used both as an assessment of the trainee's level of knowledge retention, and as a guide to progression from year to year. Finally it provides good practice in the gaming required to be successful at MCQs. Candidates are anonymised and their marks are graded according to their position relative to others in the same and other years of training. It allows trainees to see where they are in comparison to their peers. The anonymised results can also be used to assess the training programmes, both regional and national, and ultimately international, to see where deficiencies in the training provided lie, especially with regard to certain subjects, such as hands and paediatrics, and also basic sciences.

Summative Assessments

The principle of a final examination is increasingly becoming accepted as an effective tool for defining the competence of a surgeon trained in the Generality of Orthopaedics and Traumatology. Ideally it should take place towards the end of training, usually in the final year.

The eligibility criteria for the final EBOT exam are: to be a certified European Orthopaedic and traumatology surgeon, to be trainee in a European accredited program in his/her last year having fulfilled all the criteria to be recognized as an orthopaedic and traumatology surgeon (letter of Training Program Director) in his/her country.

It should assess overall competence and therefore cover the whole curriculum. The assessment is therefore for General rather than Subspecialist training. Most final examinations comprise a written MCQ paper, which tests the candidates' knowledge base, and a separate oral examination, which determines clinical skills and some aspects of professional behaviour. A clinical examination, which allows assessment of communication skills, physical examination and ability to make decisions about a live clinical scenario, is also used in some countries.

Operative skill is not tested, as this requires ongoing evaluation by the trainer over a period of time, during local formative assessments if a nation does not have a final examination, but wishes to introduce one, or wishes to supplement its own National Examination before certifying trainees, then the EBOT final examination is available to fulfil that function.

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At present the EBOT examination comprises two parts, taken separately, with the written section sat in June in centres throughout Europe, and the oral examination taken in October. The examination is currently in English only, but Spanish version of the Oral assessment took place in 2016 and French and German versions are being prepared.

A clinical examination in local languages in the candidates own country is planned for the future. We need to test attitude, clinical skills and professional behaviour of candidates as throughout modern times decision making by surgeons is moving away from the clinical grounds to be based quickly on examinations only. We must guarantee that Fellows of the European Board are skilled clinicians and know how to make a therapeutic decision based on the relevance of the clinical findings and of the investigations performed.

It is important to recognise that successful completion of the EBOT examination is not the sole determinant of clinical competence and must be associated with a rigorous appraisal system before a trainee is recognised as a Specialist. This provides the National Regulatory Authority in each EU country with an important influence. If acquisition of Specialist Certification were dependent on both satisfactory appraisals throughout the training period AND successful completion of an examination which tests Knowledge, Clinical Skills and to an extent Professional Behaviour, then doctors without these qualifications would not be able to be employed as Certified Specialists. It should be emphasized that successful completion of a final examination should NOT confer Specialist status on its own but will have to be the last step in a residency program where all other steps have been fulfilled successfully during training.

Language issue will be a challenge of the future. The general idea being that the exam will be conducted in several languages by the different countries (grouping of smaller ones) on the same “model” as the EBOT exam and under supervision by EBOT examiners...

At the end of the training, the Training Program Director certifies the attainment of:

- satisfactory operative totals
- adequate competency level
- satisfactory assessment for each year of training
- EPA Entrustable professional activity

d. Governance

The European Board of Orthopaedics and Traumatology (EBOT), on behalf of the Orthopaedic Section of the UEMS has been running the annual final examination, conducted in the English language since 2001 and also in Spanish since 2016.

For the past two years EFORT (European Federation of National Associations of Orthopaedics

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and Traumatology) has become directly involved in this examination process by taking responsibility for much of the administration.

The EBOT exam is not mandatory for the moment, since all European residents can choose to take their national examination, managed by their own Association, in their local language, (where such an examination exists).

In December 2012, EFORT launched The **European Education Platform – (EEP)**, by inviting the National Associations to contribute to this process. The idea was to start with a small group to establish a framework and later to involve all Associations, in order to have wide representation across the European Union. At the same time UEMS, EBOT, the Specialty Societies and a representative of FORTE (the trainees association), participate in the process.

The ultimate goal is to have an appropriate training syllabus and a “common” final exam in different languages and run in the different countries.

II. TRAINING REQUIREMENTS FOR TRAINERS

1. Process for recognition as trainer

a. Requested qualification and experience

Training Programme Director

The Training Program Director must be a certified specialist for a minimum of 5 years. His/her substantial working contract must be within the training institution/network. The CV of the Training Program Director should provide evidence of his/her continuing professional development (CPD) in the field of Orthopaedic and Trauma surgery.

The Training Program Director must have full secretarial and administrative support and there must be sufficient protected time for him/her to carry out his/her responsibilities.

Responsibilities of the Training Programme Director

To establish a transparent and fair selection and appointment process for trainees.

To arrange a balanced training programme with established rotations ensuring that the trainee will have complete exposure to the aspects of O and T in order to be able to fulfil the criteria in the curriculum.

To ensure that there is dedicated time allocated for training and that the trainers are fulfilling their responsibilities to oversee, support and assess trainees.

To ensure that the individual trainees’ documentation and training portfolios are up to date.

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To advise trainees and ensure that they attend proper and approved courses.

To provide valid documentation as to the satisfactory completion of training.

To oversee the types of operative procedures and clinical activities performed in the department and participating units connected with the training programme.

To provide opportunity for research, audit and other educational valid activities such as attending courses and scientific meetings.

To provide a yearly and final report on each trainee.

Accreditation of trainers

Trainers must be certified Orthopaedic and Trauma (OT) surgeons with adequate pedagogical competence. The Training Program Director must be registered with the relevant national medical authority and possess the necessary administrative, pedagogical, scientific, clinical and surgical skills required to conduct the programme.

Criteria for trainer status

Trainers should be certified OT surgeons who can demonstrate pedagogical skills and that they are in compliance with the requirements of continuing professional development in their field

Trainers must be recognised by the responsible national authority. Preferably the trainer is a member of the national society.

Trainers should possess the necessary administrative, communicative, pedagogical, scientific and clinical skills as well as commitment to conduct the programme.

Trainers should have received instruction for training e.g. pedagogical course (assessment of needs and teaching objectives and evaluation of trainees). They should be able to assess needs and advise on teaching objectives.

Trainers should provide evidence of academic activities (clinical and/or basic research, publications in peer reviewed journals and participation in OT scientific meetings).

Trainers will require secretarial and administrative support.

There should be sufficient number of trainers. The ratio between the number of qualified specialists (teaching faculty) and the number of trainees should enable a close monitoring and provide versatile exposure to different schools of thoughts.

Responsibilities of trainers

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To set realistic aims and objectives for a rotation or training period.

To supervise the day to day work of the trainee in the ward, clinic, the operating theatre and during on-call commitments.

To support and assess the trainees progress at the end of each rotation or training period.

To encourage the trainee to carry out research.

To ensure that there is appropriate balance between service commitment and training.

To ensure that the regular assessments and reports are completed and agreed upon by both the trainer and the trainee (under the supervision of the Training Program Director).

To keep the Training Program Director informed of any problems at an early stage.

To manage with the other trainers under the guidance of the Training Program Director any inadequacies/deficiencies demonstrated by a trainee. The institution/network and if necessary the relevant national authority should become involved if the local conflict between the Training Program Director and the trainee cannot be resolved.

b. Core competencies for trainers

The Training Program Director must be a certified specialist for a minimum of 5 years. His/her substantial working contract must be within the training institution/network. The CV of the Trainer Program Director should provide evidence of his/her continuing professional development (CPD) in the field of Orthopaedic and Trauma surgery.

Trainers must be certified Orthopaedic and Trauma (OT) surgeons with adequate pedagogical competence. The Training Program Director and the trainers must be registered with the relevant national medical authority and possess the necessary administrative, pedagogical, scientific, clinical and surgical skills required to conduct the programme.

2. Quality management for trainers

To assure the quality of the training programs, program directors and trainers will undergo regular controls during the site visit/ external auditing.

They will also on a regular basis (as defined by the appropriate governing body of each country) have to “re-apply” of their teaching position : CV update, practice evaluation (clinical work, surgeries ...) , scientific work (publications ...etc) , work of their colleagues etc

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etc.. Every five years would be an appropriate timing.

Evaluation is also performed by the trainees per questionnaire or any other mean decided by the individual countries.

III. TRAINING REQUIREMENTS FOR TRAINING INSTITUTIONS

1. Process for recognition as training centre

a. Requirement on staff and clinical activities

National authorities will give accreditation to departments/networks based on the range of clinical specialties, number of patients cared for as inpatients and as outpatients in such a way that the trainee will be exposed to what needs to be covered by the curriculum. Different type of accreditation are thus possible as described under III.2....and a trainee will be able to do part of his /her training in a “partial” accredited programme for part of his/her training ...

To assure that the trainee will receive appropriate exposure to the different pathologies (quality and quantity) is one of the duties of the Program Director.

Appropriate faculty covering the broad spectrum of orthopaedics should be available in “full” at a “fully” accredited department: paediatrics, spine, upper limb, lower limb, sports, trauma, tumor, arthroplasty ...As per curriculum.

Faculty can be missing in the “partially” accredited departments; nevertheless the programme of the trainee has to cover all aspects.

An appropriate ratio of trainee/trainer will be maintained in such a way that the trainee will have enough exposure to patient care in all its aspects but also time for scientific work and appropriate rest time.

This is part of the accreditation process and a minimum/maximum number of trainees will be assigned to each department/network.

b. Requirement on equipment, accommodation

Appropriate medical and technical equipment will be made available to the trainee.

Classic library or computer with internet access to medical library online (journals etc ...) will be made available to the trainee.

Appropriate accommodation for scientific work as well has a resting place will be available.

2. Quality Management within Training institutions

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Accreditation

The following decisions must be taken by the national authorities with regard to the accreditation status of the Training Institution and Programme.

- I. Full accreditation may be granted if the programme has demonstrated full compliance. The Department/Network will receive a certificate indicating that the Department/Network and the Training Programme fulfills the standards and criteria. The accreditation should be reassessed regularly.
- II. Partial accreditation may be granted if the programme has demonstrated compliance for only a partial scope or has training limitations. The Department/Network will receive a certificate indicating that the Department/Network and Training Programme fulfills the standards and criteria for a limited spectrum of accreditation or a limited period. The accreditation should be reassessed regularly. Missing criteria can be reassessed and full accreditation granted if the missing criteria are fulfilled.
- III. Accreditation may be withdrawn if the programme does not substantially comply with the requirements.

The training institution/network should possess an adequate infrastructure and offer qualitative and quantitative clinical exposure as defined in the scope of the curriculum.

The nationally accredited training programme fulfilling the criteria will obtain approval delivered by the board.

A training programme must be reviewed every 5 years.

The National Authority is responsible for setting up at national level a programme for quality assurance of training and of trainers and training institutions in accordance with national rules and EU legislation as well as considering UEMS recommendations.

Clinical Governance - Manpower planning - Regular report

The relevant medical chamber/National Authority is the responsible body for recognition/certification of medical specialities in each member state of the UEMS member states. The majority of these countries now have a Board Examination.

National bodies should be made aware of the existence of the EBOT exam.

The standards for recognition of national training institutions and education networks are matters for national authorities, in accordance with national rules and EU legislation with the aim of harmonizing the different training programmes of OT at national level.

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The visitation and evaluation of training institutions is an important feedback mechanism for maintaining standards and of quality control.

A training institution/educational network must have national recognition/accreditation, in agreement with national/UEMS standards. In order to be accredited, an educational programme must substantially comply with the special national requirements for residency training. Programmes must demonstrate their compliance with these requirements at the time of the site visit.

External auditing – site visit

The site visit will be performed by the national authority and/or medical society or medical chamber in accordance with the national regulations. The site visiting committee may be assisted by representatives from the UEMS. The site visit aims to explore in detail the training programme, the educational and scientific environment by holding discussions with the Training Program Director, the trainers, the trainees and the administration of the institution/network. A report will be prepared by the site visitors and will be part of the final decision regarding the accreditation status of the programme. All information obtained during the interviews with trainers and trainees will remain confidential. The accreditation status as decided by the relevant authority/national society will be reported to the Training Program Director by a formal letter of notification. Together with the site visit report, additional advice and recommendations – if necessary – will be given for the benefit of the Training Programme.

Transparency of training programmes-Structure for coordination of training

To establish a transparent and fair selection and appointment process for trainees is the responsibility of the Training Programme Director

To arrange a balanced training programme with established rotations ensuring that the trainee will have complete exposure to the aspects of O and T in order to be able to fulfil the criteria in the curriculum is also the responsibility of the Training Programme Director

Framework of approval – how are they approved – Process for recognition as a Training Institution/Network

Training institutions for the speciality OT are recognised by the National Authority and/or National Board and/or medical chamber/medical society of the member country. Each member country will keep a register of approved institutions.

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In order to obtain recognition, the training institution must comply with the national requirements for Residency Training in OT. The training institution/network must be able to demonstrate its compliance with these requirements.

The Training Program Director must submit a Programme Application form to the National authorities/medical chamber/medical society describing the levels of staffing, space allocation, technical facilities, and in particular the Residency Training Programme