



UNION EUROPÉENNE DES MÉDECINS SPÉCIALISTES EUROPEAN UNION OF MEDICAL SPECIALISTS

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Training Requirements for the Specialty of Sports Medicine

European Standards of Postgraduate Medical Specialist Training

Preamble

The UEMS is a non-governmental organisation representing national associations of medical specialists at the European Level. With a current membership of 39 national associations and operating through 43 Specialist Sections and European Boards, the UEMS is committed to promote the free movement of medical specialists across Europe while ensuring the highest level of training which will pave the way to the improvement of quality of care for the benefit of all European citizens. The UEMS areas of expertise notably encompass Continuing Medical Education, Post Graduate Training and Quality Assurance.

It is the UEMS' conviction that the quality of medical care and expertise is directly linked to the quality of training provided to the medical professionals. Therefore, the UEMS committed itself to contribute to the improvement of medical training at the European level through the development of European Standards in the different medical disciplines. No matter where doctors are trained, they should have at least the same core competencies.

In 1994, the UEMS adopted its Charter on Post Graduate Training aiming at providing the recommendations at the European level for good medical training. Made up of six chapters, this Charter set the basis for the European approach in the field of Post Graduate Training. With five chapters being common to all specialties, this Charter provided a sixth chapter, known as "Chapter 6", that each Specialist Section was to complete according to the specific needs of their discipline.

More than a decade after the introduction of this Charter, the UEMS Specialist Sections and European Boards have continued working on developing these European Standards in Medical training that reflects modern medical practice and current scientific findings. In doing so, the UEMS Specialist Sections and European Boards did not aim to supersede the National Authorities' competence in defining the content of postgraduate training in their own State but rather to complement these and ensure that high quality training is provided across Europe.

At the European level, the legal mechanism ensuring the free movement of doctors through the recognition of their qualifications was established back in the 1970s by the European Union. Sectorial Directives were adopted and one Directive addressed specifically the issue of medical Training at the European level. However, in 2005, the European Commission proposed to the European Parliament and Council to have a unique legal framework for the recognition of the Professional Qualifications to facilitate and improve the mobility of all workers throughout Europe. This Directive 2005/36/EC

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established the mechanism of automatic mutual recognition of qualifications for medical doctors according to training requirements within all Member States; this is based on the length of training in the Specialty and the title of qualification.

Given the long-standing experience of UEMS Specialist Sections and European Boards on the one hand and the European legal framework enabling Medical Specialists and Trainees to move from one country to another on the other hand, the UEMS is uniquely in position to provide specialty-based recommendations. The UEMS values professional competence as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served”¹. While professional activity is regulated by national law in EU Member States, it is the UEMS understanding that it has to comply with International treaties and UN declarations on Human Rights as well as the WMA International Code of Medical Ethics.

This document derives from the previous Chapter 6 of the Training Charter and provides definitions of specialist competencies and procedures as well as how to document and assess them. For the sake of transparency and coherence, it has been renamed as “**Training Requirements for the Specialty of Sports Medicine**”. This document aims to provide the basic Training Requirements for each specialty and should be regularly updated by UEMS Specialist Sections and European Boards to reflect scientific and medical progress. The three-part structure of this documents reflects the UEMS approach to have a coherent pragmatic document not only for medical specialists but also for decision-makers at the National and European level interested in knowing more about medical specialist training.

¹ Defining and Assessing Professional Competence, Dr Ronald M. Epstein and Dr Edward M. Houndert, Journal of American Medical Association, January 9, 2002, Vol 287 No 2

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I. TRAINING REQUIREMENTS FOR TRAINEES

1. Content of training and learning outcome

Competencies required of the trainee

DEFINITION OF SPORTS MEDICINE

Sports medicine is a multidisciplinary clinical and academic specialty (and subspecialty in some countries) of medicine dealing with health promotion for the general population by stimulating a physically active lifestyle and diagnosis, treatment, prevention and rehabilitation following injuries or illnesses from participation to physical activities, exercises and sport at all levels.

SCOPE OF SPORTS MEDICINE

Sports medicine is globally defined and recognized not solely for taking care of the sporting elite athletes. It is mainly focused on:

- Prevention of chronic diseases caused by sedentary lifestyle as a major area of increasing interest which can partially be served by expertise in sports medicine.
- Pre-participation clinical screening and examination before exercise and competition as well as medical assistance to the athletes engaged in all sports.
- The use of supplements, pharmacological agents, doping control and gender verification and its complex moral, legal and health-related difficulties.
- Special medical issues associated with international sporting events of athletes, including disabled athletes, such as the effects of travel and acclimatization.
- Research in basic science and extensive clinical undertaken in the sports medicine domains within a great variety of specialties.

The increased attention from media and significant financial and political interactions in international sports events creates an atmosphere where business and sports meet, not always for the benefit of involved athletes. Consequently, sports medicine can encompass an array of areas including internal medicine, exercise physiology, cardiology, orthopaedics and traumatology, physical and rehabilitation medicine etc. Sports medicine is a multidisciplinary specialty, integrating teams with physicians, athletic trainers, physical therapists, coaches, sport scientists, nutritionists, psychologists, athletes and other related specialties. Besides his clinical expertise, the sports medicine specialist should be considered as head of the multidisciplinary sports medicine team, coordinating the direct planning of the athlete's health activities, related to his health.

BASIC EDUCATIONAL REQUIREMENTS TO ENROL IN TRAINING PROGRAMMES

As a basic recommendation it is proposed to include:

- 1 year minimum of Internal Medicine with special emphasis to Cardiological problems, Emergency Medicine and Clinical Nutrition.
- 6-12 months Orthopaedics and Traumatology
- 6-12 months Physical and Rehabilitation Medicine
- 12-24 months at recognized Sports Medicine Centres, including theoretical and clinical practice and experience as a team physician.

a. Theoretical knowledge

Aims of Sports Medicine specialty training

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These studies in sports medicine aim to provide theoretical understanding and practical skills as detailed in this curriculum, sufficient to provide first line clinical services of the highest possible standard and leading to formal recognition as Clinical Specialist in Sports Medicine, equivalent within all the European countries.

Basic skills provided by this curriculum include:

Clinical

To provide pre-participation clinical screening and examination before exercise and competition as well as medical assistance to the athletes engaged in all sports.

- To cover primary responsibility to achieve, by own means or by referral, an accurate diagnosis and treatment for injury or illness caused by or affecting exercise and sport
- To provide leadership in the management of injury or disease from onset to return to sport.
- To provide appropriate and courteous communication with other clinical professionals asked for an opinion, investigations or treatment
- To work closely with allied health professionals to ensure that the athlete receives the highest level of care in each stage of their treatment process.
- To work in close collaboration within the sport specific organization to ensure a safe and healthy environment
- To promote the highest level of ethical standards within the sporting environment including anti-doping activities

Public Health

- As part of a multi-disciplinary team to encourage and promote physical activity as a lever for healthy living
- To identify impediments to an active lifestyle and work within a multi-disciplinary framework to remove those impediments or minimize their impact
- To work alongside local health authorities / public health clinicians/ developing exercise opportunities for the general public for health gain
- To liaise with public (local authorities / education / voluntary) and private sector so as to advise on the health aspects of exercise programmes

b. Practical and clinical skills

During practical clinical training, trainees should be supervised by a relevant specialist and considerations of ethical issues (such as presence of parents or tutors), and liability must be addressed. A condition for the continued recognition of undertaken training is that tools for assessment should be available to determine whether the teaching objectives have been reached. A completed and approved curriculum is required to achieve national recognition.

An important objective of the practical training is to foster the integration of knowledge and practical skills acquired during the cardiology, orthopaedics, physical & rehabilitation medicine, general practice medicine and physiology internships. Trainees will also learn to put into practice information gained in the relevant course work. Trainees will also extend and deepen their knowledge in the assessment of fitness, such as isokinetic and functional muscle performance, cycle ergometry and treadmill ergometry. Trainees will gain experience in the use of such test results in the decision-making with regard to diagnosis, recommendations and therapy for people of both gender and in

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different age groups and performance levels. With regard to elite sport, trainees will learn how to diagnose, treat and prevent overtraining and overexertion. While supervising competitions and training, trainees will become proficient in activities related to, for example, hygiene and nutrition, and will work closely with trainers, athletes, physiotherapists, officials, etc.

c. Competences

Competences to be acquired during the training, or expected to have by the end of training, include the following:

Clinical and instrumental assessment to determine the pathophysiology mechanisms and the underlying diagnosis of the patient's condition.

Trainees are expected to complete evidence of reflective practice through case reports and other experiences in their training record.

Other self-directed work will be planning, data collection, analysis and presentation of audit and research work.

The mandatory training record (hand written diary or preferably electronic logbook) will contain evidence of academic pursuits and should be checked and documented regularly by the Supervisor.

Trainees will take part and be able to lead in teaching and will be expected to develop skills to teach undergraduates, postgraduates and non-medical staff in small groups and formal lectures making personal presentations using a variety of audiovisual methods.

They will be expected to present at journal clubs, and make case presentations at grand rounds or similar settings.

They will be expected to undertake personal audit and research and make presentations of their findings at clinical meetings.

Prescription, as much evidence-based as possible, of medical and physical treatments (including drug treatment, physical modalities, innovative technologies, natural factors and others), as well as of technical aids.

Prevention and management of complications

Grades of Competence

The key competence levels/grades in the Clinical Domain of Sports Medicine, that trainees will be expected to have obtained at each level are as follows:

A. KNOWLEDGE

1. knows of
2. knows basic concepts
3. knows generally
4. knows specifically and broadly

B. CLINICAL SKILLS

1. Has observed – the trainee acts as an 'Assistant'. From complete novice through to being a competent assistant. At end of level 1 the trainee:

- a. Has adequate knowledge of the steps through direct observation.
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b. Demonstrates that he/she can handle instruments relevant to the procedure appropriately and safely.

c. Can perform some parts of the procedure with reasonable fluency

2. Can do with assistance - a trainee is able to carry out the procedure 'Directly Supervised'. From being able to carry out parts of the procedure under direct supervision, through to being able to complete the whole procedure under lesser degrees of direct supervision (e.g. trainer immediately available). At the end of level 2 the trainee:

a. Knows all the steps - and the reasons that lie behind the methodology.

b. Can carry out a straightforward procedure fluently from start to finish.

c. Knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations).

3. Can do whole but may need assistance – a trainee is able to do the procedure 'Indirectly Supervised'. From being able to carry out the whole procedure under direct supervision (trainer immediately available), through to being able to carry out the whole procedure without direct supervision i.e. trainer available but not in direct contact with the trainee. At the end of level 3 the trainee:

a. Can adapt to well-known variations in the procedure encountered, without direct input from the trainer.

b. Recognizes and makes a correct assessment of common problems that are encountered.

c. Is able to deal with most of the common problems.

d. Knows and demonstrates when he/she needs help.

e. Requires advice rather than help that requires the trainer to scrub.

4. Competent to do without assistance, including complications. The trainee can deal with the majority of problems and complications, but may need occasional help or advice.

5. Can be trusted to carry out the procedure, independently, without assistance or need for advice. This concept would constitute one Entrustable Professional Activity (EPA). An EPA is 'a critical part of professional work that can be identified as a unit to be entrusted to a trainee once sufficient competence has been reached'. This would indicate whether one could trust the individual to perform the job and not whether he is just competent to do it. At the end of level 5 the trainee:

a. Can deal with straightforward and difficult cases to a satisfactory level and without the requirement for external input to the level at which one would expect a consultant to function.

b. Is capable of instructing and supervising trainees.

C. TECHNICAL SKILLS

1. Has observed.

2. Can do with assistance.

3. Can do whole but may need assistance.

4. Competent to do without assistance, including complications, but may need advice or help.

5. Can be trusted to carry out the procedure, independently, without assistance or need for advice (EPA) This calls for a minimum of elaboration on Entrustable Professional Activities (EPAs): Definition: In order to apply a Competence-based assessment to the e-Portfolio and Logbook, the concept of Entrustable Professional Activity (EPA) should be included in Eligibility evaluation. An EPA is 'a

critical part of professional work that can be identified as a unit to be entrusted to a trainee once sufficient competence has been reached'. An EPA goes a level higher than the traditional 4th level of competence which is the 'independence competency'. The key factor is Entrustment. The trainee is not only capable of tackling the particular procedures or units independently, but he can be trusted to do this by his tutors. The units listed include the competencies that surround these procedures that are further explained in the Syllabus Clinical Skills sections. Thus, the EPA is an integral part of the Logbook and is a comprehensive and holistic tool for Competence Based Assessment. It constitutes the 5th Grade of Competence and serves as a bridge between the Syllabus/Curriculum and the Eligibility.

Assessment. The Head of the Training Programme or Tutor officially certifies this level of Competence when signing the various items in the Syllabus and Curriculum.

2. Organisation of training

a. Schedule of training

Entry requirements

Applicants for Specialist Training (ST) should have completed basic medical training and achieved corresponding National basic medical degree.

Already recognized specialists from one of the relevant specialties may apply to enter the program for at least two years of training, suited to fit appropriate further education to achieve a particular competence title in Sports Medicine. This will include competencies as described in both curricula involved and there must be jointly agreed assessment.

Flexible Training

Trainees who are unable to work full-time are entitled to choose for flexible training programmes. EC Directive 93/16/EEC requires that:

- i. Part-time training shall meet the same requirements as full-time training, from which it will differ only in the possibility of limiting participation in medical activities to a period of at least half of that provided for full-time trainees.
- ii. The competent authorities shall ensure that the total duration and quality of part-time training of specialists are not less than those of full-time trainees.

Structure, duration and organization of Sports Medicine specialty training.

The curriculum should be organized in the sense that the specialist in sports medicine could serve in his role in National Health Service but also specifically in his/her preferred sport. Minimum curriculum of supervised specialist training should correspond to at least 4 years (or equivalent of in total 3200 -contact-course and practical training hours).

Key characteristics of practicing clinical Sports Medicine are:

- It involves both clinical services and educational activities
 - It requires simultaneous patient centered and learner centered interaction with the emphasis on effective communication, allowing clinical events to be seen and treated as individually designed educational experiences
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Teaching will be undertaken in a variety of clinical settings. Work will be undertaken independently or supervised by senior staff. Trainees should have opportunities for practicing skills and performing practical procedures during their placements. Supervision will always be given where the trainee has not yet acquired a sufficient level of competence. The responsibility in choosing appropriate tasks lies with the Supervisor. The responsibility in conducting tasks or clinical procedures and to inform supervisors of lack of training or competence on any procedure lies with the Trainee.

Personal study (self-directed learning) including the reading of relevant professional journals and textbooks and use of CDs, DVDs, searching the worldwide web and use of other library resources are considered important aspects in ST.

Course work (contact hours)

The theoretical training will be given as lectures, tutorials or seminars. Regular progress meetings and supervision on written projects and reports are agreed with relevant course instructor. In the clinical setting the teacher-trainee contact is in particular important when the work involves clinical skills.

b. Curriculum of training

See ANNEX 1.

c. Assessment and evaluation

Training Record for evaluation

The trainee will maintain a hand written training record or preferably a **logbook** throughout the programme. It will regularly be counter-signed as appropriate by the Supervisor to confirm the satisfactory fulfillment of the required training experience, and the acquisition of the competences that are outlined in the Specialty syllabus. It is recommended that the trainee documents the following structured assessments

- observed clinical skills (e.g. functional assessments, rehabilitation plans, active participation in team meetings)
- observed procedural skills (e.g. instrumental diagnostic procedures or invasive therapeutic interventions for treating pain or spasticity)
- Case based discussions
- Patient feedback from in- and outpatients

The minimal numbers per year of each of these items should be determined nationally

Logbook entries must be monitored by regular inspection and signed off by the appropriate trainer; copies of assessment forms for each training period completed and signed by trainers for that period should also be included.

The Logbook should be ready to be presented before the European Board certification or exhibited to a receiving country/employer, upon request, as a proof of the knowledge/skills achieved during postgraduate education.

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The European Board attaches considerable importance in the details of the training programme as shown in the logbook.

E-Portfolio

Moreover, the trainee should be encouraged to keep a Portfolio of evidence that they have achieved the training goals, especially should they wish to seek employment in a country different from the country in which they trained.

The portfolio should include an up-to-date curriculum vitae (EUROPASS style) incorporating:

- details of previous training posts, dates, duration and trainers
- copies of assessment forms for each training period, completed and signed by trainers for that period
- details of examinations passed
- list of publications with copies of published first page or abstract
- list of research presentations at local, national and international meetings
- list of courses attended

Assessment

Periodic progress assessment

A structured goal setting for each training period, according to the curriculum, at its evaluation is recommended. Trainees have to meet the agreed standards and requirements of the planned programme. The purpose of assessment is to ensure continuing progress in the trainee's knowledge and skills as well as professional conduct and ethics.

Training institutions should provide a system of appraisal at entry into every part of the programme. Assessment must be performed on an annual basis or at the end of each rotation period by the appropriate trainer, using an evaluation sheet. Clinical experience will be assessed by a review of the patients seen by a trainee and for whom the trainee has had a personal responsibility as regards care.

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Assessment of skills comprises workplace based assessments and validation of the Logbook, that should document the specified list and numbers of procedures performed during training, including documentation of procedural and/or disease variables. It is recommended that the trainer(s) provide a final statement regarding the level of competence achieved by the trainee, as defined at the end of this document in the Curriculum of Studies in Physical and Rehabilitation

The achievement of learning/training outcomes must be assessed at least on an annual basis by the Director of Training together with the faculty. Adequate permanent records of the evaluation must be maintained. Such records must be available in the trainee file and must be accessible to the trainee, so to be included in the e-portfolio, and to other authorized personnel. The assessment must be objective and document progressive trainee performance improvement appropriate to their educational level

The result of the evaluation must be discussed with each trainee.

Failure to meet the agreed targets must be brought to the attention of the training director.

It is the responsibility of the training director to identify any failure in a trainee's progress, to conduct and to provide appropriate advice, and to take remedial action. To this end, it is advised that trainees meet with their training director on a regular basis, namely every 6 months, to discuss their work. Such discussion will take the format of an appraisal with the trainee providing information about how he/she is progressing, accompanied by documented evidence of clinical engagement and achievement of learning and training outcomes. Moreover, the training director should take particular care of ascertaining the trainees' professional behavior through the collection of multisource feedback, from trainers, other health professionals, patients and caregivers.

In the event of a trainee not progressing as required, there are three stages of action:

- targeted training: closer monitoring and supervision to address particular needs
- intensified supervision and, if necessary, repetition of the appropriate part of the programme
- withdrawal of the trainee from the programme. This last measure should be reserved to persons that are not willing or not able to comply with the first two stages.

Course work and hands on skills are preferably assessed by the supervisor as well as by an unbiased external examiner. Assessment of practical skills will also form a regular part during the training and evaluated by the course leader or supervisor. A standardized form of assessment may be developed within the framework of the supervision but must include a comprehensive view of the skills required by the curriculum.

The role of the supervisor

Each trainee should have one or more assigned supervisors throughout the program. He/she will discuss issues of clinical governance, risk management and requirements of reporting clinical incidents or complications involving the trainee. The supervisor is part of the clinical specialty team.

If the clinical director has any concerns about the performance of the trainee, or where there are issues of physician's or patient's safety, these would be discussed with the supervisor. This includes clinical routines, study leave, sick leave and annual leave arrangements, on-call rotas, educational

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opportunities, documentation and agreements. Special attention will be given to the nature of work-based learning, so it is clear about the roles and responsibilities.

Exit examination

At the end of Sports Medicine training, the Training Director certifies the attainment of adequate competency level for each training outcome.

In particular, the final year examination must verify that the trainee has demonstrated sufficient competence to enter practice without direct supervision and has achieved the standard level of entrustable professional activity, as defined at the end of this document. The minimum levels of applied clinical knowledge and applied clinical skills that a trainee must exhibit at the exit examination have been indicated for each single item of the whole Curriculum of Studies in Sports Medicine.

d. Governance

Managerial

To work closely with a network of specialists in other fields such as general practice, orthopaedics, rheumatology, emergency medicine, physical & rehabilitation medicine, neurology etc to further understanding of medical conditions affecting the active population

- To liaise with health authorities at all levels for provision of resources to promote increased physical activity for the general population to improve community health
- To establish liaison with public agencies such as social services, housing, education, unemployment and voluntary agencies as well as the private sector, involved in the provision of services to disabled people in the community
- To contribute to organizations which promote the dissemination of knowledge throughout the community for the improvement of community health and for the advancement of sports

Education and Research

- To participate in regular clinical audits and governance
 - To promote and participate in scientific research in close collaboration with academic professionals
 - To critically review scientific literature and apply evidence based principles in practice
 - To actively participate in educational activities for children, community groups, sports organizations, athletes and other medical professionals to promote an active lifestyle and to improve safety standards in sports
 - To participate in all approved training programmes
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II. TRAINING REQUIREMENTS FOR TRAINERS

1. Process for recognition as trainer

a. Requested qualification and experience

CRITERIA FOR TRAINERS WITHIN THE SPECIALTY

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The head of training should have been practicing the specialty for at least five years before appointment. He/she should be a suitably qualified specialist with a commitment to training and be recognized by the National Board. He/she should have experience in research and postgraduate education. There should also be a staff of well-qualified specialists who participate in the training programme and who can guarantee that the full range of the specialty is covered.

b. Core competencies for trainers

The head of training will be responsible for a training programme for each trainee in accordance with national rules and the recommendations of the European Board for training programmes in Sports Medicine.

The teaching staff will be sufficient in number and correlate with the number of trainees in the programme – according to the national regulations - in order to guarantee adequate supervision of the trainee in the programme.

In countries developing the specialty transitional arrangements may exist.

2. Quality management for trainers

On top of being regularly accredited as Sports Medicine physicians at national level, trainers should be Sports Medicine Board certified and should strive to keep abreast of the evolution of the discipline through a regular attendance to Congresses and Courses duly accredited for CME.

Teaching activity should be supervised and monitored by the training Director, whose responsibility encompasses identification of educational goals and the details of the educational components attributed to the trainers.

Contents and schedule of training program should be detailed in a written document presented to the trainees at the beginning of the training period and updated annually in relation to the changing educational needs and the specific needs of the training program.

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Trainers will collaborate with trainees, the training Director and their institution to ensure that the delivery of training is optimal. They should meet at least twice a year with all trainees to openly discuss all aspects of training including the evaluation and approval of their log books and portfolios.

The educational work of trainers and Director of training should be appraised annually within their Institution.

Educational support of trainers and Directors of training will be provided by their Institutions / Employers / Sports Medicine Scientific Societies and through the UEMS MJC Sports Medicine Board.

III. TRAINING REQUIREMENTS FOR TRAINING INSTITUTIONS

INSTITUTIONS OFFERING SPORTS MEDICINE TRAINING: Specialization training should be carried out by a nationally and/or internationally accredited Academic and Clinical Sports Medicine Institution, preferably affiliated with a University. A local network of relevant specialties and relevant technical and man power resources is required unless all specialties are hosted within the main Institute.

1. Process for recognition as training centre

a. Requirement on staff and clinical activities

CRITERIA FOR TRAINING INSTITUTIONS

Training institutions should receive official recognition by the National Boards responsible for the training in Sports Medicine. The MJC on Sports Medicine will receive a list of training institutions issued by the National Boards. If these institutions meet the requirements set out by the MJC and CESMA, they will be considered conformed to European Institution for the training in Sports Medicine.

Training institutions should be preferably placed within university hospitals or major general district hospitals with adequate supporting services to provide an optimal training climate. This includes the existence of training programmes in other specialties in the hospital. Furthermore, there should be the possibility for direct interdisciplinary consultation with other specialty services. The institution should provide access to the scientific literature. Occasionally, periods of training may be taken in approved mono-specialist clinics, institutes for Sports Sciences and Training Sciences.

The Sports Medicine Training Centre will set up a programme for quality management of postgraduate training.

It is recommended that the number of trainees in any one unit does not exceed the number of available specialists in Sports Medicine for training, thus the Trainee/Trainer ratio would be one/one.

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The balance between in-patient and out-patient numbers is constantly changing and varies across European countries depending on different care pathways adopted. Thus, no specific in- or out-patient numbers are stated as being necessary to be seen by a trainee during their training.

In countries developing the specialty transitional arrangements may exist.

b. Requirement on equipment, accommodation

The main Sports Medicine Training Centre will meet the national standards and will have the following facilities as minimum standards:

- (a) A fully equipped outpatient department for consultation with athletes and patients including emergencies. Equipment should be available for diagnostic and therapeutic procedures.
- (b) A clinical ward for in-patients and day-care facilities for diagnostic, therapeutic and coaching procedures.
- (c) A conference room for deliberation and tutorial sessions.
- (d) A library with electronic ability for connections with sports medicine documents, peer reviewed scientific journals, research protocols and in general access to scientific literature.

In countries developing the specialty transitional arrangements may exist.

2. Quality Management within Training institutions

a. Accreditation

Training institutions must be recognised by the National Authorities responsible for the training in Sports Medicine. It is expected that training centers undergo regular audit within their country with respect to their clinical, scientific and educational activity; therefore the audit would include data relating to the progress of trainees and their acquisition of specialist accreditation. A list of recognized training institutions may be issued by the National Authorities.

If these institutions meet the requirements provided in Chapter 6 of the UEMS Charter on PGT, they will be recognised by the UEMS MJC on Sports Medicine for specialist training in Sports Medicine, after a successful local visit for inspection. People involved in auditing the training unit (i.e. Board visitors), must comply with the following requisites:

- To be a Sports Medicine Board Certified physician.
- To be a Board certified Trainer.
- To work in a Sports Medicine Centre which has been accredited by the Board.
- To have experience of the Centre visit process.
- To have participated in two previous Centre visits before being eligible to be the Centre Visit Team Leader.

Training institutions should constitute one or several facilities within a restricted area to allow easy access and preferably be placed within or associated with a university hospital or a major hospital with adequate support services to provide an optimal training environment. This includes training programmes for other clinical specialties allowing easy access to interdisciplinary consultation. The

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institution should provide access to library and scientific literature. Occasionally, periods of training may be undertaken in other approved specialist clinics or institutes for Sports Sciences.

The Sports Medicine Training Centre will set up a programme for quality management

The Sports Medicine Training Centre will meet national standards and will have access to the following facilities:

- (a) A fully equipped and staffed outpatient department for consultation with athletes and patients. Equipment should be available for basic diagnostic and therapeutic procedures.
- (b) Conference facilities for tutorial sessions.
- (c) Relevant laboratory resources

b. Clinical governance

Each National Authority should work with the national Sports Medicine society and professional union to provide quality assurance of training in Sports Medicine.

The National Authority should determine each country's process for the selection and appointment of trainees in Sports Medicine. The National Authority should implement regulation of access to training in Sports Medicine in accordance with national manpower planning projections in the EU member state. There should be close involvement of trainers, training institutions and any other responsible bodies to select and appoint trainees who are suitable for Sports Medicine in accordance with the established selection procedure. This selection procedure should be transparent, and application should be open to all persons who have completed basic medical training.

Training centers should undertake internal audits of their performance as part of the requirements for continuing national accreditation. Any national evaluation of a training center's performance is expected to include the demonstration that is:

- providing care for patients/athletes with a wide range of Sports Medicine health conditions
- providing educational and training support for trainees
- part of a healthcare system that provides immediate access to relevant laboratory and other investigations as well as providing when necessary immediate access to other clinical specialties that maybe required by their patients/athletes.
- ensure the continuum of care.

Training centers should keep records of the progress of their trainees.

c. Manpower planning

Among the task of the UEMS is to support national authorities with guidelines on the planning of medical manpower in any definite specialty. Each country should train enough Sports Medicine physicians to meet its own requirements of specialist manpower. Trainees' recruitment in the training centres should be subordinated to the results of this planning; in any case the number of trainees present at any time in a training institution cannot exceed its clinical capacity to expose the trainees to the minimal number of procedures detailed in this document.

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c. Regular report

The training institution must have an internal system of quality assurance including features such as mortality and morbidity and structured incident-reporting procedures.

Furthermore, various hospitalactivities in the field of quality control such as infection control and drugs and therapeutic committees should exist. Visitation of training centres by the National Monitoring Authority or by the European Sports Medicine Board shall be conducted in a structured manner.

e. External auditing

The National Professional Monitoring Authority and/or the European Sports Medicine Board, together with the teachers and training institutions shall implement a policy of quality assurance of the training. This includes visits to training institutions, assessment during training, monitoring of log-books or other means. Visitation of training institutions by the National Monitoring Authority and/or the European Sports Medicine Board shall be conducted in a structured manner, according to the UEMS Charter on Site Visits.

Transparency of training programmes

It would be expected that a training centre would publish details of the training provision available with details of the clinical service it provides and the specialist and other staff. Such information would include the training programme, the nature of the clinical experiences with which a trainee would be engaged and the support and interaction with the trainer and Director of training. There would be a named individual whom a prospective trainee might contact and discuss the programme.

The list of all training centres certified (accredited) by the European Sports Medicine Board will be available in the pages devoted to UEMS MJC on Sports Medicine of the EFSMA website.

IV. MISCELLANEOUS:

1. Responsibility for the curriculum

The UEMS MJC on Sports Medicine is responsible for the core curriculum.

At National level the training should fulfil the requirements laid down by the respective Authority. Ideally, in the process of harmonisation, those national requirements should be enriched by those proposed by the UEMS MJC on Sports Medicine.

2. Research

Conducting regular clinical audit is an essential part of the specialty training. Participation in clinical research is encouraged, but not mandatory. Trainees will be encouraged and supported to publish quality research in peer-reviewed journals.

3. Equality and national diversity

The specialization training bodies are expected to comply, and ensure compliance, with the requirements of legislation.

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4. Ethics:

The ethical codes of FIMS apply to all Sports Medicine specialists. A summary of these items is listed in **Annex 2**.

5. Participation to Continuing Medical Education and Continuous Professional Development CME/CPD: See in Annex 3.

6. Reference documents: See in Annex 4.

ANNEXES

Annex 1. Curriculum of Sports Medicine Training Programme

ACADEMIC AND CLINICAL KNOWLEDGE / SKILLS AND EXPERIENCE

EXERCISE PHYSIOLOGY

1. Origins and applications of basic and applied exercise physiology
2. Cellular metabolism and biomechanical pathways of energy production
3. Human energy transfer systems during exercise
4. Energy systems in exercise
5. Measurement/ energy costs of exercise
6. Cardiovascular response and adaptations to exercise
7. Respiratory response and adaptations to exercise
8. Neuromuscular response to exercise
9. Evaluating exercise metabolism / neuromuscular activity
10. Hormones and endocrine systems in exercise
11. Principles of training
12. Strength and conditioning
13. Monitoring of exercise capacity/ training/ overtraining
14. Fitness assessment
15. Environment and exercise
16. Ergogenic aids
17. Genetics and exercise

Practical skills

1. Calculating energy utilization
2. Estimating maximal oxygen consumption
3. Lung function testing
4. Isokinetic testing
5. Force measurement

CLINICAL ANATOMY

1. Clinically relevant regional anatomy, including the upper limb, lower limb, groin & pelvis, head
& neck, thorax and abdomen, cervical spine, thoracolumbar spine

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2. Normal variations in anatomy and the relevance for injury risk, injury prevention and injury management

NUTRITION AND EXERCISE

1. Macronutrients and energy
2. Micronutrients
3. Hydration for Exercise
4. Substrate utilization during exercise
5. Diet and exercise in extreme environments
6. Body composition
7. Diet and health
8. Obesity, exercise and weight control
9. Nutrition for exercise
10. Diet, glycogen stores and endurance
11. High fat diets and exercise
12. Protein and anabolic diets
13. Supplements
14. Alcohol and exercise performance
15. Disordered eating, bone health and female athlete triad
16. Calculation of calorific expenditure
17. Formulation and analysis of food diaries
18. Calculation of body composition
19. To advise on dietary requirements for different exercise conditions/ training regimes and supplement use

PUBLIC HEALTH

Primary Care

1. Basic treatment options for common conditions seen in General practice including ENT, respiratory, cardiology, gastroenterology, ophthalmology, and dermatology
2. Acute management of common musculoskeletal injuries
3. Referral procedures to secondary or tertiary services
4. Indications and contraindications for exercise in healthy population and those with medical conditions
5. Challenges facing deprived communities and ethnic minorities
6. Effects of medications on exercise tolerance
7. Understanding of community physiotherapy services

Public Health

Benefits of exercise in primary and secondary disease prevention, working with populations and through organizations.

Role of exercise in cardiac disease, respiratory disease, osteoporosis, arthritis, hypertension, diabetes and mental health.

1. Physiology of exercise and health
2. Essentials of epidemiology, overview of methods and designs
3. Theoretical basis of health promotion
4. Evidence in physical activity/health research
5. Public health policy in physical activity and health

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6. Services supporting the promotion of physical activity and their structures
7. Measuring physical activity, fitness and health in individuals and populations
8. The ability to initiate a health screening programme.
9. Skills to provide practical guidance on setting up and managing an exercise programme for people with medical problems, as well as to deal with any technical or patient problems that may arise in such a programme.

EFFECT OF ILLNESS ON EXERCISE CAPACITY

1. Understanding of medical conditions commonly encountered in the exercising population including mental illness, acute febrile illness, epilepsy (and other neurological conditions), diabetes, bleeding disorders, cancer, asthma and vasculopathic states.
2. Understanding of the effect that these conditions may have on the individual's ability to exercise, from both an exercise capacity and safety perspective.
3. Understanding of the potential effect of medications prescribed for these conditions, on the individual's ability to exercise

MUSCULOSKELETAL MEDICINE

General Pathology of the Musculoskeletal System

1. Understanding common clinical signs and symptoms in general musculoskeletal pathology which may present in athletes
2. Understanding of the findings which may be detectable by imaging and other relevant Investigations

Experience

1. Attend rheumatology, pathology and endocrine clinics
2. Attend lectures and seminars covering these conditions
3. Attend Orthopaedic and Fracture Clinics

Management of Soft Tissue and Sports Injuries

Knowledge

A. Injury Prevention

1. Pre-participation screening (addressing risk factors, including biomechanical abnormalities)
2. Evidence regarding warm-up and stretching
3. Sports equipment, including protective equipment – health and safety pertinent to sport
4. Safe preseason training regimes
5. Targeted strength and conditioning programmes
-sport-specific - individual-specific
6. Training surface and shoes
7. Rule changes in sport

B. Acute Injury Management

1. The principles of managing acute soft tissue injury – lacerations, sprains, strains, contusions, haematomas
2. The principles of managing acute bone and joint injuries – dislocations, fractures, avulsion injury, epiphyseal injuries

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3. Understanding of the pathological process of soft tissue injury and the possible effects of common pharmacological treatments on this process

C. Chronic/Overuse Injury management

1. The principles of assessing, investigating and managing overuse injury.

D. Principles of the conservative management of injury

1. Principles of injury rehabilitation – ligament/tendon/muscle/bone/joint
2. Multidisciplinary approach to rehabilitation
3. The use of taping, splints, braces, orthotics.

E. Principles of the surgical management of musculoskeletal injury

F. Thorough understanding of the principles of tissue injury and repair

G. Joint and soft tissue injection techniques.

Musculoskeletal Radiology

Knowledge

1. The role of imaging techniques in general terms and the way in which images are produced.
2. An understanding of the relative radiation risks applicable to different types of imaging.
3. The strengths and relative weaknesses of different imaging techniques and their ability to demonstrate both normal and abnormal structures within tendons, ligaments, muscles, bones and joints.
4. A full appreciation of the role of imaging in investigating patients presenting to a team physician and sports medicine specialist. This will include the investigation of patients with both acute and chronic symptoms including acute traumatic injury and chronic overuse injury.
5. The ability to construct a differential diagnosis based on history and clinical findings and the targeted use of imaging to reach a definitive diagnosis.
6. An understanding of the use of medical imaging for targeted treatment (e.g. guided injections) to complement history & examination.

Gait and Biomechanical Assessment

Knowledge

1. Functional anatomy of joints and musculo-tendinous units
2. Characteristics of bone, tendon, ligament, articular cartilage, muscle under stress and strain and potential for fatigue
3. Human movement analysis – basic kinematics and kinetics
4. Biomechanical analysis of sport-specific techniques
6. Effects of faulty biomechanics, influence of posture
7. Methods and effects of changing biomechanics
8. Principles of body morphology
9. Biomechanics experience with podiatrist / physiotherapy / biomechanist
10. Attend workshops on orthotic construction

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WORKING WITHIN THE TEAM ENVIRONMENT

Team Physician

Knowledge

1. The role of the team physician
2. Pre-participation screening
3. Health education and pre-season assessment
4. Acquisition of skills and physique
5. Protective equipment
6. Medical equipment, pharmacy supplies required for coverage of teams
7. Structuring training to prevent injury
8. Doping classes and methods/ permitted use of banned drugs/ doping control
9. Traveler's health issues, combating jet lag and immunizations
10. Athlete confidentiality and medico-legal aspects of team care
11. Disordered eating, female athlete triad
12. Child protection
13. Decision-making

Skills

1. Communication skills
2. Ability to prepare a medical team for travel
3. Ability to monitor environment/ hygiene/ facilities
4. Ability to work both with individual athletes and a team
5. Ability to undertake pre-hospital care of an injured athlete
6. Show adequate record keeping
7. Sensible and sensitive use of technology
8. How to deal with error

Experience

1. Supervised for minimum of 2 years as physician in team sporting environment
2. Maintain a logbook of athletes and, teams and conditions seen
3. Experience of travelling with a variety of teams
4. Attend appropriate courses such as Advanced Life Support

Physician in charge of Events

General Knowledge

1. Legislative and medico-legal guidelines with regard to medical and crowd safety facilities at sporting venues
2. Guidelines for number and type of medical personnel required for sporting events with large participant numbers and/or large crowds
3. Relevant EU safety legislation governing the running of sporting events with large participation numbers and/or large crowds
4. Procedures for evacuation of injured athlete or member of the crowd from any given sporting event
5. Procedures for evaluating requirements in terms of pharmacy supplies, medical equipment, medical personnel, paramedical personnel and communication equipment at any given sporting event

Specific Sports

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Knowledge

1. Familiarity with a wide variety of sports in terms of rules and regulations, physiological requirements and injury risk profiles
2. Provide medical treatment for athletes involved in these sports
3. Provide advice to team management regarding pre-participation screening, training programs, injury risk management and injury treatment, for any of these sports

Experience

1. Spend time with teams involved in these sports
2. Attend appropriate courses relating to the care of athletes involved in these sports

MEDICAL EMERGENCIES

Head injury and Concussion

1. Pathophysiology of concussion
2. Various definitions of concussion
3. Grading concussion severity – historical perspectives
4. Understanding of possible significant complications
5. Assessment of concussion
6. Understanding of short and long-term sequelae of concussion
7. Rehabilitation of concussed athlete
8. Rationale for return to play
9. Sport-specific regulations
10. Maxillofacial and dental issues

Sudden Death in Sport

Knowledge

1. Incidence and prevalence of sudden death in sport
2. Aetiology of sudden death in sport
3. Cardiological causes, including
4. Traumatic causes including
5. Environmental factors
6. Understanding of the role of pre-participation screening

Skills

1. Implement strategies to reduce risk of sudden death in sport
2. Ability to identify at risk athletes through history, examination and appropriate investigation
3. Ability to manage athletes with known risk factors

Experience

1. Provide coverage at contact sport events
2. Attend cardiological testing sessions
3. Read ECGs and identify relevant patterns of pathology
4. Observe echocardiograms
5. Attend clinic specializing in connective tissue diseases, including Marfan's syndrome

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6. Participate in pre-participation screening

Resuscitation Training

1. On field assessment including basic life support, advanced life support, shock, anaphylaxis, basic and advanced airway management, spinal immobilization and principles of safe patient transfer.
2. Basic pharmacology of drugs used in resuscitation
3. Thorough understanding of the principles of care for the unconscious patient
4. Basic knowledge of the principles of trauma care
5. Principles of the management of spinal injury, head injury, thermal injury, chest and abdominal injury eye trauma, dental trauma and genitourinary trauma.

Accident and Emergency

1. Basic triage of injuries
2. Acute assessment and treatment of soft tissue injuries
3. Principles of basic fracture management
4. Knowledge of common fractures and dislocations in upper and lower limbs
5. Assessment and treatment of minor and major head injuries
6. Differential diagnoses in acute eye trauma
7. Differential diagnoses in acute ear, nose and throat trauma
8. Understanding of the principles and practice of local anaesthetic use including field and regional anaesthesia

DRUGS IN SPORTS

1. Understanding of effects of various pharmaceutical agents on exercise performance
2. History of Drugs in Sport
3. Banned substances/methods
4. Therapeutic use of drugs for illness and injury
5. Education of athletes and administrators – the doctor's roles & responsibilities
6. Regulatory authorities including government, IOC, WADA and individual sporting organisations

PSYCHOSOCIAL ASPECTS OF SPORTS MEDICINE

1. Awareness of motor learning, selective attention and information processing theories and models
2. Psychology of behavioural change – sedentary to active living
3. Psychological aspects of stress, trauma, disability, rehabilitation, and failure in sport
4. Psychological aspects of motivation, arousal and performance
5. Group psychology: of team, coach, medical team, group dynamics, behaviour remodelling
6. Psychological/ mood effects of physical activity
7. Sociology of sport: including violence in sport, behavioural norm and values in sport, effect of sport and physical activity on socialisation, influence of role models, drug issues in sport.
8. Psychosocial effects of retirement from sport

INVESTIGATIONS AND PROCEDURES

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1. Knowledge of muscle and nerve physiology – the motor unit
2. Understanding of the methodology behind electrophysiological testing (NCS and EMG)
3. An understanding of the indications for electrophysiological studies and their strengths and weaknesses.
4. Be able to describe the components of the normal EMG and NCS
5. Understanding of the EMG findings in denervated muscle, myopathy and inflammatory myositis
6. Be able to describe the three main types of nerve injury (neuropraxia, axonotmesis, and neurotmesis).
7. Thorough knowledge of muscle compartment anatomy, specifically related to possible complications of muscle compartment pressure testing
8. Joint anatomy, specifically related to possible complications of aspiration/injection of joints
9. Principles of lower limb biomechanics and the use of orthotics
10. Principles and techniques of musculoskeletal ultrasonography

SPINAL INJURIES, AMPUTEE REHABILITATION AND SPORTS FOR THE DISABLED

1. Awareness of the special needs of disabled athletes and exercisers e.g. cerebral palsy, amputees, visually and hearing impaired, learning difficulties etc
2. Awareness of the special medical needs of disabled athletes and exercisers e.g. knowledge of catheters, pressure sores, stump care etc
3. Have an understanding of the physical problems experienced by amputees and wheelchair users with everyday living and with respect to sport
4. Have knowledge of the types of prosthesis available, particularly those used for sport
5. Have knowledge of the types of wheelchair available and adaptations required for different sports
6. Awareness of support groups and sports organizations for disabled people
7. Knowledge of the effects of spinal injury at different vertebral levels
8. Awareness of disability classification and relevant competition rules and regulations – Special Olympics, Paralympics Associations

PHYSICAL ACTIVITY IN SPECIAL GROUPS

Children and Adolescents

1. Anatomical and physiological differences of the child and adolescent, in relation to the management of injury and illness
2. Paediatric musculoskeletal injuries: epiphyseal plate injuries, traction apophysitis, common fractures and specific soft tissue injuries
3. An understanding of non-accidental injury in all its forms, to include an appreciation of child protection issues and the relevant laws.
4. Understanding of Gillick competency and the legality of treating minors.
5. Basic knowledge of metabolic diseases encountered in children and adolescents
6. Understanding and knowledge of the principles of pre participation screening in children, with particular emphasis on cardiology screens for HOCM
7. Diagnosis and treatment of exercise induced asthma in childhood.
8. Application of appropriate training workloads to the developing skeleton and metabolism

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9. Identification of common eating and body perception disorders in the developing athlete, with particular reference to amenorrhoea (primary and secondary) and the female athlete triad

Differences Based on Gender

1. Understanding on the effect of hormone cycles on performance
2. Understanding the effects of exercise on the menstrual cycle
3. Principles of manipulation of menstrual cycle
4. Contraception options for athletes and the relevant merits & disadvantages in relation to performance
5. Understanding of the relationship between hormones, weight, osteoporosis and stress fractures in female athletes
6. Relationship between pregnancy and exercise, in terms of both safety and performance
7. Principles of return to exercise postpartum
8. Understanding of gender differences in exercise

Elderly Athletes

1. Understanding of the effect of ageing on muscle bulk, cardiovascular fitness, endurance etc
2. Knowledge of considerations when exercising with chronic diseases, and the effect of chronic diseases on performance
3. Understanding of the risks and benefits of exercise in older people
4. Knowledge of the effect of medications e.g. beta-blockers on exercise capacity
5. Knowledge of exercise prescription

RESEARCH and STATISTICS

Knowledge

1. Ethics of clinical research
2. Types of study design – experiments, observational, controlled, single case.
3. Principles of statistics, trial design, randomisation and techniques of data analysis
4. Epidemiology of sports injuries and health problems associated with exercise

Skills

1. To be able to read scientific and clinical and other relevant papers and reports critically
2. To be able to evaluate the evidence presented in papers, literature reviews and meta-analysis
3. To report research findings in written papers and at meetings
4. To design and implement a clinical audit
5. To incorporate research findings into clinical practice
6. To take the appropriate action arising from the clinical audit
7. To demonstrate an ability to design research

TEACHING AND PRESENTATION SKILLS

1. Principles of presentation construct
2. Principles of customizing information presentation to groups of varying levels of medical understanding (athletes, trainers, allied health professionals, other Sports Medicine)

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specialists etc)

3. Familiarity with commonly used software packages for presenting information
4. Presentation (case history, literature review, research update) at Sports Medicine conference on an annual basis: regional, national and international (preferred)
5. Attendance at formal teaching courses and workshops

SPORTS MEDICINE MANAGEMENT

1. Principles of personal effectiveness/ time management
2. Principles of business planning and marketing strategy
3. Understanding of IT in medical practice and potential for enhancing practice efficiency
4. Human Resources Issues
5. Principles of good communication, counselling
6. Principles of good teamwork -group dynamics, leadership techniques, conflict resolution, motivation, promotion of team identity
7. Ability to work effectively within multidisciplinary teams around athletes and exercisers physiotherapists, sports scientists, osteopaths, chiropractors, coaches and others.
8. Principles of effective financial accounting, planning, policy development and budgeting
9. Organizations within the medical profession:
10. Clinical Governance
11. Appraisal
12. Principles of planning and running a formal meeting with emphasis on formal structure of the meeting

ETHICAL AND MEDICO-LEGAL ASPECTS

1. Relevant EU legislation and medico-legal guidelines
2. Legislation regarding patient confidentiality
3. Legislation regarding keeping of medical records
4. Requirements for patient consent
5. Guidelines for dealing with minors and other potentially vulnerable individuals
6. Strategies utilized by media and other interested parties to gain information in breach of patient confidentiality
7. Privacy legislation

Annex 2

Ethical codes in Sports Medicine

The International Federation of Sports Medicine (FIMS) ethical codes apply to all sports medicine specialists. A summary of these items is given below:

1-Medical ethics in general: The same ethical principles that apply to the practice of medicine shall apply to sports medicine. The main duties of a physician include: Always make the health of the athlete a priority. Never do harm. Never impose your authority in a way that impinges on the individual right of the athlete to make his/her own decisions.

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2-Ethics in Sports Medicine: Physicians who care for athletes of all ages have an ethical obligation to understand the specific physical, mental and emotional demands of physical activity, exercise and sports training. A different relationship exists between sports medicine practitioners, their employers, official sports organization, professional colleagues and the athletes. In sports medicine there is also a link between the pathologic concern and specific recreational and professional activity. An athletic injury has a direct and immediate impact on the participation in this activity that may have psychological and financial implications.

3-Special Ethical Issues in Sports Medicine: The physician's duty to the athlete must be his/her first concern and contractual or other responsibilities are of secondary importance. A medical decision must be taken honestly and conscientiously. A basic ethical principle in health care is that of respect for autonomy. An essential component of autonomy is knowledge. Failure to obtain informed consent is to undermine the athlete's autonomy.

4-The Athlete-Physician Relationship: The physician shall not allow consideration of religion, nationality, race, party politics or social standing to intervene between his/her duty and the athlete. The basis of the relationship between the physician and the athlete should be that of absolute confidence and mutual respect. The athlete can expect a physician to exercise professional skill at all times. Advice given and action taken should always be in the athlete's best interest. The athlete's right to privacy must be protected. The regulations regarding medical records in health care and medicine shall also be applied in the field of sports medicine. The sports medicine physician should maintain a complete and accurate record of the patient. In view of the strong public and media interest in the health of athletes, the physician should decide with the athlete what information can be released for public distribution. When serving as a team physician, the sports medicine physician assumes the responsibility to athletes as well as team administrators and coaches. It is essential that each athlete is informed of that responsibility and authorizes disclosure of otherwise confidential medical information, but solely to the specific responsible persons and for the expressed purpose of determining the fitness of the athlete for participation. The sports medicine physician will inform the athlete about the treatment, the use of medication and the possible consequences in an understandable way and proceed to request his or her permission for the treatment.

5-Training and Competition: Sports medicine physicians should oppose training and practices and competition rules as they may jeopardize the health of the athlete. In general, the physician shall obtain knowledge of the specific and mental demands made of athletes when they participate in sport activities. Relevant aspects in these respect include expertise, effectiveness and efficiency, and safety. If the athletes concerned are children or growing individuals, the physician must take into consideration the special risks that the sport in questions may represent to persons who have not yet reached physical or psychological maturity.

6-Education: Sports medicine physicians should participate in continuing education courses to improve and maintain the knowledge and skills that will allow them to provide optimal advice and care to their patient athletes. Knowledge should be shared with colleagues in the field.

7-Health Promotion: Sports medicine physicians are obligated to educate people of all ages about the health benefits of physical activity and exercise.

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8-Injuries and Athletes: It is the responsibility of the sports medicine physician to determine whether the injured athletes should continue training or participate in competition. The outcome of the competition or the coaches should not influence the decision, but solely the possible risks and consequences to the health of the athlete. Injury prevention should receive the highest priority.

9-Therapeutic Exercise: When supported by scientific research, a detailed exercise prescription should be part of the therapeutic plan for an athlete recovering from injury or disease.

10-Relationship with Other Professionals: The sports medicine physician should work in collaboration with professionals of other disciplines. The sports medicine physician should cooperate with physical therapists, podiatrists, psychologists, sport scientists including biochemist, biomechanics, physiologists, and others. The sports medicine physician has the final responsibility for the health and well-being of the athlete and should therefore coordinate the respective roles of these professionals and those of appropriate medical specialists in the prevention, treatment and rehabilitation of disease and injury. The concept of interdisciplinary team work is fundamental to the practice of sports medicine. A sports medicine physician should refrain from publicly criticizing fellow professionals who are involved in the treatment of athletes. When a sports medicine physician recognizes that the athlete's problems are beyond his level of expertise, it beholds him to advise the athlete of other persons with the necessary expertise and refer the athlete to such appropriate persons for assistance.

11-Relation to Officials, Clubs, etc.: At a sport venue, it is the responsibility of the sports medicine physician to determine when an injured athlete can participate in or return to an event or game. The physician should not delegate this decision. To enable the sports medicine physician to undertake this ethical obligation the sports medicine physician must insist on professional autonomy and responsibility for all medical decisions concerning the health, safety and legitimate interest of the athlete. No third party should influence these decisions. No information about an athlete may be given to a third party without the consent of the athlete.

12-Doping: The sports medicine physician should oppose and in practice refrain from using methods to improve performance artificially such as those prohibited by the IOC and WADA. The physicians have forcefully opposed the use of methods that are not in accordance with medical ethics or scientifically proven experience. Thus, it is contrary to medical ethics to condone doping in any form. Neither may the physician in anyway mask pain in order to enable the athlete's return to practicing the sport if there is any risk of aggravating the injury.

13-Research: Research should be conducted following the ethical principles accepted for research in animals and human subjects. Research should never be conducted in a manner which may injure athletes or jeopardize their athletic performance.

Annex 3

Participation to Continuous Professional Development CPD/CME

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A successful participation to such a programme requires the collection of 50 credits per year (or 150 per three years or 250 per five years according to the national rules). The credits are collected by:

- a. Participation in Learning Educational Events:
(1 credit per academic hour attended, 3 credits per half-day and 6 credits per full day event).
- b. Lectures/posters:
For each lecture given by an individual during an accredited learning educational event 5 credits are given and for each poster 3 credits.
- c. Publications in:
 - i. Journals: 10 credits to each author.
 - ii. Books: for each chapter 10 credits.
- d. Academic activities (e.g. Ph.D. 50 credits).
- e. Self-education:
 - i. Personal subscriber to indexed journals of SM: 5 credits/journal, up to 2 journals.
 - ii. Also, subscriber to one non-indexed journal of SM: 3 credits.
 - iii. Internet Sports Medicine teaching lessons: 1 credit per lesson or the credits provided
for the lesson and are written at the electronic programme.

Annex 4

Reference documents

1. Chapter 6 of the UEMS Charter on Postgraduate Training for the requirements to be specialized in Sports Medicine. UEMS 2007.21, as endorsed by Bratislava UEMS Council meeting in Oct. 2007. www.uems.org
 2. Faculty of Sport and Exercise Medicine (UK), SPECIALTY TRAINING CURRICULUM FOR SPORT AND EXERCISE MEDICINE September 2006, <http://www.jrcptb.org.uk>
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 4. Curriculum for training specialists in sports medicine, M. Koornneef , A.M.G.J. Bruinsma, Stichting Nederlands Instituut Opleiding Sportartsen (NIOS) 1991, Vondellaan 24, 3521 GG Utrecht
 5. Ergen E, Pigozzi F, Bachl N, et al. (2006) Sports medicine: a European perspective. Historical roots, definitions and scope JOURNAL OF SPORTS MEDICINE AND PHYSICAL FITNESS 46 (2): 167-175.
 6. Austrian, Hungarian, Italian, Romanian and Turkish sports medicine specialization training curricula. Emin Ergen et al: 2008, EFSMA, www.efsm.net
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7. UEMS 2015.37 ETR Submission Rules.

8. UEMS 2012.29 Sections and Boards template structure for European Training Requirements.
