



# UNION EUROPÉENNE DES MÉDECINS SPÉCIALISTES EUROPEAN UNION OF MEDICAL SPECIALISTS

*Association internationale sans but lucratif*

*International non-profit organisation*

AVENUE DE LA COURONNE, 20

BE- 1050 BRUSSELS

[www.uems.net](http://www.uems.net)

T +32 2 649 51 64

F +32 2 640 37 30

[info@uems.net](mailto:info@uems.net)

## Training Requirements for the Specialty of Paediatric Surgery

### *European Standards of Postgraduate Medical Specialist Training*

#### **Preamble**

Twenty years ago, in 1994, the UEMS adopted its “*Charter on Training of Medical Specialists*” aiming to set the basis for high quality medical training. On the basis of this charter, outlining the guiding principles for high level Medical Training and providing the essential criteria for medical training programs, also the Section & Board of Paediatric Surgery elaborated its own document, in close cooperation with the European Paediatric Surgeons’ Association.

The “*European Syllabus in Paediatric Surgery*” is the result of a long preparation process that lasted some three years (2006-09), involving at first the two European promoting bodies and thereafter all the European Scientific Societies for further comments, criticism and refinements. It has been officially endorsed by the General Council of the UEMS in its plenary session held in Istanbul the 17th of October, 2009.

The present document has been written on the basis of what detailed in the Syllabus: it is therefore intended to present - in a concise and non exhaustive way - the optimal standards for training in Paediatric Surgery (PS) throughout Europe, and has to be intended as a reference document reflecting the general criteria laid down in the charter on training of medical specialists in the EU, to be read in conjunction with the existing national programs. Emphasis has been placed exclusively on topic characteristic of the discipline, entrusting to the UEMS documents the presentation of the general principles of ethics and professionalism common to the medical profession as such.

Through a clear definition of the contents of training, the professional skills and attitudes requested to become a Paediatric Surgeon, the characteristics and requirements of trainers and trainees, this document is designed to:

- 1) harmonize training programmes in PS between different European countries;
- 2) establish defined standards of knowledge, skills and attitude required to practice PS at secondary and tertiary care level;
- 3) improve the level of care for children with surgical diseases, and to thereby further enhance the European contribution to clinical and academic PS worldwide.

This document is intended as a work in progress, in a continuous process of updating to keep up with the continuous development of the discipline.

## I. Training Requirements for Trainees

### 1. Content of training

#### a. Theoretical knowledge

The field of PS encompasses the surgical care of the growing individual. It requires specialized knowledge and skills in managing congenital and acquired diseases and injuries in most organ systems, to be treated by surgical methods, including management, peri-operative care and rehabilitation from foetus to the final stages of development.

Paediatric surgical core activity includes deep knowledge of acute and non-acute diseases and injuries and acute and elective procedures in children in their pre-, peri- and postoperative aspects; knowledge of the principles of operative medicine (including minimally invasive surgery and transplant surgery) in the most frequent surgical congenital and acquired diseases, including traumatology and oncology; knowledge of the theoretical approach to anesthesia and intensive care in children.

PS includes surgical pathologies of the *central and peripheral nervous system*; head, neck and face; respiratory system; gastrointestinal tract; *genitourinary system*; vascular and musculoskeletal system (including skin); endocrine system; lymphatic system; *orthopaedic traumatology*. Within the domain of PS specific skills in the areas above written in *italics* are not included in the core curriculum in some European Countries; basic understanding of the principles of these subspecialties is nevertheless required.

On top of general PS, essential part of the core knowledge of the discipline is **Neonatal Surgery** (including comprehensive management of complex congenital malformations; incidences of associated anomalies and complications and risks of transfer from one unit to another; understanding the place of operative and non-operative managements and outcome in short and long-terms) and **Emergency Surgery** (care of critically ill children with underlying conditions including coordinated multidisciplinary management; clinical assessment of more or less severely injured children and to the understanding of disorders of function caused by trauma, thermal injuries, haemorrhage and shock; diagnosis and treatment of the battered / abused child).

#### b. Practical skills

A paediatric surgeon is a surgeon specifically trained in the care of children, according to the rules and standards specified in this document.

Practical skills may include knowledge in the fields of:

- Pediatric Plastic Surgery
- *Pediatric Urology*
- Surgery of the digestive tract in children
- Pediatric surgical oncology
- Thoraco-laparoscopic pediatric surgery
- Pediatric Thoracic Surgery

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- *Orthopedics and traumatology*
- *Paediatric Neurosurgery*
- *Pediatric Vascular Surgery*

(in *italics* skills to be acquired according to the national rules)

In order to enable trainees to practice PS to a reasonable extent unsupervised after completion of the training, the training programme itself must expose them to a sufficient number of patients and procedures of sufficient diversity and complexity. Trainees must demonstrate competence in a number of areas; the degree of competence will be determined by the trainer and be driven by the trainee. Four areas of competence for each procedure should be identified: 1. Has observed; 2. Can do with assistance; 3. Can do almost all – may need assistance; 4. Competent to do without assistance, including complications. By the end of the training program candidates should reach the appropriate level: 2 for complex procedures, 3 for average procedures and 4 for day case procedures.

The minimum number of procedures required is to be considered as a recommendation; it should be weighed against the national structure of the training program and should be linked to a registration of complications and outcomes (possibly documented in the log-book) aiming this document more for quality than for quantity. Credit as active surgeon can only be claimed when the trainee has actively participated in all phases of treatment, has made or confirmed the diagnosis, participated in the selection of the appropriate procedure, has either performed or been responsibly involved in performing the surgical procedure and has been a responsible participant in both pre- and postoperative care.

Competence	Performer or supervisor of a younger trainee	Assistant to the trainer
Neonatal surgery	10	20
Emergency surgery	30	60
Day case surgery	100	200
Head and neck surgery	10	20
Thoracic surgery	15	
Gastrointestinal surgery	30	60
Tumour surgery	25	
Endoscopies	20	40
<b>TOTAL</b>	<b>200 (250)</b>	<b>400 (450)</b>
If included in the National core curriculum		
<i>Central /peripheral NS</i>	<i>10</i>	<i>20</i>
<i>Urology</i>	<i>20</i>	<i>40</i>
<i>Traumatology</i>	<i>80</i>	<i>100</i>

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## **c. Professionalism**

Post-graduate training leading to recognition as a specialist in PS should furnish the candidate with knowledge and skills which enable him/her to be competent in the entire field of the specialty, which might include the following activities: 1) acting in a consultative capacity; 2) running a specialist practice; 3) directing a programme of PS (in and outpatient) in a clinic, a hospital or in connection with a private practice; 4) actively participating in providing students and patients education.

The trainee must acquire counselling and communication skills, in particular: a) the ability to counsel parents / carers, patients and health professionals in the many varied situations in clinical PS such as information about prenatally diagnosed malformations, psychological effects of surgery and hospitalisation - particularly if prolonged - on the child development, and in stressful circumstances e.g. critically ill and dying patients; b) knowledge of transcultural communication, including informing parents via an interpreter; c) knowledge of the role of family education in paediatric surgical disorders; building knowledge of the wide field of family education required in the PS diseases and the concept of the team approach to patient management; d) understanding of the role of staff management and of referral in particularly complex paediatric surgical disorders

## **2. Organisation of training**

### **a. Assessment and evaluation**

Knowledge is assessed by examination of the trainee, at least yearly, through a viva, MCQ or similar suitable method; skills are evaluated on the basis of the content in the log-book when the minimal requirements have been attained.

The Diploma of Specialisation in Paediatric Surgery will be awarded, according to the national rules, only after final assessment of documented knowledge and competence.

The role of European Examination as run by the EBPS is complementary to National Examinations where they exist; although devoid of any legal value in the view of national legislations is a mark of excellence and should be sought by every new specialist in PS.

### **b. Schedule of training**

Access to the training in PS will be delegated to the responsible Authorities according to the national rules. In order to train the most suitable individuals for this specialty, a selection procedure on a national basis should be set up. This selection procedure must be transparent and application must be open to all persons who have completed basic medical training. Selection procedure can be based on examinations or interview, or both.

The duration of surgical training should be six years (+/- one year). The training may not be interrupted for more than one year, unless otherwise allowed by National Regulations. The training should involve the maximum in-hospital hours/week allowed by the EWTD.

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A basic training program should be incorporated in the early years of the training during which the paediatric surgical trainee shall acquire a central core of knowledge embracing anatomy, physiology, metabolism, immunology, nutrition, trauma, pathology, wound healing, shock and resuscitation, intensive care and tumours. Following years of core curriculum training should be structured in a modular system, with modules inserted or omitted according to the national requirements (e.g. orthopaedics, traumatology, urology, etc.).

The program of training should be planned to maintain an ongoing scholarly activity including:

- Weekly clinical discussions and rounds
- Regular programme of teaching
- Regular journal clubs
- Regular clinical and experimental research conferences
- Discussions of morbidity and mortality.

Experience in clinical and operative aspects of the training and scholarly activity of the trainee should be recorded in a logbook, according to the template edited by the EBPS.

## **II. Training Requirements for Trainers**

### **1. Process for recognition as trainer**

#### **a. Requested qualification and experience**

A trainer is a paediatric surgeon accredited either at European or national level with the following additional qualifications: teaching experience, documented in the form of a teaching assignment to a local university, and/or a research tradition in PS. Additional teachers in PS hold acknowledged expertise in one or in a few particular aspects of PS, but do not have to be accredited European paediatric surgeons, nor have to hold a university assignment or a personal research tradition. Their individual teaching competence in the training programme is restricted to one or several defined topics.

#### **b. Core competencies**

The training programme director will have completed a specific training in PS and must have been recognized by his/her National Authority. He/she shall have practiced paediatric surgery for at least 10 years after specialist accreditation. The Head of training programme and his/her associate training staff should be actively practicing surgery. Leadership and Teaching experience should be documented.

### **2. Quality management for trainers**

On top of being regularly accredited as paediatric surgeons at national level, trainers should be registered in the European Register of Paediatric Surgeons, 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 programme 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.

### **III. Training Requirements for Training Institutions**

#### **1. Process for recognition as training center**

##### **a. Requirement on clinical activities**

Training must take place in an institution or group of institutions, preferably based in a university hospital or associated with a university, otherwise in a recognised training centre, which together offer the trainee adequate practice in the full range of the specialty as defined in this document. These Institutions must be formally recognized by their proper National Authority and can require further recognition by the EBPS through a Site Visit.

Training institutions must include facilities for inpatient care, day care and ambulatory care, and shall be staffed by at least two trained paediatric surgeons. Neighbouring specialties must be present to a sufficient extent to provide the trainees the opportunity of developing their skills in a team approach to patient care. Consultations and operative procedures should be varied and quantitatively and qualitatively sufficient to meet the minimal requirements for each trainee as defined above.

##### **b. Requirement on equipment, accommodation**

Training institutions must have up to date facilities for:

- paediatrics and its subspecialties;
- paediatric anaesthesia;
- child psychiatry;
- paediatric imaging;
- laboratory services.

There must be:

- a regular discussion of indications for operation;
- a weekly programme of teaching;
- regular discussions of morbidity and mortality (the possibility to attend autopsies should be encouraged);
- ready access to international journals and reference books;
- facilities for clinical investigations or experimental research are desirable.
- educational and research facilities,
- access to adequate national and international professional literature;
- space and equipment for practical training of techniques in a laboratory setting.

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## 2. Quality Management within Training institutions

### *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 only enough paediatric surgeons to meet its own requirements of specialist manpower. Trainees' recruitment in the training centers 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.

### *Regular report*

The training institution must have an internal system of surgical audit / quality assurance including features such as mortality and morbidity conferences and structured incident-reporting procedures. Furthermore, various hospital activities 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 EBPS shall be conducted in a structured manner.

### *External auditing*

The National Professional Monitoring Authority and/or the EBPS, 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 EBPS shall be conducted in a structured manner, according to the UEMS Charter on Site Visits.

Quality control of the training in PS shall be the task of the EBPS. The EBPS will cooperate in this respect with the national paediatric surgical associations, but may also perform site inspections on a voluntary basis.

### *Transparency of training programmes*

All relevant documents related to the program, particularly as regards the procedures for the selection of candidates, the teaching program and the final results of the trainees should be published on a website.

The list of all training centers accredited by the EBPS is available on the Section's website.

### *Structure for coordination of training*

A yearly program director meeting with participation of all program directors of training centers, the UEMS president and chairman of the EUPSA Education Office is held in connection to the annual Congress of the European Paediatric Surgeons' Association.

The agenda includes structure and coordination of postgraduate training in Paediatric Surgery.