European Training Requirements for Training in Paediatric Emergency Medicine

European Standards of Postgraduate Medical Specialist Training

Preamble

The UEMS (Union Européenne des Médecins Spécialistes, or European Union of Medical Specialists) is a non-governmental organisation representing national associations of medical specialists at the European level. With its current membership of 40 national associations and operating through 43 Specialist Sections and their European Boards, 17 Multidisciplinary Joint Committees and 4 Thematic Federations the UEMS is committed to promote the free movement of medical specialists across Europe while ensuring the professional consensus on the framework for the highest possible level of their training which will pave the way to the improvement of quality of care for the benefit of all European citizens and beyond.

In 1994, the UEMS adopted its Charter on Postgraduate Training aiming at providing the recommendations at the European level for high quality training. This Charter set the basis for the European approach in the field of harmonisation of Postgraduate Specialist Medical Training, most importantly with the ongoing dissemination of its periodically updated Chapter 6's, specific to each specialty. After the most recent version of the EU Directive on the recognition of Professional Qualifications was introduced in 2011, the UEMS Specialist Sections and other UEMS Bodies have continued working on developing the documents on European Training Requirement(s) (ETRs). They reflect modern medical practice and current scientific findings in each of the specialty fields and particular competencies covered and being represented within the UEMS. In 2012 the UEMS Council adopted the document Template Structure for ETR.

It is the UEMS' conviction that the quality of medical care and expertise are directly linked to the quality of training, achieved competencies and their continuous update and development provided to the medical professionals. No matter where doctors are trained, they should have the same core competencies. The UEMS ETRs reflect many years (or even decades) of experience on the ground of the UEMS Sections/ Multidisciplinary Joint Committees (MJCs) and Boards developing in close collaboration with the relevant European Scientific Societies training requirements coupled with European Medical Assessments. It is one

among the clear aims of the UEMS ETRs to raise standards of training to make sure that European patients find high quality standards of safe specialist care. While professional activity is regulated by national laws in EU Member States, it is the UEMS understanding that it has basically to comply with international treaties and UN declarations on Human Rights as well as the WMA International Code of Medical Ethics.

The UEMS Council and its Specialist Sections, first created in 1962, have regularly provided advice and expert opinion to the European Commission. This helped create the framework that informed the drawing up of the Doctors Directives in 1975, which provided for the mutual recognition of medical diplomas and the free movement of doctors throughout the EU. The revised EU Directive on the recognition of Professional Qualifications (2013/55/EU) allows member states to decide on a common set of minimum knowledge, skills and competencies that are needed to pursue a given profession through a Common Training Framework (CTF) which represents the third mechanism that could be used to ensure mobility within the EU. This directive states that "professional qualifications obtained under common training frameworks should automatically be recognised by Member States. Professional organisations which are representative at Union level and, under certain circumstances, national professional organisations or competent authorities should be able to submit suggestions for common training principles to the Commission, in order to allow for an assessment with the national coordinators of the possible consequences of such principles for the national education and training systems, as well as for the national rules governing access to regulated professions". The UEMS supported CTFs since they encompass the key elements developed in modern educational and training models, i.e. knowledge, skills, professionalism. In addition, the Directive 2011/24/EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in cross-border healthcare introduced a strong incentive for harmonisation of medical training and achieved competencies among EU/EEA Countries through the requirements to assure good and comparable quality of care to increasingly mobile European citizens.

The UEMS ETR documents aim to provide for each specialty the basic training requirements as well as optional elements, and should be regularly updated by UEMS Specialist Sections and European Boards to reflect scientific and medical progress. The three-part structure of these documents reflects the UEMS approach to have a coherent pragmatic document for each individual specialty, not only for medical specialists but also for decision-makers at the national and European level interested in knowing more about medical specialist training. To foster harmonisation of the ETR by adopting more specific

guidelines, the CanMEDS competency framework is recommended which defines the entire set of roles of the professionals which are common across both medicine and surgery. UEMS has an agreement to use an abbreviated version of the competencies within those roles.

Competency-based education is not oriented towards the period of clinical rotations, but towards trainee, and trainee's progress in the acquisition of competencies. Having a clear distinction within an ETR's contents between competencies and knowledge helps define both how that training should be delivered and how it should be assessed. The UEMS considers that the appropriate use of different methods of assessment of knowledge and acquired skills, emphasising the workplace-based assessment, is an essential component of quality postgraduate training, focused on high standards of specialist medical practice. To improve the methods of assessment it is also recommended to use the so-called Entrustable Professional Activities (EPAs) in all specialties ETRs. In order to recognise common and harmonised standards on the quality assurance in specialist training and specialist practice at a European level some UEMS Specialist Sections and Boards also have, for a long time, organised European examinations (supported and appraised by the UEMS CESMA - Council of European Specialist Medical Assessments).

Each of the UEMS ETRs defines a syllabus or knowledge base and describes learning outcomes defined for given competencies. Some of these curricula encompass a whole specialty, other focus on areas within or across specialties and define content of the training requirements for specific areas of expertise. By recognising the potential overlapping it creates the opportunity for those writing ETRs to draft overlapping or common goals for learning outcomes. Similar measurement does not necessarily equate to the same targets. Rather, across different specialties the final goal may differ, i.e. there may be clearly defined individual goals for trainees with different expectations.

The UEMS strongly encourages the National Medical Competent Authorities (NMCAs) to adopt such requirements and believes that this is the most efficient way of implementation of good standards in postgraduate training. We clearly respect and support the vital role of the NMCAs in setting high standards of training and care in their respective Countries and checking through robust quality control mechanisms the qualifications of medical specialists moving across Europe. The UEMS ETRs are developed by professionals for professionals and this adds unique value to them. UEMS aim is to indicate the knowledge and competencies that should be achieved by trainees in EU/EEA countries and also competencies and organisation of the training centres. The training environment and results described in UEMS ETRs may be achieved in adapted ways, depending on local traditions, organisation of healthcare

system and of medical specialist training. Adaptation of UEMS ETRs to local conditions assures the highest quality of specialist training and each state may include additional requirements, depending on local needs.

The UEMS always wishes to work with all Colleagues, NMAs, professional and scientific organisations across Europe. In the process of ETRs development, the UEMS recognises the importance of meaningful collaboration with the other European medical representative bodies, the European Junior Doctors (EJD representing doctors in training), the European Union of General Practitioners (UEMO – Union Européenne des Médecins Omnipraticiens), the Standing Committee of European Doctors (CPME - Comité Permanent des Médecins Européens), the Federation of European Salaried Doctors (FEMS) and the European Association of Senior Hospital Doctors (AEMH - Association Européenne des Médecins Hospitaliers). In addition, UEMS continues to develop closer links with the many European specialist societies. UEMS, in collaboration with its fellow European representative bodies, has constantly been highlighting the importance of coordinated postgraduate specialist medical training programmes always accepting the differing needs of different specialties. In this way quality medical care is delivered by highly qualified medical specialists - essential to ensuring consumer confidence and protection all over Europe.

UEMS is very proud for all the hard work that has been done until now in developing the UEMS ETRs as well as that they are increasingly implemented as national curricula. However, we also recognise the need for constant improvement, and we are always open to further suggestions. The UEMS insists that the medical profession remains the driver in defining its own specialist training and continuous professional development needs. On this basis, we sincerely look forward to working with the key European Union responsible bodies, as well as the national stakeholders in implementing the basic common strategies and requirements outlined with this initiative. We are confident that the priorities detailed in UEMS ETR documents developed for individual specialties (and/or competencies) will become evident in national strategies and programmes, as well as action plans for postgraduate medical education and training.

Introduction

The **First edition** of this syllabus was completed in November 2018; the **Second edition** was finalised in September 2025 and was subsequently approved by the European Board of Paediatrics (EBP), the European branch Society of Emergency Paediatrics (EUSEP), and the UEMS (European Union of Medical Specialists)-Emergency Medicine

Paediatric emergency medicine was first recognised as a specialist area within paediatrics by the Confederation of European Specialists in Paediatrics (CESP) and latterly by the EAP and is a subsection of the Tertiary Care Group of the European Academy of Paediatrics (EAP), itself a section of the European Union of Medical Specialists (UEMS) through the European Board of Paediatrics (EBP).

Paediatrics is an independent medical specialty based on the knowledge and skills required for the prevention, diagnosis and management of all aspects of acute illness and injury affecting children of all age groups from birth to the end of adolescence, up to the age of at least 18 years. It is not just about the recognition and treatment of illness in babies and children. It also encompasses child health, which covers all aspects of growth and development and the prevention of disease. The influence of the family and other environmental factors also play a large role in the development of the child, and many conditions require life-long management and follow-up before a smooth transition of care to adult services.

This document is targeted at doctors who will either work entirely, or almost so, in a paediatric environment such as a dedicated paediatric Emergency Department. This ETR is exclusively targeted at those trainees undergoing formal training in P-EM. Therefore, aspiring P-EM trained physicians will typically have undertaken their core training in paediatrics or emergency medicine. Those having completed core training in paediatrics should be able to demonstrate having achieved core skills and competencies in General

Paediatrics, as set out by many National Training Authorities (NTA) and the European Common Trunk Syllabus, approved by the UEMS -EAP (Union Européenne des Medicins Specialistes - European Academy of Paediatrics). This General Paediatrics training, which is recommended as being of 3 years minimum duration, will normally come as a prelude to specialist training, and will underpin many of the principles set out in this syllabus. It is expected that these trainees have had limited training opportunities and exposure to a number of core competencies that are part of the 2nd edition of the ETR in Emergency Medicine, approved by the UEMS in 2024, and which are vital to becoming a highly skilled and qualified P-EM physician.

Similarly, physicians who have completed specialist EM training (with a training time of 5 years as set out by the EM ETR) can pursue a career as a certified P-EM physician. This P-EM ETR (2nd edition) complements the ETR in Emergency Medicine (2nd edition). In the 2nd edition of the EM ETR it is recognised that training includes many paediatric skills and competencies and that training programmes include looking after acutely unwell and injured children in emergency care settings. **Specifically, the ETR in Emergency Medicine prescribes that EM specialty trainees should have 20% dedicated training time (of their 5 year core training time) to acquire paediatric skills and competencies**. Hence, these trainees will have covered elements of the paediatric core training, which will not need to be repeated. However, several aspects of the core paediatric training will not or not sufficiently be covered during the specialist EM training.

Therefore, we strongly recommend that both trainees with core training in paediatrics as well as trainees with core training in EM meet with their P-EM trainer early in P-EM specialist training to identify these gaps to ensure sufficient evidence of competencies gained by the time for their final appraisal. This ETR and clinical syllabus are intended to guide this.

It will be appropriate to develop an individual checklist regarding theoretical knowledge, practical and clinical skills, and competencies at the commencement of P-EM program for each trainee from both the General Paediatrics and EM pathways based on their prior training. This would require evidence from their training record to date that those specific core targets competencies were already achieved. In most cases this should be clearly evident from the relevant training program Syllabus and the individual trainee portfolio.

The specific outstanding requirements to be addressed should be clearly listed, and guide their training goals in P-EM training with documented sign off at completion of training. While it is anticipated that most of the core training would occur within the P-EM or EM setting, some specific areas (particularly in general paediatrics) may require placement outside EM departments with a specified trainer who may be from another speciality or discipline. This is to ensure best practice and that the supervising trainer be sufficiently expert and current in that area of practice in order that the trainee's competency is then assured. This offers the best assurance to the NTA that the training in an area both within or outside of EM has been achieved for each candidate.

In this context, we recommend, in addition to the specific skills and competencies outlined in this syllabus for P-EM, the following:

- During their P-EM training, trainees who completed their specialist training in EM should have an additional focus on:
    - safeguarding of children and young people
    - nutrition, growth and development

- critical care of premature and term neonates, children, and young people
- care of the newborn infant
- children with complex care needs, including children with congenital and genetic conditions. and looked after children
- palliative and end of life care of patients in paediatric age group

- During their P-EM training, trainees who completed their core training in General Paediatrics should have an additional focus on:
  - understanding and application of patient triage systems
  - learning and insight in disaster medicine
  - exposure to and experience in pre-hospital medicine
  - minor injuries and major trauma
  - working as a member or leader of a team taking care for children with major trauma or critically ill

Methodology for generating the syllabus

This syllabus is a revised version of the 1st European Training Requirements for Paediatric Emergency Medicine (2018).

This syllabus was created by the Curriculum Development Special Interest Group of the Paediatric Branch society (EUSEP) of the European Society of Emergency Medicine (EUSEM), with direct involvement of stakeholders from the European Academy of Paediatrics (EAP) and The Union Européenne des Medicins Specialistes -Emergency Medicine (UEMS-EM) section:

Javier Benito – Spain – EUSEP (member)

Zsolt Bognar – Hungary – UEMS-EM, EUSEP (current president)

Ruth Brown – UK – UEMS-EM (current president)

Danilo Buonsenso – Italy – EUSEP (member SIG ETR)

Sigita Burokiene – Lithuania – EAP (national representative)

Jacqueline Eleonora Ek – Sweden/ Malta – young EUSEM

Juri Kryvonos – Ukraine – young EUSEM

Nika Morgan – Slovenia – young EAP

Alessia Nucci – Italy – young EUSEM

Cem Oktay – Turkey – EMERGE, UEMS–EM (lead EMERGE, national representative)

Gregor Prosen – Slovenia – EUSEM (lead adult EM ETR renewal, lead education committee)

Andela Simic – Croatia – UEMS–EM (national representative)

Macarena Taguas-Casaño – Spain – EAP (national representative)

Luigi Titomanlio – France – EUSEP (past president)

Rob Ross Russell – UK – EAP (Chair European Board of Paediatrics, EAP)

Lead: Ruud Nijman – UK – EUSEP, UEMS–EM representative, EAP representative for P-EM

A final draft was approved for submission to UEMS after review by the national delegates, representing their respective national specialty societies, associated with the European Academy of Paediatrics (EAP) and The Union Européenne des Medicins Specialistes -Emergency Medicine (UEMS-EM) section.

Objectives

This syllabus intends to:

- Provide content for P-EM training programmes and harmonise these training programmes across different European countries.
- Establish clearly defined standards of knowledge and skill required to practice P-EM at a specialist P-EM centre.
- Improve the level of care for children who attend Emergency Departments (EDs).
- Foster the development of a European network of specialist P-EM centres.

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I Training requirement for trainees

1) Content of training and learning outcomes

- **Aim of training**

The aim of training in specialist P-EM centres is to provide training to allow competent practice to be undertaken as an independent P-EM specialist whose practice would be expected to deal with complex problems in P-EM. The end result of the training programme envisaged and detailed below will provide for the needs of Paediatric Emergency Physician (P-EP) who is a P-EM specialist and whose scope of practice would be expected to encompass:

i. The P-EP is able to look after patients with a wide range of pathologies, from the life threatening to the self-limiting, within all paediatric age groups in the ED setting.
ii. Essential to the work of the P-EP is the principle that all decisions should be made in the best interests of the child or young person in their care. Principles of safeguarding children and young people should be integrated with every patient contact.
iii. The P-EP is an advocate of diagnostic and antimicrobial stewardship, applying best practice standards when ordering diagnostic tests or prescribing therapeutics.
iv. The P-EP is able to request imaging in line with IRMER, following ALARA principles, and best practice recommendations.
v. The P-EP is able to safely and effectively identify those children needing admission and those that can be discharged.
vi. The P-EP is able to conduct a primary assessment and take appropriate steps to stabilise and treat critically ill and injured children.

vii. The P-EP is able to work in the challenging environment of the ED and is able to re-prioritise and respond to new and urgent situations.

viii. The P-EP is an expert at directing and coordinating medical, surgical and trauma resuscitations involving children.

ix. The P-EP is skilled at practical procedures especially those needed for resuscitation.

x. The P-EP is aware of the limitations of their skills, competencies, and scope of practice, within the context of their national medico-legal framework.

xi. The P-EP is able to interact with, co-ordinate, educate and supervise all members of the ED team.

xii. The P-EP is able to understand the unique interaction of the ED with every part of the hospital and its significant role in interacting with the external community.

xiii. The P-EP is able to critically evaluate evidence and engage in continuous quality improvement in the department for the benefit of patients

xiv. The P-EP is able to work alongside EM and other relevant acute adult and paediatric specialty trained specialists, collaborating to maximise the benefit for all children

xv. As well as providing clinical care, the P-EP is able to act as coordinator in the ED during a major incident.

a) Theoretical knowledge

Overall, evidence supporting the acquisition of key capabilities across six domains will determine a trainee's ability to complete P-EM specialist training and progress to being an independent P-EM specialist.

i. Recognises, assesses, and manages the full range of paediatric emergency conditions.

ii. Assumes the role of paediatric emergency team leader and takes responsibility for this domain of service.

iii. Performs high-level clinical and technical skills and procedures in the paediatric emergency setting.

iv. Liaises effectively with pre-hospital, hospital and community specialist teams.

v. Effectively manages and coordinates patient flow, staffing, safety and quality in a PED.

vi. Demonstrates the ability to make pragmatic and rapid decisions across a broad range of paediatric emergencies.

b) Practical and clinical skills

The European syllabus for Paediatric Emergency Medicine (section IV) specifies the practical and clinical skills, as outlined by clinical presentations and procedural skills, a trainee needs to master as part of their training. This syllabus also sets out the person specifications and generic competencies of a P-EM specialist following the CanMEDS framework.

c) Competences

Trainers should indicate the level of *entrustment* for each competency assessment. The Entrustable Professional Activity levels reflect the degree to which a trainee can be trusted to manage clinical scenarios, perform procedures, and interpret imaging or diagnostic tests independently, as would reasonably be expected for paediatric emergency medicine presentations outlined in the clinical syllabus. This also encompasses the ability of a trainee to appropriately defer to and consult with other specialty teams, particularly in clinical situations beyond the scope of the clinical syllabus and in more complex patient management where additional specialty input is required, including procedures, sedation, and the

interpretation of diagnostic tests and imaging. Trainees can illustrate progression of learning and mastering of key capabilities, domains of professionalism, and competencies by competency assessments using the descriptions of clinical presentations, procedural skills and generic competencies as set out in the European syllabus for Paediatric Emergency Medicine (section IV). Additional considerations for pre-hospital medicine, triage, and resuscitation are given in section IV.1 .All clinical presentations and procedural skills deemed Essential should be valued by an Entrustable Professional Activity level 4 or higher by the end of the training period; those deemed Aspirational should have an Entrustable Professional Activity of minimum 3 or higher.

For clinical presentations, levels of entrustment expected from P-EM trainee: (as reflected in Entrustable Professional Activity levels) is as follows:

Level	**Clinical presentation: applied clinical knowledge**
1	Knowledge /awareness of, observer only
2	Knows basic concepts- direct supervision and confirmation required
3	Knows generally, can manage with distant supervision
4	Knows specifically and broadly, competent to treat with no supervision, knows own capacities and limitations
5	Can supervise others

For procedural skills, levels of entrustment expected from P-EM trainee:

Level	**Procedural skill**
1	Unable to perform, observer only
2	Performs with direct supervision – supervisor present

3	Performs with distant supervision
4	Performs with no supervision
5	Can supervise others

For interpretation of diagnostic test and imaging, levels of entrustment expected from P-EM trainee:

Level	**Diagnostic test and imaging**
1	Unable to interpret, observer only
2	Interprets under direct supervision – can recognise normal – supervisor present
3	Interprets with distant supervision – can act on results to make referrals
4	Interprets with no supervision, acts on results to discharge
5	Can supervise others

2) Organisation of training

a) Schedule of training

A clinical training period of full-time employment in a paediatric emergency department or related children's services of **24 months** (or equivalent duration of part time training) is considered appropriate.

This duration of training is in addition to the core training in General Paediatrics or specialist training in Emergency Medicine, both with a *minimum* training duration as set out in the respective specialty ETRs, and on the condition that core training was successfully completed.

Duration of training should largely be considered as competency based and as set out in this ETR, with

sufficient exposure to all facets of P-EMtraining during the designated and agreed training period.

It is anticipated that most of the P-EM core training would occur within a dedicated P-EM setting. Some specific areas may require short-term placements outside P-EM departments; these placements should be in addition and outside a minimum core period of 12 months in a dedicated P-EM setting. It is expected that P-EM trainees will have spent at least 6 months in (paediatric and/or neonatal) critical care units by the end of their P-EM training and provide evidence of acquired skills and competencies in providing paediatric and neonatal critical care to a satisfactory entrustment level.

b) Schedule of training – Special considerations and clarifications

i. EM trainees must evidence sufficient prior experience and competencies in looking after acutely injured and unwell children and young people **before** entering P-EM training. This should include evidence of, at the least, 20% of their core EM training time (or the equivalent of 1-year WTE training) fully dedicated to looking after children and young people under the direct supervision of paediatric and child health professionals, during their general EM training, as set out in the 2024 EM ETR (2nd edition). Moreover, there is the understanding that a significant proportion of their remaining EM training is spend looking after children and young people (with the proportion of children estimated at least 20% or more of the patient workload).

ii. Similarly, paediatric trainees must evidence sufficient prior experience and competencies in looking after acutely unwell (premature) neonates, infants, children and young people and working in acute care settings **before** entering P-EM training, and this would ordinarily represent a mandatory component for the successful completion of paediatric core training.

iii. As discussed in the introduction of this syllabus, it will be appropriate to develop an individual checklist regarding theoretical knowledge, practical and clinical skills, competencies at the commencement of P-EM program for each trainee from both the General Paediatrics and EM pathways based on their prior training. This would require evidence from their training record to date that those specific core targets competencies were already achieved. In most cases this should be clearly evident from the relevant training program Syllabus and the individual trainee portfolio.

iv. The specific outstanding requirements to be addressed should be clearly listed and guide their training goals in P-EM training with documented sign off at completion of training. While it is anticipated that most of the P-EM core training would occur within the P-EM or EM setting, some specific areas may require short-term placement outside EM departments with a specified co-trainer acting in conjunction with the P-EM trainer who may be from another speciality or discipline. This is to ensure best practice and that the trainer be sufficiently expert and current in that area of practice in order that the trainee's competency is then assured. This offers the best assurance to the NTA that the training and competence in areas both within or outside of EM has been achieved for each candidate.

v. Where a doctor can evidence significant experience in looking after acutely injured and unwell children and young people prior to entering the P-EM training programme, the duration of training time may be shortened in agreement with the training programme lead *prior* to commencing the P-EM training programme. This might include trainees who have spent time in an approved P-EM training site as part of their initial specialist training. This additional prior experience might enable the trainee to have a shortened training duration, but no more than a shortening of 6 months in total.

vi. In countries where paediatric core training has the minimum duration of 3 years with limited exposure to acute paediatric specialties, additional P-EM training time beyond 24 months might be needed. Likewise, in countries where the EM training curriculum has limited dedicated paediatrics training time or minimal exposure to children and young people as part of their EM training an extension of P-EM training time will be needed. **Importantly,** in all instances, this does not negate the requirement for trainees to have fulfilled all essential portfolio criteria and prior experience prerequisites *before* commencing P-EM training.

vii. As already outlined in the Introduction of this ETR, a number of core training domains will need specific attention during P-EM training.

- Trainees who completed their specialist training in EM should evidence achieving core competencies, as described in the core Paediatrics ETR, related to:
  - safeguarding of children and young people
  - nutrition, growth and development
  - critical care of premature and term neonates, children, and young people
  - care of the newborn infant
  - children with complex care needs and looked after children
  - palliative and end of life care of patients in paediatric age group

We recommend that trainees, who completed their specialist training in EM, use part of their P-EM training time in paediatric clinical areas outside the emergency department, such as community (or primary care) paediatric clinics, specialty paediatric clinics, neonatal wards and paediatric intensive care units, to acquire the above competencies.

- Trainees who completed their core training in General Paediatrics should evidence achieving core competencies, as described in the EM ETR, related to:
  - understanding and application of patient triage systems
  - learning and insight in disaster medicine
  - exposure to and experience in pre-hospital medicine
  - minor injuries and major trauma
  - working as a member or leader of a team taking care for children with major trauma or critically ill

We recommend that trainees, who completed their core training in General Paediatrics, spend time in clinical areas other than paediatric emergency departments, such as specialty clinics, pre-hospital medical teams and adult emergency departments, during their P-EM training.

c) Curriculum of training

i. This ETR does not replace a national training curriculum but provides a complementary training framework based on European wide educational and clinical experience.

ii. This ETR does not set out a fixed programme of clinical rotations to facilitate acquiring all competencies. Rather, this ETR describes which competencies should be acquired during the aforementioned training duration. National societies and training boards should further detail training programmes. Typically, the majority of training will occur in paediatric emergency departments; with allocated time, either as a percentage of total training time (eg. 20%) or with fixed rotations in other clinical areas, to obtain competencies that are more difficult to master in paediatric emergency departments.

iii. To facilitate P-EM trainees in acquiring all required competencies, and in particular those related to *departmental flow* and *crowding*, it is strongly recommended that trainees have worked in a 'high volume' paediatric emergency care department for a minimum duration of six months full time equivalent, at any point during their training. Trainees who have completed their core training in emergency medicine can use prior assessments to evidence these aspects of the training curriculum. For the purposes of this ETR 'high volume' is defined as a minimum of 10,000/year of paediatric patients aged 18 years or under attending the emergency department. This training requirement does not suggest that training in 'lower volume' settings is inferior or inadequate, but rather tries to ensure trainees are exposed to clinical environments with a higher number of patients, and the clinical and leadership issues that arise with this, at some point during their training.

iv. Overall, there is no defined number of patient contacts required to inform the duration of P-EM training, but there must be sufficient cases to ensure exposure to the breadth of the syllabus as well as ensuring each presentation or condition is explored in appropriate depth. Likewise, there is no defined numbers for each procedure but national societies or training boards may specify the numbers for specific procedures and/or specific training settings.

- **Leadership and management, clinical governance, and patient safety**

There are many ways for trainees to show their development of leadership and management qualities, evidence involvement in clinical governance and show awareness of the importance of patient safety. Some recommended examples of showing this include: 1) participation in a departmental investigation of a serious clinical incident and showing learning of local processes for serious clinical incidents; 2) drafting of a medico-legal report; 3) ESLE assessment as assigned clinical lead for the department; 4) writing of a departmental clinical guideline involving relevant stakeholders; 5) certificate of attendance at a dedicated management and leadership course with

appropriate reflection of learning and implications for their professional practice; 6) responding to a patient complaint and showing insight in local complaint processes. Requirements for these portfolio domains might be set and more carefully defined at a national level.

- **Participation in audit and research projects**

  i. Trainees should evidence participation in at least one local or national audit and/or quality improvement project in paediatric emergency medicine during their P-EM training period.

  ii. Trainees should be trained in aspects of P-EM specific evidence-based medicine, and apply this by active participation in a research project. Special considerations should be given to recruiting and consenting and assenting children and young people in emergency situations, including use of deferred consent; optimal study designs for diagnostic accuracy studies, therapeutic intervention studies, mixed methods methodology studies, and health system and health care delivery evaluations; patient and public involvement in conducting P-EM based research; ability to undertake basic data analysis; and apply and interpret reporting standards of scientific evidence. Examples of evidencing this can include recruiting and consenting patients into a research study, a certificate of good clinical practice in scientific research, the writing of a research protocol, authoring conference abstracts and peer-reviewed papers, and presenting at a local journal club.

  iii. Trainees should conduct at least one detailed evidence-based appraisal of a diagnostic test or a therapeutic intervention, presented at a suitable meeting locally or nationally.

- **Delivery of education and teaching**

  i. Trainees should be able to deliver and evidence relevant and multimodal teaching on a wide range of P-EM related topics to all members of the clinical team involved in delivering care to children and young people in urgent and emergency care facilities. They should be able to do this at both an undergraduate and postgraduate level. This should include

evidence of teaching opportunities in various settings, including, for example, bedside teaching and departmental seminars or similar. Trainees should reflect on how they delivered their teaching, including the content and style of the teaching.

ii. Trainees should include feedback received in response to teaching delivered in their portfolio.

iii. Attending a dedicated course on delivering teaching within the clinical setting is advisable.

d) Assessment and evaluation

- **Portfolio**

i. Every trainee should maintain a training portfolio and this will form the basis for assessing training progression and ongoing learning. The portfolio should ideally contain entries related to, at the least, 1) clinical skills and competencies, 2) audit and quality improvement, 3) research, 4) leadership and management, 5) teaching and education, 6) clinical governance and patient safety.

ii. The trainee should keep a written logbook as part of their training portfolio of patients they have seen, procedures conducted, diagnostic and therapeutic interventions instigated and followed up. This should be in addition to formal competency assessments as described below.

iii. The trainee will be required to keep his/her personal training portfolio up-to-date according to national guidelines and European Union directives. All entries to the portfolio must be endorsed by his/her tutor or authorised deputy.

iv. The trainee should attend and provide evidence of attendance at local, regional and national meetings and training courses, and reflect on learning in their portfolio. In particular, evidence of successfully attending advanced paediatric and neonatal life support courses, advanced trauma courses, and safeguarding children and young people training courses, is considered crucial for completing P-EM training.

v. The trainee is encouraged to actively reflect on each portfolio entry, highlighting actions for learning, citing sources of additional information, and stating learning points for future practice, as evidence of self-directed learning.

- **Competency assessment**

Competencies should be evaluated throughout the training period. There are a number of different tools to assess competencies, describing different aspects of training. Some of these are set out below. Formal and informal reflections on these assessments are an important aspect of their success. Simulation and other educational sessions can, in certain circumstances, be used to evidence acquired skills and competencies. Several of the assessment types in the table below can also be used to evidence and reflect on teaching delivered and presentation of research, audit, or quality improvement activities.

Assessment	**Purpose**	**Method**
Mini-CEX (Mini-Clinical EXamination)	Provides feedback on skills needed in clinical care	Trainer observes a trainee examining a patient and explaining the management plan to the parents
CbD (Case-based Discussion)	Assesses clinical reasoning or decision making	Trainee presents a more complex case to the trainer and has a discussion about the evidence or basis for diagnosis or treatment. One of these should be a safeguarding CbD

DOPS (Directly Observed Procedural Skills)	Assesses practical skills	Trainee undertakes a practical skill whilst being observed
LEADER	Focuses on one or two of the following domains: o Leadership in a team o Effective services o Acting in a team o Direction setting o Enabling improvement o Reflection	A trainee is observed leading a team (e.g. during a resuscitation)
HAT (Handover Assessment Tool)	Evaluates handover skills	Handover episodes are supervised and discussed
ACAT (Acute Care Assessment Tool)	Assessment of management of paediatric acute care, with focus on one or more of the following competencies: o Clinical assessment o Medical record keeping o Investigations and referrals o Safe prescribing o Management of the acutely	Trainer directly observes trainee during acute care event; this could occur in a simulation or training environment. assessment contemporaneously completed with assessor

	unwell patient ○ Time management ○ Team management ○ Conflict resolution ○ Clinical leadership ○ Decision making ○ Teaching	
ESLE (extended supervised learning event)	Extended event of observation in the workplace across cases, with the trainee taking on a leading role in the department; with a focus on interactions with patients, staff and others,; decision-making; management and leadership; as well as the trainee's individual caseload	Direct observation of trainee by clinical supervisor (in non clinical and a purely assessing role), followed by a debrief and contemporaneous completion of the assessment form with assessor
DoC (Discussion of Correspondence)	Assesses letter writing skills	Clinic letters or discharges are reviewed and discussed
MSF (Multi-Source Feedback)	Provides wider feedback on the performance of the trainee	Confidential comments from a wide range of colleagues, including nurses and other members of the

		multidisciplinary team, patients and the trainee are sought

An example of a workplace-based assessment framework can be found here.

In summary, a portfolio should include:

- Records of appraisal meetings and other educational contact with supervisor
- Various workplace-based assessments
- Log book of experience, clinical cases and procedures
- Personal reflection on learning
- Description of research activities undertaken and any scientific output achieved
- Reflection and feedback on teaching delivered
- Personal projects completed (quality improvement, patient safety, academic & research, management & leadership)
- Development of leadership and management qualities
- Personal development plans
- Certificates of courses attended and delivered
- Certificates of success in national examinations if applicable

- **Completion of training**

Currently, NTAs, independent from educational supervisors and trainers, will be responsible for adjudicating completion of training. This will be competency based, taking into account minimum standards for sufficient exposure to all training modules and aspects of P-EM training as set out in this ETR. At the least, the trainee needs to show sufficient evidence of having acquired the key capabilities, as well as reaching Entrustable Professional Activity levels for clinical presentations and procedural skills as

set out in the clinical syllabus. Additionally, a rich training portfolio should reflect overall development and learning about all aspect of P-EM training. Nationally, there might be additional requirements such as national exams; at present there is no uniform European exit exam for P-EM.

e) Governance

The governance of an individual training programme is a matter for the NTA or local training institution in which the training programme is being delivered. It is recommended that there is a training programme director (TPD) who has responsibility for the quality of the training programme locally/regionally, and that individual educational supervisors and trainers are responsible for delivering the required training in their departments. Evaluation of the quality of training may occur by regular exploration with the trainees (surveys, interviews), requests for feedback and by monitoring the progress of trainees under the trainer's supervision. It is good practice that the TPDs communicate with each other within a country to ensure consistency of the training delivered and the standards reached.

II Requirements for Trainers

1) Process for recognition as trainer

a) Requested qualification and experience

i. **Training programme directors (TPD)** are educational supervisors who have considerable knowledge and expertise in training and education and should be recognised by national authorities. The training programme director must have been practising P-EM for at least 5 years and be accredited as P-EM specialist. The TPD is responsible for overseeing the quality of the training

programme locally/regionally.

ii. **An educational supervisor** is a trainer who has had additional specific training in mentoring, coaching and assessment and who provides ongoing individual professional development advice to a trainee. Educational supervisors also provide clinical supervision and undertake workplace-based assessments. Educational supervisors should provide training and be competent across all aspects of the speciality and be research active in P-EM.

iii. **A trainer** is a registered medical practitioner who holds acknowledged expertise and skills in one or several aspects of P-EM. This person's contribution may be restricted to these areas of expertise.

iv. Trainers provide clinical supervision and assessment in the ED and other clinical environments. Trainers ensure patient safety is maintained whilst trainees are developing their skills.

v. Appointment and role of Co-Trainers. Some training may be required occur outside the core P-EM or EM setting. In this context the program director may appoint a co-trainer from another discipline who will agree to train the individual candidate in a specific clinical set of competencies during a placement. The Co-Trainer must be a registered paediatric specialist in clinical practice identified before the placement of the trainee who can then certify on the knowledge, practical and clinical skills, competencies achieved. This is to ensure the highest professional standards are met during training. The role of the Co-Trainer will be particularly relevant with regard to acquisition of general paediatric skills but also relevant to other disciplines and specialities in order to achieve competencies.

vi. Both educational supervisors and trainers must have practised P-EM for a minimum of 2 years (at least at pro-rota of 80% WTE). In countries where P-EM is still evolving, direct and comprehensive experience of independent working in a paediatric emergency department for at least 2 years is required before a practitioner can be recognised as a P-EMtrainer.

vii. When an aspect of training cannot be provided in one centre it will be necessary for the trainee to

be taught at another suitable centre by a trainer approved for that purpose.

viii. Educational supervisors should work out a training programme for the trainee in accordance with the trainee's own qualities and the available facilities of the institution. Regular review will be required to allow for flexibility and for early identification of problems/deficiencies. The educational supervisor should work with the trainee to create a Personal Development Plan (PDP).

ix. Educational supervisors and trainers are expected to provide appraisal and assessment of progress. Appraisal consists of determining what is needed and what evidence is required to show that this has been achieved. Assessment evaluates progress against objectives.

x. Trainee assessment should be provided in terms of:

   a. Training and career ambitions;

   b. Training experience related to syllabus;

   c. Achievements related to current plan.

xi. In order to provide a close personal monitoring of the trainee during his/her training, the number of P-EM trainees should not exceed the number of educational supervisors in the centre by a ratio of 2:1.

xii. Providing training to P-EM trainees takes time. Trainers should have this time recognised in their contracts and it is likely to require at least one hour per week for each trainee supervised by an educational supervisor.

xiii. Educational supervisors will meet the trainee at the beginning of the programme to define the educational contract for that trainee. Reviews of progress should take place at 3 monthly intervals during the first year of training to appraise the individual.

xiv. An annual assessment of each P-EM trainee should be undertaken, ideally at a regional or national level, to review competencies achieved and to allow progress within the training programme. Assessments should be detailed and contain statements of theoretical and practical experience

accumulated by the trainee. It is expected that the trainee will also provide an account of the training received and problems encountered (portfolio). Reports will be submitted to the TPD or NTA.

b) Core competencies for trainers

Trainers must be:

i. familiar with the content of the ETR and specifically the syllabus
ii. able to practise independently in all areas of the syllabus unless specifically focused on one area
iii. experienced in teaching and supporting learners
iv. skilled in identifying the learning needs of the trainees and able to describe the goals to the trainee
v. familiar with assessment tools and the standard required and be able to give constructive and positive feedback to trainees
vi. able to recognise trainees whose progress is unsatisfactory and initiate supportive measures as needed – this includes unsatisfactory professional skills as well as clinical skills
vii. able to maintain a positive attitude towards clinical training and be able to create a positive learning environment.

2) Quality management of trainers

There should be a mechanism in place through which trainees can periodically and confidentially provide feedback on the teaching received in a training centre (or training unit) and their clinical supervision, at least annually but ideally for each of their training rotations. The training programme director has responsibility for ensuring the quality of training is maintained. Evaluation of the quality may occur by regular exploration with the trainees (surveys, interviews), requests for feedback and by monitoring the progress of trainees under the trainer's supervision. Support for further development of the educational skills of the trainer

should be available through (inter)national societies and national institutions.

III Training requirements for training institutions

1) Process for recognition as training centre

a) Requirement on staff and clinical activities

- **Fully accredited training centre**

i. The training centre must provide adequate experience in all fields of P-EM. It is expected to offer exposure to and training opportunities in all domains of this ETR required to meet training competencies.

ii. Typically, a training centre will be one institution responsible for the delivery of specialist training, with the option of delivering training in specified domains of the ETR in closely linked training units.

iii. A training centre would normally have a local training programme director, or at a minimum a local training lead (in cases where the training programme director fulfils a regional role), who also acts as an educational supervisor.

iv. The training staff in a training centre should include at least two trainers.

v. There is no minimum number of patient related activities for a training centre, acknowledging the ability of smaller training centres to deliver high quality specialist training; however, specialist P-EM training should include a period of training in a 'high volume' setting (see section 2.c.iii, 'Curriculum of training'). For the purposes of this ETR 'high volume' is defined as a minimum of 10,000/year of paediatric patients aged 18 years or under attending the emergency department.

vi. The centre must have easy access and close relationships with other relevant acute adult and

paediatric specialities. Specifically, the centre should provide access to appropriate general EM training opportunities.

vii. Demonstration of involvement of other care teams particularly specialised nurses, paediatric nutritionists, physiotherapists, social workers and psychologists is essential for recognition.

viii. Training centres will be responsible for offering regular clinical and P-EM relevant teaching. There should be a formalised institutional and departmental programme for auditing, quality improvement and clinical governance., as exemplified by mortality and morbidity meetings, learning from excellence, management of complaints, and clinical incident review meetings, and trainees should be offered the opportunity to participate in this.

ix. All (paediatric) emergency departments must have policies in place to safeguard all children, adolescents, and vulnerable adults. These policies should include provisions, where appropriate, for implementing reasonable adjustments to accommodate vulnerable patients.

x. Training centres should encourage and enable trainees to attend relevant regional, national and international meetings, and to provide trainees with opportunities to present their own work at these meetings.

xi. The centre must provide evidence of on-going clinical research and access to basic research.

xii. In countries that have approved centres for P-EM care then the fully accredited training centre must be one of these.

- **Training unit**

i. Training units are institutions that provide training in one or more domains of the P-EM curriculum, but which do not deliver all aspects of P-EM training. Training units are typically linked to a fully accredited training centre or regional/national network of training centres; in this capacity they could function as integral part of the training centre. Training units have a clearly defined role in the

training of P-EM trainees and they must provide adequate exposure in the defined area and a trainer who is deemed competent in these areas, as overseen by the TPD and ultimately national training authorities (NTAs). Examples of training units can include institutions with paediatric intensive care units, burns units, pre-hospital services, and services responsible for the retrieval (i.e. hospital to hospital transfer) of critically ill or injured children and young people.

b) Requirement on equipment, accommodation

Basic textbooks in P-EM should be immediately available in training centres and there should be easy access to a comprehensive reference library either in paper or electronic format. There should be satisfactory IT equipment and technical support with easy internet access; trainees should have dedicated space to study and to access electronic health records and online decision support materials. Trainees should be able to assess patients in clinical areas with sufficient privacy and to have confidential conversations; trainees should also have access to the necessary equipment to perform the clinical procedures as set out in this ETR. Training centres should offer or facilitate access to simulation programmes and skills labs, as well as provide opportunities to complete advanced paediatric and trauma life support courses. This should ideally also include point of care ultrasound for simulation and bedside teaching and practice.

Ideally, training units offer similar departmental training resources to training centres. Alternatively, the leading training centre should continue to provide this. Textbooks and educational resources, teaching and available courses should be tailored to the ETR domain covered by the training unit.

2) Quality management within Training institutions

- **Accreditation**

i. Training centres and training units are encouraged to engage with local, national or UEMS

delivered processes for accrediting the training institution, placement and programme. This allows transparent demonstration of quality standard for training and supports trainees and trainers. Sites are also encouraged to conform with local or national clinical standards, seeking accreditation where possible or relevant.

ii. For each European Union (EU) Member country, a list of training centres, training units, training programme directors, educational supervisors and trainers should be compiled by NTAs and updated on an annual basis. Each centre and unit is characterised by the ETR domains covered (e.g. does it have a burns unit, PICU, etc), areas of teaching and research activities, educational supervisors and trainers available, and the size of the clinical practice as defined by the needs of the trainee.

- **Clinical Governance**

Sites should actively engage with clinical governance including mortality and morbidity sessions, risk management including critical incident reviews and management of complaints and legal cases. This activity is an important part of the syllabus for Paediatric Emergency Medicine and trainees should be offered the opportunity to participate in these activities.

- **Workforce planning**

There should be appropriate workforce planning for medical and other professions within the department to ensure service needs are met without undue burden on trainees. In order to create an appropriate learning environment, there must be a balance of service provision and learning opportunities.

- **Transparency of training programmes**

At the onset of their P-EM training, trainees should be provided with a plan of their P-EM training programme, the anticipated placements, and additional mandatory training activities for the duration of their

P-EM training. This is particularly important if the trainee is expected to move to another hospital site or city to gain particular experiences. These plans should be flexible and discussed at an annual review. There should be transparency about equity of access for all trainees on a rotation to highly valued/specialist placements.

- **Structure for coordination of training**

Within a training programme, there should be sufficient administrative support to allow appropriate coordination of placements, assessments, local examinations etc where relevant. Oversight of the coordination is the role of the TPD but there should be administrative support for this role. The NTA should facilitate a central committee that oversees the programme with representation from all placements and trainees themselves.

- **Approval of placements**

Feedback should be sought from trainees and trainers in relation to the educational value and learning opportunities for each placement. The purpose of the discussion and review of evidence is to allow transparent decision making about ongoing approval for the placement to be included in a programme.

IV European syllabus for Paediatric Emergency Medicine

1) Clinical syllabus – Generic competencies:

This ETR follows the CanMEDS framework[1]. Portfolio evidence should be provided to show learning and acquisition of competencies in the following generic competencies and domains

i. History taking.

[1] https://www.royalcollege.ca/en/standards-and-accreditation/canmeds.html (accessed October 24th 2024)

ii. Clinical examination.

iii. Use of appropriate diagnostic modalities.

iv. Therapeutics and safe prescribing.

v. Time management and decision making.

vi. Decision making and clinical reasoning.

vii. The patient as central focus of care.

viii. Prioritisation of patient safety in clinical practice.

ix. Team working and patient safety.

x. Principles of quality and safety improvement.

xi. Infection control.

xii. Managing long term conditions and promoting patient self-care.

xiii. Rehabilitation following injury or illness.

xiv. Relationships with patients and communication within a consultation.

xv. Breaking bad news.

xvi. Complaints and medical error.

xvii. Communication and cooperation with colleagues.

xviii. Health promotion and public health.

xix. Principles of medical ethics and confidentiality.

xx. Valid consent.

xxi. Legal framework for practice

xxii. Ethical research.

xxiii. Evidence and guidelines.

xxiv. Clinical audit.

xxv. Teaching and training.

xxvi. Professional personal behaviour.

Paediatric emergency medicine physicians are:

Medical experts who

- Apply basic science and clinical knowledge to provide excellent safe care to patients
- Ensure their care is patient centred involving the patient, their family and carers, in planning that care adapting treatment according to patient need
- Prioritise and deliver procedures and therapies for individual patients to ensure rapid improvement in health
- Consult with other specialists and professions to ensure appropriate management of the patient and their ongoing care
- Ensure a culture of safety is created and maintained within the department
- Identify and provide appropriate support to vulnerable patients (including children, adolescents and adults) who – due to any number of reasons - may be unable to take care of themselves, or unable to protect themselves against significant harm or exploitation.

Collaborators who

- Work closely with other relevant specialists in delivering care to individual patients and in developing systems of care where emergency medicine is central in emergency care delivery
- Ensure safe handover of patients to inpatient specialties or to their primary care provider
- Work closely with the hospital administration team and other non clinicians
- Work with and take handover from the pre-hospital personnel

Communicators who

- ensure their communication with patients is adapted to the patient needs particularly if there are language, ethnic, social or cultural issues or patient physical and mental needs that need adapting

- can communicate distressing information to patients and their relatives with empathy and clarity
- can demonstrate skills for managing and de-escalating conflict situations
- understand the legal and ethical boundaries of sharing information with patients, healthcare professionals and other interested parties
- utilise health records in a variety of different formats to contribute to the best care for patients utilising technology to reduce duplication and maximise sharing of information to the benefit of patients
- understand and manage communications with the press and other external agencies to best promote P-EM and public health interest

Leaders who

- can lead an individual patient resuscitation, a shift or a departmental team
- can contribute to the healthcare system including prehospital setting
- can understand the importance of, and limitations of, quality standards in paediatric emergency medicine
- can understand and apply the principles of quality improvement to optimise the healthcare delivery to patients in the ED facilitating the introduction of change and using appropriate validated tools
- utilise data on activity, performance and workforce to ensure continuous improvement in both service and clinical care delivery
- contribute to a culture that promotes patient safety within the (paediatric) emergency department
- understand the importance of staff wellbeing, and as leaders can contribute positively to this within their teams
- analyse and take action on serious incidents and take action where there are other indicators that care has been unsatisfactory

- Share information relating to patient safety incidents including actions taken in an accurate and appropriate manner and supporting staff involved in such incidents
- Use health informatics to improve the quality of patient care and optimize patient safety
- Understands and uses opportunities in digital medicine, such as an electronic patient record, digital decision aids etc., and uses them appropriately for patient treatment based on current evidence
- Promote and use guidelines to support safe and quality care within the department
- Contribute to quality improvement forums, including mortality and morbidity conferences
- Engage with medicolegal and other patient related enquiries into care
- Utilise healthcare resources appropriately to maximise the benefit to individual patients and populations
- Understand the principles of, and input into, planning for mass casualty, major incidents and disasters
- Lead the debrief for events in the department such as major resuscitations or other demanding events such as major incidents
- Identify and support colleagues in difficulty whether from clinical competence or personal health and other issues

Advocates who

- Promote and petition for equitable emergency healthcare for all regardless of age, sex, gender, race, religion, disability
- Ensure the needs of their patients are considered including those who have experienced (child) abuse or a violence of any kind
- Respond and advocate for appropriate healthcare for specific groups including but not limited to patients requiring end of life care, transient populations, and those with alcohol or drug misuse
- Advocate for system change and P-EM development with governments and relevant legal entities

Scholars who

- Continue to develop their clinical and professional skills
- Develop other practitioners through expert education and supervision
- Integrate the best available evidence into their practice of Emergency Medicine
- Contribute to the creation and dissemination of new and existing knowledge and practice of emergency medicine
- Understand and apply critical appraisal skills to the published literature and how this affects clinical practice including evaluation of statistical data

Professionals who

- Understand, apply and work within the legal framework in their country of employment including management of vulnerable patients and information sharing
- Understand, apply and work according to the ethical principles accepted by their profession and international conventions.
- Demonstrate appropriate professional behaviours as defined by their medical registration authority including self regulation

2) Clinical syllabus – pre-hospital medicine, triage and resuscitation

- **Pre-hospital medicine**

This ETR does not cover competencies for the practice of paediatric pre-hospital and retrieval (i.e. hospital-to-hospital transfer of critically unwell or injured patients) medicine. National societies can consider including specific competencies related to these areas of medicine if deemed essential for their national health services.

- **Triage**

Paediatric emergency physicians must be able to estimate and prioritise the urgency of the patient's need

for treatment based on a short assessment and limited information. This process is referred to here as triage.

There are many triage systems in use. Which system is most suitable will depend on the context; trainees should be familiar with and trained in the use of their local or national triage systems. Emergency physicians should be able to apply the principles of triage in the Emergency Department as well as in the pre-hospital arena, both during normal circumstances and during mass casualty situations.

- **Resuscitation**

Children and young people up to the age of 18 (including preterm new-borns) that are critically ill or injured require immediate management, the focus being on rapidly delivering therapy that decreases morbidity and mortality. This process is referred to here as resuscitation.

Resuscitation combines assessments and interventions geared to identify and normalise abnormal physiological parameters (e.g., hypoxia, hypoglycaemia), as well as identify and initially manage life-threatening conditions in patients presented with acute illnesses or injuries (e.g., anaphylaxis, haemorrhagic shock). The recommended generic resuscitation algorithm follows the ABCDE structure, whereby:

  - A refers to Airway and cervical spine, the focus being on ensuring that the upper airway is patent and that the cervical spine of patients with potential unstable fractures is stabilised
  - B refers to Breathing, the focus being on ensuring adequate blood oxygenation and ventilation
  - C refers to Circulation, the focus being on ensuring adequate perfusion and stopping haemorrhage
  - D refers to Disability, the focus being on assessing the patient's level of consciousness, identifying gross focal neurological deficits and treating hypoglycaemia if present
  - E refers to Exposure, the focus being on identifying diagnostic clues from an external examination of the body and treating or preventing hypo- and hyperthermia

CABCDE – many authorities now advocate a CABCDE approach particularly for major trauma or massive haemorrhage on the basis that the circulatory actions will be the priority in these patients. The approach has its roots in military medicine and includes applications of tourniquet or other immediate action to stop catastrophic haemorrhage.

Training institutions should have tailored pathways in the event of a catastrophic or major haemorrhage. In the event of a major haemorrhage and massive transfusion of blood products, it is advisable to have

early discussions with anaesthetics to facilitate safe transfer to imaging facilities or operating theatres.

Depending on the number of personnel involved in the resuscitation, assessments and interventions may be performed sequentially or simultaneously. The assessments and treatments performed during resuscitation will depend on the context and available equipment. When available, judicious use of the following assessments is recommended:

- point-of-care ultrasound
- point-of-care blood tests
- electrocardiogram
- (invasive) monitoring of vital signs

Specific consideration should be given to the resuscitation of term and preterm newborn infants and support of transition of infants at birth.

In parallel to resuscitating the critically ill or injured child or young person, the paediatric emergency physician must identify the child's or young person's caregivers and those with parental responsibility early, provide them with timely and appropriate information to facilitate shared and informed decision making, and offer family support. In this context, the paediatric emergency physician should also recognise the importance of initiating safeguarding processes, when relevant, in a timely and appropriate manner.

3) Clinical syllabus – clinical presentations

This clinical syllabus contains a list of clinical signs, symptoms, and syndromes that P-EPs will commonly encounter. These signs, symptoms, and syndromes can be time-critical requiring swift recognition, initiation of diagnostic and therapeutic processes, and involvement of additional specialty teams. Likewise, other signs, symptoms, and syndromes are typical of non-life-threatening common childhood illnesses or injuries. In both instances, P-EPs need to show understanding of the underlying pathophysiology and presenting symptomatology, consider alternative differential diagnoses, utilise available diagnostic modalities appropriately, and initiate available evidence-based interventions and treatments. Crucially, the

P-EP will be able to differentiate between children with serious and non-serious illnesses and injuries in an open population with often non-specific presenting symptomatology. The P-EP will do all this in a family-centred approach, with consideration of safeguarding children, young people, and vulnerable adults. Competency assessments will focus on the identification of serious and non-serious illnesses and injuries and their emergency management in the emergency department, including the transfer of care to other specialties or planning for community-based follow-up, and not so much on the subsequent management in inpatient areas, although P-EPs must show insight into the full patient care pathway.

Paediatric Emergency Physicians should:

- initially evaluate, diagnose, and manage children and young people aged <18 years with acute illness or injury,
- know a condition's possible presenting symptoms, signs, and situations,
- know the risk factors for the condition to be able to assess its pre-test probability,
- be able to estimate the likelihood that the patient is suffering from the condition based on the history, physical findings, and (point-of-care test) test results,
- know how to initially manage, within the realm of emergency medicine, patients potentially suffering from these conditions, including being able to estimate the risks and benefits of various investigations and treatments for the individual patient,
- know whom to contact for patient management outside the scope of emergency medicine and how to manage transfer of care.

For any diagnostic modality, Paediatric Emergency Physicians should:

- know their approximate sensitivities and specificities for time-sensitive conditions,
- know the potential complications of invasive diagnostic procedures and exposure to ionizing radiation,

- be able to systematically interpret their results as appropriate,
- to consult with appropriate specialties, including radiology, virology and microbiology, in a timely and effective manner to discuss test result,
- have an approach to the initial management of the patient with the abnormal test result.

✓ The levels of competencies for each of the clinical presentations in the table below are either essential or aspirational.

[e,p]: e=emergency medicine; p=paediatrics; curriculum items in the table below annotated with 'e' and/or 'p' are included in core training programmes for either emergency medicine or paediatrics, as described in the ETR documents for emergency medicine and paediatrics. Curriculum items without this annotation are not expected to have been covered in sufficient depth during core training programmes, and P-EM training should focus on acquiring these. Final entrustment scales should reflect competencies for managing these clinical presentations in 1) emergency medicine environment AND 2) children and young people. National training programmes should review this clinical syllabus and tailor to accommodate local training needs.

Level of competencies: degree of required competency
Essential: Entrustable Professional Activity level 4 required at the end of training
Aspirational: Entrustable Professional Activity level 3 required at the end of training

Clinical presentations	**Essential**	**Aspirational**
1. Child protection and children in special circumstances, including:		
Clinical syndromes and diagnoses:		
a. Physical abuse;	✓ e,p	
b. Emotional abuse;	✓ e,p	

c. Sexual abuse;	✓ e,p	
d. Neglect;	✓ e,p	
e. Trafficking and gang related violence;		✓
f. Female genital mutilation;		✓
g. Children with complex care needs;	✓ p	
h. Refugee and asylum seeking children and young people.		✓
2. Child and adolescent mental health presentations, including:		
Clinical syndromes and diagnoses:		
a. Deliberate self-harm;	✓ e,p	
b. Suicidal ideation and suicide attempts;	✓ e,p	
c. Intentional ingestion;	✓ e,p	
d. Delirium and psychosis;		✓ e
Clinical signs and symptoms:		
e. Agitation;	✓ e	
f. Confusion.	✓ e	
3. Cardiovascular presentations, including:		
Clinical syndromes and diagnoses:		
a. Cardiac arrest;	✓ e,p	
b. Heart failure;	✓ e,p	
c. Arrhythmia, including SVT;	✓ e,p	
d. Syncope;	✓ e,p	

e. Cardiac inflammation, myocarditis;	✓ e,p	
Clinical signs and symptoms:		
f. Apnoeic episodes in an infant;	✓ p	
g. Palpitations;	✓ e,p	
h. Cyanosis;	✓ e,p	
i. Chest pain.	✓ e,p	
4. Respiratory medicine and otorhinolaryngology (ENT), including:		
Clinical syndromes and diagnoses:		
a. Respiratory arrest;	✓	
b. Respiratory failure;	✓ e,p	
c. Asthma and acute wheeze;	✓ e,p	
d. Pneumothorax, pneumomediastinum;	✓ e,p	
e. Bronchiolitis;	✓ e,p	
f. Pneumonia and empyema;	✓ e,p	
g. Pertussis;	✓ e,p	
h. Epiglottitis;	✓	
i. Acute throat infections and quinsy;	✓ e,p	
j. Otitis media, otitis externa and mastoiditis;	✓ e,p	
k. Sinusitis;	✓ e,p	
Clinical signs and symptoms:		

l. Sore throat;	✓ e,p	
m. Acute stridor;	✓ e,p	
n. Shortness of breath;	✓ e,p	
o. Haemoptysis;	✓ e,p	
p. Earache and discharge;	✓ e,p	
q. Epistaxis;	✓ e	
r. Haemoptysis	✓ e,p	
s. Cervical lymfadenitis, including neck mass and infection;	✓ e,p	
5. Dermatological presentations, including:		
Clinical syndromes and diagnoses:		
a. Eczema;	✓ p	
b. Bites and infestations;	✓ e,p	
c. Steven's Johnson syndrome;		✓ p
d. Staphylococcal scalded skin syndrome.		✓ p
6. Endocrine and metabolic presentations, including:		
Clinical syndromes and diagnoses:		
a. DKA (Diabetic Keto-Acidosis);	✓ p	
b. Hypoglycaemia;	✓ e,p	
c. Adrenal insufficiency and Addisonian crisis;	✓ p	
d. Acid Base balance;	✓ e,p	

e. Dehydration;	✓ e,p	
f. Weight loss and malnutrition;	✓ p	
g. Thyrotoxicosis.		✓
7. Gastro-intestinal presentations, including:		
Clinical syndromes and diagnoses:		
a. Constipation;	✓ e,p	
b. Pyloric stenosis;	✓ p	
c. Gastric-oesophageal reflux;	✓ e,p	
d. Volvulus, malrotation and intussusception;	✓ p	
e. Peritonitis and appendicitis;	✓ e,p	
f. Inflammatory bowel disease;	✓ e,p	
g. Acute liver failure;	✓ e,p	
Clinical signs and symptoms:		
h. Acute and recurrent abdominal pain;	✓ e,p	
i. Diarrhea;	✓ e,p	
j. Bilious vomiting;	✓ e,p	
k. Dyspepsia;	✓ e,p	
l. Haematemesis;	✓ e,p	
m. Haematochezia.	✓ e,p	
8. Obstetric and gynaecologic presentations, including:		
Clinical syndromes and diagnoses:		

a. Ectopic pregnancy;		✓ e
b. Ovarian torsion;	✓ e	
c. Pelvic inflammatory disease		✓ e
Clinical signs and symptoms:		
d. Menorrhagia;	✓ e,p	
e. Vaginal discharge.	✓ e,p	
9. Sexually transmitted infections (STIs).	✓ e	
10. Haematology and oncology, including:		
Clinical syndromes and diagnoses:		
a. Sickle cell disease and crisis;	✓ e,p	
b. Anaemia;	✓ e,p	
c. Leukaemia/ lymphoma;	✓ p	
d. Mediastinal mass;		✓
e. The management of the immunocompromised patient, including febrile neutropaenia;	✓ p	
f. Major haemorrhage and use of emergency blood products;	✓ e	
g. Coagulopathy (dilutional, consumption, congenital, drug-induced)		
Clinical signs and symptoms:		
h. Purpura and non-blanching rash, including Henoch-Schonlein purpura and immune thrombocytopenia	✓ p	

11. Infection, immunology and allergy, including:		
Clinical syndromes and diagnoses:		
a. Sepsis and septic shock;	✓ e,p	
b. Kawasaki disease;	✓ p	
c. Toxic shock syndrome;	✓ p	
d. Inoculation injuries;	✓ e	
e. Management of injuries associated with risk of rabies and tetanus;	✓ e	
f. Fever in returning traveller;	✓	
g. Fever in immunocompromised patient, febrile neutropaenia;	✓ p	
h. Antimicrobial stewardship;	✓ e,p	
i. Cow's milk protein allergy;	✓ p	
j. Allergic reactions and Anaphylaxis.	✓ e,p	
Clinical signs and symptoms:		
k. Febrile child;	✓ e,p	
l. Common exanthems.	✓ p	
12. Neonatology, including:		
Clinical syndromes and diagnoses:		
a. Newborn resuscitation and support of transition of infants at birth	✓ p	

b. Congenital heart disease and duct-dependent lesions;	✓ p	
c. Jaundice;	✓ p	
d. Early and late onset neonatal sepsis;	✓ p	
e. Inborn errors of metabolism and appropriate metabolic tests in acute presentation	✓ p	
f. Genetic conditions and role of acute whole genome sequencing	✓ p	
Clinical signs and symptoms:		
g. Feeding difficulties;	✓ p	
h. Crying infant	✓ p	
13. Nephro-urology, including:		
Clinical syndromes and diagnoses:		
a. Urinary tract infections (UTI), including cystitis and pyelonephritis;	✓ p	
b. Acute kidney injury;	✓ p	
c. Chronic renal failure;	✓ p	
d. Renal stones;	✓ e,p	
e. Paraphimosis;	✓ e	
f. Nephrotic syndrome;	✓ p	
g. Glomerulonephritis;	✓ p	

h. Testicular torsion;	✓	
i. Orchitis and epididymitis;	✓ e	
j. Balanitis;	✓ e	
Clinical signs and symptoms:		
k. Haematuria;	✓ e,p	
l. Proteinuria;	✓ e,p	
m. Dysuria;	✓ e,p	
n. Acute scrotal pain and swelling;	✓ e	
o. Urethral discharge;	✓ e	
p. Urinary retention;	✓ e	
q. Priapism;		✓
r. Hypertension.	✓ e,p	
14. Neurological conditions, including:		
Clinical syndromes and diagnoses:		
a. Meningitis and encephalitis;	✓ e,p	
b. Encephalopathy;	✓ p	
c. Stroke;	✓ e,p	
d. Blocked ventricoperitoneal shunt;	✓ p	
e. Facial nerve palsy;	✓ e,p	

Clinical signs and symptoms:		
f. Altered level of consciousness;	✓ p	
g. Headache, including tension headache and migraine;	✓ p	
h. Seizures and status epilepticus;	✓ e,p	
i. Muscle weakness;	✓ p	
j. Altered and unstable gait;	✓ p	
k. Abnormal movements;	✓ p	
l. Raised intracranial pressure.	✓ e,p	
15. Accidents and trauma, including:		
Clinical syndromes and diagnoses:		
a. Head injury, including diffuse axonal injury, subdural haematoma, commotio and concussion;	✓ e	
b. Facial injury, including ear, oral, and nasal trauma;	✓ e	
c. Abdominal injury, including liver and splenic rupture and intraabdominal bleeding, including blunt and penetrating injury;	✓ e	
d. Chest injury, including rib fracture, haemothorax, lung contusion and flail chest, including blunt and penetrating injury;	✓ e	
e. Pelvic injury;	✓ e	
f. Injury to joints and extremities, including dislocations and subluxations	✓ e	

g. Spinal injury;	✓ e	
h. Hand fractures, including volar plate injury and nailbed injuries;	✓ e	
i. Foot fractures, including midfoot fractures;	✓ e	
j. Stress related injuries, including Osgood Schlatter, Sever disease;	✓	
k. (Major) burns;	✓ e	
a. Crush injury;	✓ e	
b. (Near) drowning;	✓	
c. Electrical injury;		✓
d. Major trauma.	✓ e	
16. Musculoskeletal presentations, including:		
Clinical syndromes and diagnoses:		
a. Transient synovitis;	✓	
b. Septic arthritis, osteomyelitis;	✓ e,p	
c. Congenital hip dysplasia;	✓ p	
d. Slipped upper femoral epiphysis;	✓	
e. Soft tissue infections, including impetigo, cellulitis, necrotising fasciitis;	✓ e,p	
f. Compartment syndrome;		✓ e
Clinical signs and symptoms:		

g. (Non-traumatic) limping child;	✓	
h. (Non-traumatic) swollen joint.	✓	
17. Accidental poisoning and intoxications	✓ e	
18. Ophthalmological problems, injuries and infections, including:		
Clinical syndromes and diagnoses:		
a. Preseptal and orbital cellulitis;	✓ e,p	
b. Conjunctivitis;	✓ e,p	
c. Obstructed or infected lacrimal duct;		✓ p
d. Chalazion, stye;	✓ e	
e. Retro-orbital haematoma;		✓
f. Ophtalmia neonatorum;	✓ p	
g. Corneal abrasion;	✓ e	
h. Retinal detachment;		✓ e
i. Globe rupture;		✓ e
Clinical signs and symptoms:		
j. Ptosis;	✓ e	
k. Papilledema;	✓ e,p	
l. Diplopia;	✓ e,p	
m. Nystagmus	✓ e,p	
n. Strabismus (squint).	✓ e,p	

19. OMFS - Oral and Maxillofacial Surgery and Dental problems, including: *Clinical syndromes and diagnoses:* a. Toothache (pulpitis, dental compartment syndrome) b. Dental abscess; c. Tooth avulsion and dental trauma; d. Temporal-mandibular joint dislocation; e. White Eye Blow-out Fracture – emergency; f. Facial Fractures (mandible, maxilla, zygoma, naso-maxillary complex); g. Serious facial and neck space infections (dental and other); h. Facial soft tissue trauma (lacerations including tongue, lips, eyebrows, and penetrating wounds).	✓ e ✓ e ✓ e ✓ e ✓ e ✓ e ✓ e ✓ e	
20. Major incident management and support, including management of mass casualties, including natural disasters and environmental emergencies, blast injuries, chemical incident, adiation incident.		✓ e

4) Clinical syllabus – procedural skills

This ETR recognises that the ability to perform a procedure (hereafter referred to as "procedural competence") requires:

- knowledge, e.g., regarding the indications and for the procedure and how it is performed,
- psychomotor skills to carry out the procedure correctly and efficiently.

For each procedure, the physician should know:

- its indications and contraindications,
- the steps involved in the performance of the procedure including applied anatomy,
- its potential complications and how to initially manage these,
- post-procedure management.

Of the utmost importance is the need to create a safe and child- and family friendly environment when attempting a procedure. P-EPs need to show an expert knowledge of the different strategies to maximise procedural success, and this includes appropriate preparation of the child and carers (for example, by using a play therapist), use of distraction techniques, and consideration of appropriate systemic, local, or topical drugs to achieve the desired analgesic, dissociative, anxiolytic, hypnotic, and/or sedative effect.

When a procedure requires pharmacotherapy, the physician should know the indications, contraindications, interactions, side-effects and dosages of the relevant medications. This includes knowledge of local toxicity when using pharmacotherapy for local or regional pain blocks; advanced airway management skills for laryngospasm in procedural sedation; and being able to recognise malignant hyperthermia after administration of anaesthetic drugs.

An emergency physician may struggle to acquire and maintain the psychomotor skills required to perform procedures that are rarely or never performed by the physician in his/her workplace. Such may be the case when:

- the procedure is seldom indicated (e.g., cricothyrotomy),
- the procedure is futile (e.g., resuscitative thoracotomy in a setting where access to an operating theatre for further care is unavailable),

- the equipment required to perform the procedure or diagnostic test is unavailable (e.g., transvaginal ultrasound in a setting lacking a vaginal ultrasound probe),
- the procedure is not carried out in the physician's workplace (e.g., delivery in a setting where women in labour do not present to the emergency department),
- the procedure is carried out by other specialists (e.g., rapid sequence intubation in a setting where this procedure is performed by anaesthesiologists),

Notwithstanding the above, the competences required to perform certain procedures are sufficiently crucial to the initial management of critically ill patients that they qualify as "core" in emergency medicine. If core procedures are not regularly performed by emergency physicians, the local emergency medicine program should provide regular training with models, refresher courses and/or clinical exposure to these procedures in other settings to ensure that emergency physicians acquire and maintain a sufficient competence level.

Some competences required to perform procedures may be described as 'aspirational'. These competences are within the scope of paediatric emergency medicine and valuable for paediatric emergency physicians to master. While knowledge pertaining to these procedures (e.g., indications, steps, complications) may be expected from all specialists in paediatric emergency medicine, the psychomotor skills required to perform them are not. These are expected to be at Entrustable Professional Activity level 3. Certain 'aspirational' procedural skills should be taught and supervised with assistance from other specialties; for example, anaesthetics can support delivering teaching on regional blocks.

Whether the emergency physician ought to perform a procedure or not hinges on multiple factors. The competence of any given physician to perform a given procedure lies on a spectrum ranging from

observer to independent competence. The degree of difficulty to perform a given procedure in a clinical context lies on a spectrum as well, depending on patient characteristics and clinical setting. The risks and benefits for the patient of different management strategies depend on the condition's acuity, the patient's comorbidities and medications, the expected clinical courses, and the availability of local expertise and equipment. Judicious decision-making regarding procedure performance includes recognizing circumstances when it is in the patient's interest to have the procedure performed by someone with greater competence, or not at all.

The role of point-of-care ultrasound is increasingly recognised. Some pathological entities that a specialist in P-EM should be able to identify to enable immediate care to be initiated are listed below. The point of care ultrasound is not expected to be a comprehensive examination. The interpretation is not expected to be at the formal diagnostic standard that will be provided by radiology specialists and wherever possible the emergency physician will wait for the formal report.

✓ The levels of competencies for each of the procedural skills in the table below are either essential or aspirational.

[e,p]: e=emergency medicine; p=paediatrics; these are curriculum items that are also covered in core training for emergency medicine and/or paediatrics. For curriculum items without 'e' or 'p' allocation, it is assumed these competencies would not necessarily be covered by the emergency medicine or paediatrics core curricula and need covering during P-EM training. Importantly, the final Entrustable Professional Activities for all procedural skills should reflect competencies for performing these procedures in 1) emergency medicine environment AND 2) children and young people.

Level of competencies: degree of required competency
Essential: Entrustable Professional Activity level 4 required at the end of training
Aspirational: Entrustable Professional Activity level 3 required at the end of training

Procedural skills	**Essential**	**Aspirational**
Advanced life support/resuscitation procedures:		
Manual airway clearance manoeuvres;	✓ e,p	
Airway insertion;	✓ e,p	
Heimlich manoeuvre;	✓ e,p	
Oxygen delivery techniques;	✓ e,p	
Orotracheal and nasotracheal intubation (including RSI and paralysis);	✓ e,p	
Use of supraglottic devices(e.g. laryngeal mask airway);	✓ e	
Mechanical ventilation;	✓	
Use of Continuous Positive Airways Pressure;	✓ e,p	
Replacement of tracheostomy tube;	✓	
Needle thoracentesis;	✓ e	
Tube thoracostomy (chest drain placement);	✓ e	
Intraosseous line insertion;	✓ e	
Direct current electrical cardioversion defibrillation;	✓	
Central intravenous line insertion;	✓ e	
Cricothyrotomy and percutaneous trans-tracheal ventilation;	✓	

Finger thoracostomy;	✓ e	
Thoracotomy;		✓
External cardiac pacing;		✓
Pericardiocentesis.		✓
Monitoring coagulation with TEG		✓
Basic paediatric emergency procedures		
Electrocardiogram	✓ e,p	
Peripheral intravenous access in newborns and children	✓ p	
Capillary blood sampling in newborns and children	✓ p	
Urine analysis with dipstick	✓ e,p	
OMFS - Oral and Maxillofacial Surgery and Dentistry:		
Re-implantation of tooth;	✓ e	
Splinting of tooth;	✓ e	
Reduction of temporomandibular joint dislocation;	✓ e	
Facial laceration repair and wound management including tongue, lips, eyebrows;	✓ e	
Ear Nose and Throat (ENT) procedures:		
Control of epistaxis with cautery, anterior packing, posterior packing and balloon replacement:	✓ e	
Cerumen removal	✓ e	
Incision and drainage of auricular and nasal septum haematoma;	✓ e	

Aural wick insertion.		✓
Foreign body removal: Nose; Ear; In soft tissue; Eye; Ring removal; Wound.	 ✓ e ✓ e ✓ e ✓ e ✓ e ✓ e	
Gastrointestinal procedures: Oro/nasogastric tube replacement; Gastrostomy tube replacement; Hernia reduction;	 ✓ e,p ✓ ✓	
Gastric lavage; Reduction of rectal prolapse.		✓ e ✓ e
Genitourinary: Paraphimosis reduction; Urethral catheterisation.	 ✓ e ✓ e,p	
Minor surgical procedures: Infiltration of local anaesthetic; Incision and drainage of abscesses;	 ✓ e ✓ e	

Incision and drainage of paronychia;	✓ e	
Evacuation of subungual haematoma;	✓ e	
Wound exploration and irrigation;	✓ e	
Wound repair with glue, adhesive strips and sutures;	✓ e	
Fingernail/nailbed injuries;	✓ e	
Emergency management of amputation.	✓ e	
Musculoskeletal techniques:		
Immobilisation techniques;	✓ e	
Application of broad arm sling;	✓ e	
Application of collar and cuff sling;	✓ e	
Application of Thomas Splint;	✓ e	
Pelvic stabilisation techniques;	✓ e	
Spinal immobilisation/log rolling.	✓ e	
Fracture/dislocation reduction techniques:		
Shoulder dislocation;	✓ e	
Elbow dislocation;	✓ e	
Phalangeal dislocation;	✓ e	
Patellar dislocation;	✓ e	
Ankle reduction;	✓ e	
Plaster techniques:		

Back slabs;	✓ e	
Splints;	✓ e	
Plaster of Paris.	✓ e	
Neurological procedures:		
Lumbar puncture.	✓ p	
Ophthalmic procedures:		
Conjunctival irrigation;	✓ e	
Eversion of eyelids;	✓ e	
Use of slit lamp.	✓ e	
Fundoscopy	✓ e,p	
Contact lens removal;		✓ e
Lateral canthotomy		✓ e
Pain relief and sedation:		
Pain scoring;	✓ e,p	
Non-pharmacologic measures;	✓ e,p	
Pharmacologic approaches;	✓ e,p	
Local anaesthetics;	✓ e	
Regional nerve blocks: including digital, auricular blocks	✓ e	
Regional nerve blocks: including scalene, paravertebral, and femoral blocks; [joint assessment with anaesthetics]		✓ e
Procedural sedation techniques;	✓ e	

Rapid tranquilisation.		✓ e
POCUS		
Cardiopulmonary Resuscitation	✓ e	
Focused cardiac ultrasound	✓ e	
pericardial fluid/tamponade	✓ e	
dilated right ventricle	✓ e	
decreased contractility/left ventricular function	✓ e	
inferior vena cava assessment	✓ e	
Lung ultrasound:	✓ e	
pleural fluid	✓ e	
pulmonary consolidation	✓ e	
pneumothorax	✓ e	
interstitial syndromes		✓ e
(e)FAST ((extended) Focussed Assessment with Sonography in Trauma)	✓ e	
Abdominal ultrasound:		✓ e
hydronephrosis		✓ e
distended urinary bladder		✓ e
abdominal aorta measurement		✓ e
gallstones		✓ e
cholecystitis		✓ e

small bowel obstruction		✓ e
intrauterine pregnancy		✓ e
Soft-tissue ultrasound:		
foreign body	✓ e	
fluid collection/abscess		✓ e
cellulitis		✓ e
proximal deep venous thrombosis		✓ e
Ultrasound-guided procedures:		
femoral nerve blocks^		✓ e
scalene and paravertebral nerve blocks^		✓ e
^this requires understanding of neurosonoanatomy at aspirational level		
peripheral/central vascular access	✓ e	
pericardiocentesis		✓ e
Musculoskeletal ultrasound^^		✓ e
^^Identification of fracture, dislocation, joint effusion, tendon injury		
Ocular ultrasound^^^		✓ e
^^^Identification of globe rupture, intraocular foreign body, retinal detachment, elevated intracranial pressure, eye movement, vitreous haemorrhage, pupillary reflex *[in joint assessment with ophthalmology specialist]*		

Glossary

ACAT	Acute Care Assessment Tool
ALARA	As Low As Reasonable Achievable
CanMEDS	https://www.royalcollege.ca/en/standards-and-accreditation/canmeds.html
CbD	Case-based Discussion
CESP	Confederation of European Specialists in Paediatrics
DKA	Diabetic Keto-Acidosis
DoC	Discussion of Correspondence
DOPS	Directly Observed Procedural Skills
EAP	European Academy of Paediatrics
EBP	European Board of Paediatrics
ED	Emergency Department
ENT	Ear Nose and Throat
ESLE	Extended Supervised Learning Event
EU	European Union
EuSEM	European Society of Emergency Medicine
HAT	Handover Assessment Tool
IRMER	Ionising Radiation Medical Exposure Regulations
LEADER	Leadership in a team; Effective services; Acting in a team; Direction setting; Enabling improvement; Reflection
Mini-CEX	Mini-Clinical EXamination
MSF	Multi-Source Feedback

NTA	National Training Authority
OMFS	Oral and Maxillofacial Surgery
PDP	Personal Development Plan
P-EM	Paediatric Emergency Medicine
P-EP	Paediatric Emergency Physician
PICU	Paediatric Intensive Care Unit
RSI	Rapid Sequence Intubation
STI	Sexually Transmitted Infection
TPD	Training Programme Director
UEMS	Union Européenne des Medicins Specialistes
UTI	Urinary Tract Infection
WTE	Whole Time Equivalent