European Training Requirements (ETRs) for Paediatric Rheumatology

European Standards of Postgraduate Medical Specialist Training
(old chapter 6)

Participating Organisations

UEMS – European Union of Medical Specialists

EAP – European Academy of Paediatrics, Pediatric section of U.E.M.S.

PReS – Paediatric Rheumatology European Society

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INTRODUCTION

UEMS 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.

UEMS and its Postgraduate Medical Specialists Training programmes. 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.

The linkage between the quality of medical care and quality of training of medical professionals. 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.

UEMS and European legislation facilitating the mobility of medical professionals. 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.

Importance of making a distinction between Knowledge and Competency in ETR documents. 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).

Overlapping of learning outcomes and competencies. 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.

UEMS ETRs and national curricula. 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.

Importance of collaboration with other representative European medical bodies. 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.

Conclusions. 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.

Specialty of Paediatric Rheumatology

Paediatrics is an independent medical specialty based on the knowledge and skills required for the prevention, diagnosis and management of all aspects of illness and injury affecting children of all age groups from birth, through adolescence and up to the age of 18 years. Paediatrics also encompasses child health and covers growth, development, health promotion and prevention of disease. The influence of the family and other environmental factors also play a large role in development and for those children with chronic conditions, many require life-long management with smooth transition of care from paediatric to adult services.

A Paediatric Rheumatologist serves as a clinical expert with the ability to diagnose, manage, and prevent a wide spectrum of inflammatory and non-inflammatory conditions affecting the joints, muscles, and connective tissues in children and adolescence. Recognizing the multidimensional and interdisciplinary nature of Paediatric Rheumatology, the specialist possesses a comprehensive understanding and proficiency that surpasses the confines of individual bodily systems and specific age demographics. The subspecialty requires expertise in clinical immunology, genetics, imaging, and the long-term multidisciplinary management of chronic conditions.

The Paediatric Rheumatologist demonstrates adept clinical reasoning, ensuring that diagnostic and therapeutic approaches align with the principles of evidence-based and economical medical care and exercises caution to avoid unnecessary or detrimental procedures or treatments. Adhering to both national and international standards, the specialist acknowledges their strengths while remaining

cognizant of the limitations inherent in their knowledge and skills, thereby facilitating appropriate referrals to other specialists when warranted.

Therapeutic decision-making requires balancing efficacy, safety, and long-term outcomes. For example, the use of biologic agents (e.g., TNF inhibitors, IL-6 blockers) demands vigilance for potential side effects, such as immunosuppression or secondary malignancies, while ensuring adherence to evidence-based guidelines from organizations like PRINTO (Paediatric Rheumatology International Trials Organisation) and CARRA (Childhood Arthritis and Rheumatology Research Alliance). Non-pharmacological interventions, including physiotherapy, occupational therapy, and psychological support, are integral to holistic care. Transitional care—preparing adolescents to navigate adult rheumatology services—is another key responsibility, requiring collaboration with adult rheumatologists to address developmental, psychological, and logistical challenges.

Continual updating of knowledge and skills is a priority for the Paediatric Rheumatologist.

Quality improvement is also central to this role. The Paediatric Rheumatologist must audit clinical outcomes, participate in registries (e.g., Eurofever for autoinflammatory diseases), and advocate for equitable access to cutting-edge therapies across socioeconomic and geographic divides. By integrating digital health tools, such as remote monitoring apps or teleconsultations, the specialist ensures continuity of care for families in rural or underserved regions.

We believe therefore that all doctors practising Paediatric Rheumatology require a solid basic training in General Paediatrics, as set out by many National Training Authorities (NTAs), and in the recommended European Common Trunk Syllabus, approved by the European Academy of Paediatrics - Union Européenne des Médecins Spécialistes (EAP-UEMS). This basic paediatric training, which should be a minimum of 3 years duration, should be the prelude to specialist training, and will underpin many of the principles set out in this specialist syllabus.

Aims of the speciality

The purpose of establishing European Training Requirements (ETRs) for trainees, trainers, and training institutions in Paediatric Rheumatology is to:

- Enhance the standard and uniformity of care provided to children and adolescents with rheumatic, autoimmune, autoinflammatory, and systemic inflammatory conditions.
- Support alignment and comparability of paediatric rheumatology training across European countries.
- Offer a coherent training framework for countries or regions where formalised national training pathways in paediatric rheumatology are not yet available.
- Set clearly defined expectations regarding the knowledge base, clinical expertise, and professional competencies required for independent practice in paediatric rheumatology.
- Encourage the development and collaboration of a European network of accredited paediatric rheumatology training centres and centres of excellence.

Procedure of ETR Decelopment/Revision

This document sets out the minimum requirements for training in Tertiary Care Paediatric Rheumatology. Paediatric Rheumatology is a subsection of the Tertiary Care Group of the EAP-UEMS through the European Board of Paediatrics (EBP).

The initial European Training Requirements (ETR) for Paediatric Rheumatology were endorsed by UEMS in 2018, when the syllabus was competed and approved.
The syllabus has now been revised. The updated version has been prepared in 2024 by the Education and Training Committee of the Paediatric Rheumatology European Society (PReS).

Composition of the syllabus subcommittee

The ETRs were developed by the **Education and Training Committee of the Paediatric Rheumatology European Society (PReS):** Marija Jelusic, Jordi Antón López, Brigitte Bader-Meunier, Ezgi Deniz Batu, Raquel Campanilho-Marques, Sónia Melo Gomes, Erdal Sağ, Natasa Toplak

Revision of the ETR

Presidents of PReS : Angelo Ravell, Seza Ozen
Council of PReS: Tadej Avcin, Petra Hissink Muller, Jelena Vojinovic, Joost F Swart, Alexandre Belot, Polly Livermore

TRAINING REQUIREMENTS FOR TRAINEES

Trainee in Paediatric Rheumatology

A medical doctor who has successfully completed his / her training of at least 3 years in general paediatrics (recognised by national authorities and with official registration or board certification as a pediatrician) will be eligible for access to further specialist training in Paediatric Rheumatology. Clinical training in paediatric rheumatology of full-time equivalent and minimum of 24 months is considered adequate; in some countries a longer training may be required.

There are no current guidelines for research training within the European Syllabus of Tertiary training, however, research training (clinical or laboratory based), is highly recommended. Trainees should also have the opportunity to have training in clinical teaching and educational supervision. These arrangements will need to be negotiated at the national level.

Content of training and learning outcome

Competencies required of the trainee

CanMEDS framework

Training in Paediatric Rheumatology is structured around the CanMEDS competency framework, which defines the core professional roles of physicians. For each role, key competencies and learning objectives are specified and must be achieved by the completion of training. Progression towards independent practice is evaluated through Entrustable Professional Activities (EPAs), which reflect increasing levels of responsibility and autonomy.

Medical Expert
The Paediatric Rheumatologist applies clinical knowledge, technical skills, and professional judgement to deliver safe, effective, and high-quality care for children and adolescents with rheumatic diseases.
Core competencies include the ability to:

- Diagnose and correctly classify all forms of Juvenile Idiopathic Arthritis (JIA).
- Recognise early signs of Macrophage Activation Syndrome (MAS) and initiate urgent management.
- Diagnose and manage paediatric connective tissue diseases, including SLE, juvenile dermatomyositis, systemic sclerosis, and overlap syndromes.
- Identify and treat paediatric vasculitides such as IgA vasculitis, Kawasaki disease, and ANCA-associated vasculitis.

- Diagnose and manage autoinflammatory conditions, including FMF, TRAPS, CAPS, MKD, and related disorders.
- Perform a structured paediatric musculoskeletal examination using standardised assessment tools.
- Safely carry out intraarticular corticosteroid injections across different joints, with appropriate use of sedation or anaesthesia.
- Interpret laboratory investigations, including autoantibody profiles, complement levels, cytokine assays, and genetic testing.
- Evaluate imaging studies relevant to paediatric rheumatology, including X-ray, ultrasound, MRI, and CT.
- Prescribe, monitor, and adjust conventional DMARDs, biologic agents, and targeted therapies such as JAK inhibitors.
- Recognise and manage treatment-related adverse effects, including infection risk, toxicity, and effects on growth and development.
- Incorporate psychosocial, developmental, and family factors into comprehensive disease management.

Communicator

The Paediatric Rheumatologist builds effective therapeutic relationships with children and their families through clear, empathetic, and developmentally appropriate communication.
Key competencies include the ability to:

- Communicate effectively with patients across all developmental stages and with their caregivers, using attentive listening and tailored explanations to gather and integrate relevant clinical information.
- Adapt communication strategies to individual needs, taking into account age, cognitive development, cultural background, language, disability, and family dynamics.
- Use age-appropriate techniques, such as play-based approaches or visual aids for younger children, while supporting autonomy and shared decision-making with adolescents about treatment options and long-term implications of their condition.
- Address cultural and linguistic barriers through the appropriate use of professional interpreters and culturally sensitive communication approaches.
- Provide clear and balanced explanations of diagnoses, prognoses, and treatment options.
- Conduct difficult conversations, including delivering serious or life-altering diagnoses and discussing disease progression or escalation of therapy, in a sensitive and trauma-informed manner.
- Educate patients and families about disease mechanisms, medication adherence, and lifestyle considerations, using practical tools such as personalised care plans or simplified analogies.
- Facilitate shared decision-making by ensuring that patients and families understand risks, benefits, and alternatives to proposed treatments.
- Communicate clearly and effectively with colleagues and allied health professionals, both verbally and in writing, to support coordinated care.
- Ensure that written information and consent documentation are accessible and understandable.
- Collaborate with schools, social services, and community organisations, for example by contributing to individualised education plans or supporting school-based accommodations.

- Promote clear communication within multidisciplinary teams, enabling effective coordination with specialties such as orthopaedics, ophthalmology, and allied health services.

Collaborator

Recognising the multisystem nature of paediatric rheumatic diseases, the Paediatric Rheumatologist works closely with a wide range of healthcare professionals to deliver coordinated and patient-centred care. Effective collaboration is grounded in mutual respect, clear role definition, and a shared commitment to patient safety.

Core competencies include:

- Working collaboratively with ophthalmologists, nephrologists, dermatologists, immunologists, orthopaedic surgeons, physiotherapists, psychologists, and other allied professionals involved in patient care.
    - Active participation in multidisciplinary team meetings (MDTs). The specialist must lead MDT

  meetings with humility, valuing input Physical and Rehabilitation Medicine (PRM) physicians whose focus is on functioning as well as health professionals such as nurses, psychologists, and dietitians. For instance, managing a child with JIA may require the physiotherapist to design joint-friendly exercises, the psychologist to address anxiety related to chronic pain, and the nurse to administer subcutaneous biologics. The Paediatric Rheumatologist synthesizes these contributions into a unified care plan, ensuring all interventions align with the patient's goals.
    - Professional collaboration extends beyond the hospital setting. Close cooperation with primary care paediatricians is essential to promote early recognition and timely referral of suspected rheumatic diseases, thereby minimising diagnostic delay. Engagement with patient advocacy organisations, such as ENCA, further strengthens the patient perspective in both research and health policy development.
      In addition, the Paediatric Rheumatologist plays a key role in bridging paediatric and adult services, ensuring continuity of care during transition by facilitating joint clinics, coordinated care pathways, or shared electronic health records.

Leader

The Paediatric Rheumatologist must have a clear understanding of their professional role and responsibilities within the healthcare institution. They are accountable for the comprehensive care of children with rheumatic diseases and are expected to take a leading role in advancing paediatric rheumatology services. Leadership is expressed through proactive engagement aimed at improving patient outcomes and optimising healthcare delivery.

Leadership in Paediatric Rheumatology encompasses clinical, organisational, and system-level responsibilities.

Core competencies include:

- Leading and moderating multidisciplinary team (MDT) meetings, coordinating healthcare professionals and support staff to ensure structured and effective patient management.
- Promoting patient safety in clinical practice by developing and implementing protocols to reduce medication errors and prevent hospital-acquired infections.
- Providing mentorship and supervision to junior doctors, trainees, and research fellows, including teaching procedural skills such as joint injections and supporting academic development.

- Contributing to planning processes and the allocation of healthcare resources at departmental or institutional level.
- Leading quality improvement initiatives, for example by implementing standardised treatment algorithms to reduce inappropriate or prolonged corticosteroid use in juvenile idiopathic arthritis.
- Driving service development and innovation, including the integration of novel therapies into clinical practice.
- Addressing systemic inequities in healthcare access, such as advocating for national funding of therapies for rare diseases or developing tele-rheumatology services to improve access for underserved populations.
- Demonstrating financial stewardship by balancing cost-effectiveness with high-quality care, for instance through the appropriate use of biosimilars when clinically indicated.

Health Advocate

The Paediatric Rheumatologist actively advocates for the health and well-being of children with rheumatic diseases, both at the individual patient level and within the wider healthcare system.

Competencies include:

- Advocacy conducted individually or through participation in scientific and professional rheumatology organisations. This involves identifying key determinants of health and developing comprehensive management and preventive strategies to ensure equitable access to medical and social support services.
- Recognising vulnerable populations at increased risk of rheumatic diseases and their complications, and applying principles of primary and secondary prevention.
- Supporting individual patients by facilitating access to compassionate or off-label medication use in refractory disease, and assisting families in securing appropriate educational, housing, or home adaptations for children with disabilities.
- Engaging in population-level advocacy by contributing to health policy development, including promoting adequate workforce planning, sufficient trainee positions, and vaccination strategies for immunocompromised patients.
- Assisting patients and families in navigating complex healthcare systems.
- Promoting prevention and awareness through collaboration with schools, community organisations, and primary care providers, facilitating the inclusion of children with chronic disease in educational settings.
- Raising awareness of paediatric rheumatic diseases through public and professional education initiatives, such as awareness campaigns (e.g. WORD Day), targeted educational sessions for primary care physicians
- Addressing social determinants of health, including socioeconomic deprivation, housing instability, food insecurity, and unequal access to specialised care and medication.
- Increasing awareness of rare rheumatic diseases and their psychosocial impact on affected children and their families.
- Multidisciplinary care is a core component of paediatric rheumatology, involving close collaboration with nurses, physiotherapists, psychologists, dietitians, and Physical and Rehabilitation Medicine (PRM) physicians. Trainees should understand the principles of the International Classification of Functioning, Disability and Health (ICF) and the importance of

improving functioning and reducing disability through collaboration with physical and rehabilitation medicine (PRM) specialists and multidisciplinary teams.

Scholar

The Paediatric Rheumatologist is committed to continuous learning, teaching, and the advancement of knowledge within the field of Paediatric Rheumatology. This role requires ongoing critical engagement with emerging evidence and active contribution to education and research.

Core competencies include:

- Critically appraising medical literature, clinical guidelines, and other sources of medical information to support evidence-based clinical decision-making.
- Maintaining lifelong learning in a rapidly evolving specialty, including the evaluation of novel therapeutic approaches such as JAK inhibitors or advanced cellular therapies, and integrating validated evidence into clinical practice.
- Actively sharing knowledge with medical students, trainees, colleagues, patients, and the wider community, recognising education as a central professional responsibility.
- Appreciating the importance of research and contributing to scholarly activity through participation in research projects, including clinical trials, case reports or case series, and collaborative studies.
- Contributing to the development of national or international consensus statements and clinical guidelines, thereby supporting standardisation and improvement of care.
- Fulfilling diverse educational roles, such as developing educational materials and e-learning modules for different learner levels, delivering simulation-based training for acute rheumatological emergencies, and mentoring students and trainees during clinical placements or community-based initiatives.
- Engaging in public education and knowledge translation through appropriate platforms, including written or digital media, to increase awareness of paediatric rheumatic diseases and reduce stigma.

Professional

The Paediatric Rheumatologist demonstrates a sustained commitment to high-quality, ethical, and patient-centred care for children and young people with rheumatic diseases.

Core competencies include:

- Adherence to ethical and legal standards, including informed consent, research ethics, respect for patient autonomy, and age-appropriate shared decision-making.
- Managing ethical challenges specific to paediatric rheumatology, such as off-label treatments in refractory disease and balancing adolescent autonomy with parental involvement.
- Practising cultural humility by recognising personal biases and adapting care to diverse cultural and belief systems.
- Awareness of personal limits, seeking supervision or support when appropriate.
- Maintaining personal wellbeing and resilience to ensure safe and sustainable professional practice, including strategies to prevent burnout and promote healthy work–life balance within the healthcare team.

TABLE 1: CanMEDS Roles, Competency Descriptions, and Examples

CanMEDS Role	Competency Description	Examples in Paediatric Rheumatology
Medical Expert	Demonstrates comprehensive expertise in paediatric autoimmune, autoinflammatory, musculoskeletal, and systemic inflammatory diseases, integrating clinical reasoning with developmental, psychosocial, and family-centred considerations.	• Diagnose and manage all JIA subtypes, SLE, JDM, systemic sclerosis, vasculitides, and autoinflammatory disorders. • Perform age-appropriate musculoskeletal examination, including assessment of growth and pubertal development. • Manage acute and severe complications such as macrophage activation syndrome or severe vasculitis. • Interpret immunological investigations, genetic testing, and imaging modalities (X-ray, ultrasound, MRI). • Perform intra-articular joint injections safely. • Prescribe and monitor DMARDs, biologics, and JAK inhibitors. • Apply the ICF framework and coordinate care with Physical and Rehabilitation Medicine services.
Communicator	Communicates effectively, empathetically, and appropriately with children at different developmental stages, their families, and healthcare professionals, ensuring shared understanding and culturally sensitive care.	• Explain diagnoses (e.g. JIA, SLE) using developmentally appropriate language. • Conduct trauma-informed consultations and support shared decision-making. • Use professional interpreters to address language and cultural barriers. • Deliver difficult information regarding prognosis or disease progression with sensitivity. • Provide written management and flare action plans.
Collaborator	Works effectively within multidisciplinary and interprofessional teams to ensure coordinated, patient-centred care across healthcare settings.	• Co-manage uveitis with ophthalmology. • Coordinate multidisciplinary care for systemic vasculitis or childhood-onset SLE. • Collaborate with PRM, psychology, dietetics, neurology, immunology, and other relevant specialties. • Participate in or lead MDT meetings. • Facilitate structured transition to adult rheumatology services.
Leader	Contributes to healthcare system improvement through leadership in clinical practice, quality initiatives,	• Develop and implement clinical guidelines for biologic therapies or MAS management. • Lead quality improvement projects, such as initiatives to reduce corticosteroid exposure.

	resource stewardship, and service development.	• Manage outpatient, day-care, and infusion service resources. • Promote innovative care models, including tele-rheumatology and nurse-led clinics.
Health Advocate	Identifies and addresses determinants of health at individual and systemic levels, promoting equitable access to care and improved outcomes.	• Advocate for access to therapies for rare or severe rheumatic diseases. • Support educational and social accommodations for children with fatigue, pain, or mobility limitations. • Promote vaccination strategies in immunosuppressed patients. • Identify and address social barriers to care, including socioeconomic challenges and access to specialised services.
Scholar	Engages in lifelong learning, critical appraisal, research, and education to advance paediatric rheumatology practice.	• Participate in registries, clinical trials, and guideline development. • Teach trainees, medical students, and MDT members. • Develop educational materials and e-learning modules. • Conduct audits and apply quality improvement methodologies.
Professional	Demonstrates ethical integrity, accountability, cultural humility, and commitment to professional development and well-being.	• Manage complex consent and assent processes. • Adhere to ethical standards in off-label and advanced therapies. • Maintain confidentiality, particularly in adolescent care. • Engage in reflective practice and strategies supporting professional resilience.

Levels of Competence

Competence represents a legally recognised overall capability, acquired through successive stages of education and training, and evidenced by the attainment of defined competencies. Effective performance in professional practice results from the integrated application of theoretical knowledge, technical and non-technical skills, professional behaviour, and clinical experience.

Levels of competence widely used are

- Level 1: Observation only
- Level 2: Performs with direct supervision
- Level 3: Performs with indirect supervision (supervisor immediately available)
- Level 4: Performs independently
- Level 5: Supervises others

ENTRUSTABLE PROFESSIONAL ACTIVITIES (EPAs)

This Educational Training Requirement (ETR) sets out the minimum standards for specialist training in Paediatric Rheumatology across Europe. It is designed to ensure that trainees gain the skills and competencies required to deliver safe, effective, developmentally appropriate, and evidence-based care to infants, children, and adolescents. The curriculum follows the CanMEDS framework and is implemented through Entrustable Professional Activities (EPAs), with assessment methods that support a stepwise progression towards independent practice.

The document is consistent with European Union legislation on the recognition of professional qualifications (Directives 2005/36/EC and 2013/55/EU) and on cross-border healthcare (Directive 2011/24/EU). It also reflects key principles of transparency, competency-based education, and professional mobility within Europe.

EPAs describe clearly identifiable components of professional practice that can be entrusted to a trainee once an appropriate level of competence has been demonstrated. In Paediatric Rheumatology, these activities capture the core responsibilities of the specialty and require the integration of several CanMEDS roles, including clinical assessment, procedural competence, emergency management, multidisciplinary teamwork, communication, advocacy, and ethical decision-making.
Decisions regarding entrustment extend beyond the simple completion of tasks and consider clinical judgement, professionalism, communication skills, reliability, sensitivity to developmental needs, and patient safety.

1. **Assessment and long-term management of Juvenile Idiopathic Arthritis.**
   Confidently identify and classify all forms of JIA and provide ongoing, individualised treatment, using validated monitoring tools and proactive surveillance for ocular, growth-related, and treatment-associated complications.
2. **Early recognition and acute management of Macrophage Activation Syndrome.**
   Detect evolving MAS promptly through clinical and laboratory indicators, initiate emergency immunomodulatory therapy, and coordinate urgent escalation of care while excluding alternative life-threatening diagnoses.
3. **Care of paediatric connective tissue and overlap diseases.**
   Diagnose and manage systemic inflammatory conditions such as paediatric lupus, dermatomyositis, and scleroderma, addressing multi-organ involvement and coordinating specialist input throughout the disease course.
4. **Evaluation and treatment of childhood vasculitic disorders.**
   Recognise vasculitis across the severity spectrum, initiate appropriate immunosuppressive treatment, and monitor for vascular and organ-related complications using clinical and imaging-based assessment.
5. **Management of autoinflammatory and periodic fever syndromes.**
   Identify characteristic fever patterns, use genetic investigations judiciously, and implement targeted long-term therapies while supporting families and preventing inflammatory sequelae.

6. **Comprehensive paediatric musculoskeletal examination.**
   Perform structured, age-appropriate MSK assessments and document findings consistently to support accurate diagnosis, longitudinal follow-up, and early detection of serious pathology.
7. **Delivery of intraarticular steroid therapy in children.**
   Safely administer joint injections using appropriate techniques and analgesia, ensuring procedural competence, clear communication, and effective post-procedure care.
8. **Clinical interpretation of laboratory and imaging findings.**
   Apply immunological, genetic, and imaging data thoughtfully to clinical scenarios, recognising disease-specific patterns and findings that influence diagnosis and management decisions.
9. **Individualised therapeutic planning and monitoring.**
   Develop and adjust treatment strategies that balance disease control and safety, including immunomodulatory therapies, steroid-sparing approaches, and vaccination planning.
10. **Prevention and management of treatment-related risks.**
    Monitor for infections, toxicity, and other adverse effects of immunosuppressive therapies, adapting treatment promptly and coordinating preventive strategies to minimise harm.
11. **Leadership and coordination of multidisciplinary care.**
    Organise and guide collaborative care across specialties, ensuring aligned treatment goals, clear communication, and continuity for children with complex rheumatic disease.
12. **Advanced communication with children and families.**
    Engage in clear, compassionate, and developmentally sensitive conversations, including discussions of chronic illness, uncertainty, and difficult outcomes, to support understanding and shared decisions.
13. **Structured transition to adult rheumatology services.**
    Support adolescents through a planned transfer process that promotes independence, maintains continuity of care, and facilitates effective collaboration with adult providers.
14. **Engagement in research, audit, and service improvement.**
    Contribute to clinical research and quality initiatives, using evidence appraisal and outcome evaluation to improve care standards within paediatric rheumatology.
15. **Professionalism, ethics, safeguarding, and advocacy.**
    Demonstrate ethical judgement, protect vulnerable children, address inequities in care, and model professional responsibility, resilience, and advocacy within the healthcare system.

A detailed description of the EPAs is written in Appendix 1.and in Table 2 are all EPAs are in summery.

TABLE 2. – Entrustable Professional Activities in Pediatric Rheumatology

No.	Title	Specifications	CanMEDS Roles	Target Entrustment Level	Assessment Tools
EPA 1	Diagnose and manage Juvenile Idiopathic	Takes history, performs paediatric MSK exam, orders labs/imaging, initiates DMARD/biologic	Medical Expert, Communicator, Collaborator	Level 4	Mini-CEX, CBD, MSF, portfolio

	Arthritis (all subtypes)	therapy, monitors disease activity, manages flares.			
EPA 2	Emergency recognition and management of Macrophage Activation Syndrome	Identifies early signs, orders urgent labs, initiates high-dose steroids/cyclosporine/biologics, coordinates PICU care.	Medical Expert, Collaborator, Professional	Level 4	DOPS, simulation, CBD, MSF
EPA 3	Perform comprehensive paediatric musculoskeletal examination	Conducts structured MSK exam adapted to age, development, pain, and cooperation; documents findings.	Medical Expert, Communicator	Level 4	DOPS, Mini-CEX
EPA 4	Perform intra-articular corticosteroid injections in children	Prepares patient/family, uses sedation/analgesia appropriately, performs aseptic technique, monitors safely.	Medical Expert, Professional	Level 4	DOPS, logbook
EPA 5	Interpret imaging in paediatric rheumatology	Integrates US/MRI/X-ray findings with clinical picture; recognises synovitis, erosions, osteopenia, vasculitic changes.	Medical Expert, Scholar, Collaborator	Level 3–4	CBD, imaging portfolio
EPA 6	Coordinate multidisciplinary care	Leads MDT meetings; organises referrals (ophthalmology, nephrology, PRM, psychology).	Collaborator, Leader, Communicator	Level 4	MSF, MDT audit, portfolio
EPA 7	Counsel families, deliver difficult news, support shared decision-making	Communicates prognosis, treatment escalation, risks; maintains empathy and clarity.	Communicator, Health Advocate, Professional	Level 4	Mini-CEX, MSF
EPA 8	Prescribe, monitor, and adjust immunosuppressive therapy	Selects DMARDs/biologics, manages adverse effects, coordinates vaccination, screens for infections.	Medical Expert, Health Advocate	Level 4	CBD, logbook review
EPA 9	Manage transition from paediatric to adult rheumatology	Prepares adolescents, coordinates joint clinics, ensures structured transfer documentation.	Collaborator, Leader, Health Advocate	Level 4	Transition plan audit, MSF

EPA 10	Lead or participate in research, audit, or quality improvement	Designs QI projects, presents findings, engages in research ethics.	Scholar, Leader, Professional	Level 3–4	Portfolio, presentation review
EPA 11	Demonstrate ethical and professional conduct	Handles confidentiality, assent/consent, off-label prescribing dilemmas; acts as role model.	Professional, Leader	Level 4–5	MSF, CBD, professionalism assessment

Assessment of EPAs

- Each EPA must be documented in the trainee's logbook, with supervisor comments.
- Entrustment decisions are based on repeated observation across clinical settings.
- Tools used: mini-CEX, case-based discussion, DOPS (direct observation of procedural skills), multisource feedback.
- Final certification requires that the trainee has achieved at least Level 4 in all core EPAs.

Organisation of training

Training programs must immerse future specialists in real-world scenarios and activities that integrate these roles. For example:

a. Simulation exercises: ie Managing a critically ill child with MAS, requiring rapid coordination with ICU teams.
b. Quality improvement and/or Policy projects: ie Drafting a proposal to improve transition services for adolescents.
c. Participation in audits and clinical research projects
d. Encourage participation in educational activities such as journal clubs, departmental and institutional teaching programs.
e. Encourage development of skills in basic science and lab-based research: through pursuit of higher degrees such as masters and / or PhDs in the field or short-term initiatives such as the EMERGE fellowship.
f. Presentation of research outputs in scientific meetings and/ or in scientific publications
g. Regular assessments—360-degree feedback, e-portfolio reviews, and OSCEs—will ensure trainees meet competency milestones. Continuing professional development (CPD) post-certification, such as regular participation in congresses, webinars or advanced courses such as in ultrasonography or health equity, sustains excellence.

A summary of the anticipated knowledge of a Paediatric Rheumatologist upon completion of training is outlined below. Further information on the theoretical knowledge is available in the syllabus provided in the appendix.

· Basic knowledge
- Structure and function of the musculoskeletal system
- Innate and adaptive immunity
- Pathogenesis of autoimmune and autoinflammatory diseases
- Mechanisms of tissue injury
- General principles of molecular biology
- The inter-relation of rheumatic diseases with other body systems
- Quality of life for rheumatic diseases

· Juvenile idiopathic arthritis (JIA) and it's complications
- Classification, diagnosis, differential diagnosis
- Epidemiology, aetiology, immunopathogenesis and genetics
- Clinical presentation
- Extra-articular manifestations
- Laboratory examinations
- Radiographic examinations, ultrasound and MRI imaging
- Monitoring
- Pharmacological management
- Physical and occupational therapy
- Surgery
- Prognosis
- Multidisciplinary team approach
- Impact for the family and community

• Childhood-onset systemic lupus erythematosus and other rare systemic connective tissue diseases
- Classification, diagnosis of cSLE
- Epidemiology, aetiology, immunopathogenesis and genetics of cSLE
- Clinical presentation of cSLE
- Laboratory examinations in cSLE
- Histopathology and imaging in cSLE
- Monitoring of cSLE
- Differential diagnosis of cSLE
- Management of cSLE
- Long term outcome of cSLE
- Neonatal lupus erythematosus
- Anti-phospholipid syndrome
- Classification and diagnosis of mixed connective tissue, undifferentiated connective tissue disease and overlap syndromes
- Epidemiology, aetiology, immunopathogenesis and genetics of mixed connective tissue disease, undifferentiated connective tissue disease and overlap syndromes
- Clinical manifestations of mixed connective tissue disease, undifferentiated connective tissue disease and overlap syndromes
- Laboratory examinations in mixed connective tissue disease, undifferentiated connective tissue disease and overlap syndromes

- Management of mixed connective tissue disease, undifferentiated connective tissue disease and overlap syndromes and long term outcome
- Classification and diagnosis of Sjögren's Disease

Epidemiology, aetiology, immunopathogenesis and genetics of mixed connective tissue disease

- Clinical manifestations of Sjögren's Disease
- Laboratory examinations in Sjögren's Disease
- Management of Sjögren's Disease and long term outcome

• Juvenile dermatomyositis
- Classification, diagnosis
- Epidemiology, aetiology, immunopathogenesis and genetics
- Clinical presentation
- Laboratory examinations
- Other examinations
- Monitoring
- Differential diagnosis
- Management
- Physical and occupational therapy
- Prognosis

• Systemic and localized scleroderma
- Classification, diagnosis
- Epidemiology, aetiology, immunopathogenesis and genetics
- Clinical presentation
- Laboratory examinations
- Histopathology and imaging
- Nailfold capillaroscopy
- Monitoring
- Management
- Course
- Raynaud's phenomenon

• Childhood vasculitis
- Classification and differential diagnosis of systemic vasculitides
- Epidemiology, aetiology, immunopathogenesis and genetics of systemic vasculitides
- Clinical manifestations and mimics of systemic vasculitides
- IgA vasculitis (Henoch–Schönlein purpura), Kawasaki disease, Takayasu's arteritis, polyarteritis nodosa, Behçet's disease, granulomatosis with polyangiitis
- Laboratory examinations in systemic vasculitides
- Histopathology and imaging in systemic vasculitides
- Monitoring of systemic vasculitides
- Treatment of systemic vasculitides
- Course and prognosis of systemic vasculitides

- Cutaneous vasculitis and vasculopathies
- Central nervous system vasculitis

• Other rare systemic inflammatory diseases
- Paediatric sarcoidosis
- Vitamin deficiency or excess, metabolic diseases, hematologic disorders, disorders of endocrine and exocrine glands, cystic fibrosis, coeliac disease, hyperostosis
- Rheumatic diseases associated with primary immunodeficiencies

• Infectious arthritis and osteomyelitis
- Epidemiology, aetiology and pathogenesis
- Clinical features, diagnosis and differential diagnosis
- Management
- Lyme disease

• Reactive arthritis
- Classification and differential diagnosis
- Epidemiology, aetiology and pathogenesis
- Articular and extra-articular manifestations
- Laboratory examinations and imaging studies
- Treatment and outcome
- Rheumatic fever and post streptococcal reactive arthritis

· Autoinflammatory diseases
- Classification and differential diagnosis of hereditary periodic fever syndromes
- Epidemiology, genetics and pathogenesis of hereditary periodic fever syndromes
- Clinical manifestations and complications of hereditary periodic fever syndromes
- Treatment and course of the disease of hereditary periodic fever syndromes
- Periodic fever with aphthous stomatitis, pharyngitis and adenitis (PFAPA)
- Other inherited autoinflammatory diseases
- Autoinflammatory bone disorders
- Interpretation of genetic studies according to clinical manifestations"

· Emergencies
- Differential diagnosis, investigation and practical inpatient and outpatient management of rheumatological emergencies in children
- Macrophage activation syndrome

• Non-inflammatory musculoskeletal conditions including collagen disorders
- Hypermobility
- Hypomobility
- Common overuse injuries
- Chondromalacia patellae
- Backpain

- Orthopaedic conditions including Scheuermann disease, osteochondroses, Legg-Calve-Perthes disease, slipped capital femoral epiphyses and chondrolysis
- Growing pains

• Non-inflammatory pain syndromes
- Childhood fibromyalgia
- Complex regional pain syndromes

• Transitional care for patients with chronic paediatric rheumatic diseases
- Work with adult rheumatology multidisciplinary team
- Physiological and psychological principles of puberty
- Educational, vocational and social issues
- Impact of paediatric rheumatic diseases on the adolescent development
- Transitional care process

A dedicated Appendix on the care of Adolescents and Young Adults, including training objectives relevant to transitional care, has been added to the document.

• Assessment of health status, function and quality of life outcomes in paediatric rheumatic diseases
• Laboratory investigations in rheumatic diseases
• Imaging in paediatric rheumatic diseases

- Pharmacology of drugs used for children and adolescents with rheumatic disease
- Assessment of vaccination status and recommended vaccinations regarding the disease and therapy of a patient
- Occupational and physical therapy for children with rheumatic diseaseTheoretical knowledge should encompass an understanding of functioning and disability within a biopsychosocial framework, including the WHO International Classification of Functioning, Disability and Health (ICF). Trainees should be aware of the indications for rehabilitation, including physical and occupational therapy, and understand how to access specialised paediatric Physical and Rehabilitation Medicine (PRM) services through appropriate referral pathways. This knowledge underpins a comprehensive approach to care focused on optimising function, participation, and quality of life in paediatric rheumatic diseases.
- Evaluation of functioning should address body structures and functions, activities, participation, and relevant environmental factors. Effective management requires close cooperation with PRM physicians and multidisciplinary rehabilitation teams, with particular attention to prevention of disability, optimisation of functioning, and support during care transitions, including community-based rehabilitation and telerehabilitation when applicable.

Clinical skills

- Obtain a rheumatological history from a child and parents or carer, taking into account the child's developmental stage and growth
- Perform a caring yet meticulous clinical examination of a child with suspected

rheumatic or musculoskeletal disorder; to include as a minimum, the use of pGALS as a basic examination and pREMS for individual joints

- Assess and quantify the physical function of a child with rheumatic disease
- Assess clinical features and function of all potential target organs: kidneys, lung, central nervous system, heart, blood vessels, eyes, skin, muscle, bone and joints; where necessary this will be in collaboration with other (sub)specialists
- Be able to use disease specific functional scores, outcome variables, disease activity and damage scores
- Assess pain in children and demonstrate awareness of the relevant tools for pain assessment
- Assess health related Quality of Life with disease specific or generic assessments
- Assess health related physical fitness with relevant tools/assessments
- Assess family interactions and their impact on clinical symptoms and signs
- Establishing and promoting clear referral pathways from general paediatrics to paediatric rheumatology is essential to ensure early recognition of disease and timely access to specialised care.

Prior to appointment as a "European Paediatric Rheumatologist", trainees should also master the following practical procedures:

A) Technical Skills

- Performing and interpreting joint aspiration and intraarticular corticosteroid injection.
- Clinical application and interpretation of laboratory results, including knowledge about medically important method limitations as well as on clinically guided interpretation of results:
  - Acute phase reactants (ESR, CRP, ferritin, fibrinogen).
  - Autoantibodies (ANA, anti-dsDNA, ENA, ANCA, antiphospholipid antibodies).
  - Complement studies (C3, C4, CH50).
  - Genetic testing and cytokine profiles for autoinflammatory syndromes.
  - role of point-of-care laboratory testing in acute presentations (such as CRP, ESR and urinalysis for early recognition of proteinuria)
- Use and interpret musculoskeletal imaging findings in a clinical context, based on reports and data provided by radiology specialists, with advanced image acquisition and interpretation performed in collaboration with radiology.
  - X-rays for erosions, growth disturbances.
  - Point of care musculoskeletal ultrasound for effusion and synovium (paediatric rheumatologists after completion of a certified training course are competent to independently use and interpret point-of-care musculoskeletal ultrasound)
  - MRI for inflammatory changes in joints, muscles (Trainees are expected to be familiar with the fundamentals of musculoskeletal MRI; however, MRI acquisition and comprehensive interpretation are undertaken in cooperation with radiologists specialised in paediatric musculoskeletal imaging.)
- Interpretation of nailfold capillaroscopy
- Assessment of growth, pubertal development, bone health, and psychosocial adjustment in children with chronic disease.

- Understand the clinical indications and basic principles of neuroimaging, also the relevance of imaging findings within the clinical context. The curriculum emphasises appropriate indications for neuroimaging in selected conditions with central nervous system involvement, such as CNS vasculitis, neuropsychiatric lupus, and autoimmune encephalitis and the importance of collaboration with neuroradiology who perform MRI protocols and sequence selection as well as interpretation.

Following completion of an accredited training programme, paediatric rheumatologists are competent to independently use and interpret point-of-care musculoskeletal ultrasound. Trainees are expected to be familiar with the fundamentals of musculoskeletal MRI; however, MRI acquisition and comprehensive interpretation are undertaken in cooperation with radiologists specialised in paediatric musculoskeletal imaging.

B) Optional Skills

Mastering the following skills is considered optional.

- Skin punch biopsy
- Performing pathergy test
- Intraarticular injection under imaging guidance
- Measure of the salivary flux
- Performing Schirmer's test
- Performing nailfold videocapillaroscopy

It is noteworthy that different countries and different specialist posts may require evidence of skills in additional practical procedures. It will be highly recommended to complete basic and advance musculoskeletal ultrasound and the nailfold videocapillaroscopy courses, nationally and internationally.

C) Communication skills

- Communicate with children and young people of all ages and their parents, placing emphasis on counselling skills, the explanation of the disease to the child and provision of appropriate disease education
- Communicate and empathise with parents/care givers of affected children in the emergency situation: employ appropriate counselling skills
- Communicate risks and benefits of drug treatment as well as prognosis to children and their parents
- Counselling about use of immunosuppressive treatments and impact on lifestyle (eg. contraception), and long-term risks (including unknown risk eg. malignancy)
- Communication skills for adolescent consultations

D) Management skills:

- Time management
- Chairing meetings (including teleconferences) and team working

- Appraisal, audit and governance
- Health economics and service provision

Multidisciplinary and interdisciplinary exposure

The trainee must rotate through or actively participate in joint clinics and MDT meetings with:

- Ophthalmology – for JIA-associated uveitis and other inflammatory eye disease.
- Dermatology – for lupus rash, vasculitic lesions, psoriasis, and autoinflammatory skin manifestations.
- Nephrology – for lupus nephritis, vasculitic renal disease, hypertension.
- Immunology – for overlap between autoimmunity, autoinflammation, and primary immunodeficiency.
- Orthopedics and rehabilitation medicine – management of joint deformities, physiotherapy, orthotic support.
- Psychology and psychiatry – support for adjustment to chronic illness, pain syndromes, adherence to therapy.
- Adult rheumatology – structured participation in transition clinics to ensure continuity of care.
- Radiology Interpretation of musculoskeletal imaging, especially MRI, requires close collaboration with paediatric radiology with experience in musculoskeletal system, with the paediatric rheumatologist focusing on clinical correlation and integration of radiological findings rather than independent radiological reporting. The exception would be point-of-care musculoskeletal ultrasound may be performed independently by paediatric rheumatologists after completion of a certified training programme. Suspicious or uncertain findings should be discussed with an experioenced radiologist.

Research and scholarly activity

- Take an active role in at least one clinical study
- Perform recruitment and consenting of a child or young person to an observational study or interventional trial
- Know about the roles and responsibilities of a local Principal Investigator for a trial
- Understand the roles of different observational and interventional trial design: retrospective case series, cohort studies, randomised controlled trials, randomised withdrawal trials, cross-over trials, Bayesian design
- Present research findings as a poster or oral presentation at a national or international meeting

Teaching responsibilities

- Defining aims of teaching course/programme/lecture for different audiences
- Presentation skills and preparation of teaching materials using different formats
- Educational methodologies including evaluation of teaching
- Educational supervision
- Commitment to continuing self-education, continual professional development and maintenance of competence.

- Teaching of essential clinical skills for medical students to include pGALS as a basic examination and the structured approach to more detailed joint examination (pREMS)

Professionalism:

The duty of paediatric rheumatologists toward maintaining the well-being of individuals and society should be evident in their reflective thinking, effective communication, decision-making, and risk management. They must exhibit clinical competence, humility, and a dedication to continuous professional development while promoting a healthy way of living. Adhering to ethical standards and embodying values such as integrity, altruism, and respect for diversity is crucial. They must value their own health and that of their colleagues. This will be achieved by adhering to these principles:

1. Treat individuals with medical needs respectfully and with dignity
2. Show respect towards all colleagues, whether medical, non-medical, or junior staff
3. Give care irrespective of age, gender, sexual orientation, race, disability, language, religion, political or other opinion, national or social origin, property, birth or other status
4. Protect the rights of vulnerable individuals
5. Give highest quality care with emphatic and compassion
6. Uphold the values of candor and confidentiality
7. Advance care by examining its processes and outcomes
8. Continuously maintain and update professional expertise
9. Engage in educational programmes

TABLE 3. – Domains, Learning Outcomes and Educational Methods

Domain	Learning Outcomes	Educational Methods
Clinical Immunology & Autoimmunity	Understand immunopathogenesis of paediatric rheumatic diseases; apply biomarkers and genetic tools.	Lectures, CBD, lab rotations
Paediatric Musculoskeletal Medicine	Perform MSK exam, identify abnormalities, recognise developmental variants.	Simulation, bedside teaching
Disease-Specific Management	JIA, SLE, JDM, vasculitis, systemic sclerosis, autoinflammatory diseases.	Clinics, MDTs, case reviews
Emergency Rheumatology	Recognise and manage MAS, acute vasculitis, SLE flare, pulmonary haemorrhage.	Simulation, ER rotations
Pharmacology & Therapeutics	DMARDs, biologics, JAK inhibitors, steroid stewardship.	Workshops, prescribing logs
Imaging	Interpretation of X-ray, US, MRI in paediatric rheumatology.	Radiology rounds
Procedural Skills	Intra-articular injections, aspiration, US-guided techniques.	DOPS, simulation

Rehabilitation & ICF Model	Collaborate with PRM; optimise functioning.	PRM clinics, MDT
Transition	Prepare adolescents for adult care.	Joint clinics
Ethics & Professionalism	Consent/assent, confidentiality, cultural competence.	Seminars, role-play
Communication	Deliver difficult news; shared decision-making.	Mini-CEX, simulation
Health Advocacy	Address determinants of health; support vulnerable populations.	Community projects
Scholarship	Research literacy; QI; critical appraisal.	Journal clubs, research supervision

Schedule of training

- Minimum of 2 years full-time equivalent training in Pediatric Rheumatology, after completion of General Pediatrics.
- An optional third year is recommended for those pursuing a strong academic or research focus, or for centres that integrate advanced laboratory and translational training.
- Part-time training is acceptable if approved by national authorities, but total training time must be equivalent to 2 full years.

Curriculum of training

The curriculum aims to cover training of future paediatric rheumatologists for general competencies and rheumatology-specific competencies. It should allow flexibility for personal development according to the needs of the individual, the centre and the country where the candidate is training. Defining a standard European curriculum is challenging. Some countries already have their curriculums for training in paediatric rheumatology. The European curriculum should take into account diverse health systems and clinical settings of different countries, as well as the different spectrum of skills required by national curriculums.
A curriculum for paediatric rheumatologists is based on the following principles:
- Competence in history taking, physical examination with emphasis on special rheumatological examination of joints and skin, competence in diagnostic, management and continuing care of patients with most common and also rare rheumatological diseases
- Competence in communication with children, and parents or other caregivers

Commented [1]: adolescents

- Competence in comunication, age-appropriate history and physical examination with adolescents and young adults - Competence in communication and collaboration with colleagues from the same field, with experts in other paediatric subspecialists, adult rheumatologists, geneticists, physiotherapists, psychologists inside the country and on an international level
- To practice evidence-based medicine and follow domestic and international recommendations for diagnosis and treatment of patients
- To practice cost-effective care
- To invest time into continuous education to maintain the quality of the practice
- To understand the importance of public health and preventive medicine (the importance of vaccinations)
- To be a future mentor for trainees, to teach and support them
- To understand the basic principles and importance of research work
- To understand the importance of ethics in the research

Trainees must collect proof of their achievements in the above principles which will also help them if they wish to seek employment in a country different from the country in which they trained. The same level of knowledge and competence should be requested in different countries and the curriculum of training is the fundamental background to achieve this goal.

Assessment and evaluation

The assessment of training competence is under the responsibility of NTAs, tasked with developing their own appraisal systems and assessment frameworks. All facets of training should be adequately supervised and assessed, with the purpose of ensuring a continuous progress of the trainee's knowledge and skills as well as professional conduct and ethics. Assessment of competences is defined as the process of obtaining information relative to a known objective or goal, which includes (but is not limited to) testing. Trainees should be assessed according to summative and formative elements. The latter refer to following definite criteria during a designated period of time whilst the former address the trainee's achievements at the end of a defined period or project. Evaluation refers to the process of attributing value, which is designed to provide information that will help substantiate a judgement about a given situation.

The main principles of training assessments have been agreed by the PReS and by the EAP and should include four separate components of competence: assessment of knowledge, assessment of experience and progress monitoring through logbooks, assessment of work competence (workplace assessment of skills, knowledge and attitudes during regular clinical performance) and a face-to-face oral assessment (such as annual appraisals for example).

These tools should be used routinely during the learning process, offering trainees timely and specific feedback on performance to inform on their progress and ample opportunities for discussion. Many countries hold validated end of training examinations constituting part of the assessment for certification. It is recommended that the NTAs issue a certification of completion of training (or 'Diploma') recognizing all aspects of assessment that have been satisfactorily completed.

A final examination at the end of training that covers the entire curriculum is an effective tool to define the competence of a physician trained in paediatric rheumatology.

PReS has established a paediatric rheumatology knowledge-based exam (KBE) in 2023. It is designed according to the curriculum of the PReS paediatric rheumatology syllabus and it is intended as a measure of the knowledge that should have been achieved at the end of a training in paediatric rheumatology. The PRES KBE is open to paediatricians who are doing a training program in paediatric rheumatology. Applicants will need to provide a letter of confirmation from their training institute that certifies the trainee is a qualified paediatrician, who is finishing his or her training in paediatric rheumatology. The PRES KBE is also open to already practicing paediatric rheumatologists who would like to confirm their ongoing professional development, or for revalidation. Those paediatric rheumatologists already practicing may present the certificate as paediatric rheumatologist, or attestation from the Clinical Director of the Institution, the Head of the Department or equivalent, of their position in a paediatric rheumatologist post.

End of training outcomes

Assessment in Paediatric Rheumatology training integrates both formative and summative methods to ensure that competencies and Entrustable Professional Activities (EPAs) are achieved in a structured, progressive, and reliable manner.

Medical Expert
Assessment methods: DOPS, Clinical Evaluation, Case-Based Discussion, Multi-Source Assessment

Communicator
Assessment methods: OSCE, Case-Based Discussion, DOPS, Multi-Source Assessment

Collaborator
Assessment methods: Case-Based Discussion, DOPS, Multi-Source Assessment

Leader
Assessment methods: Case-Based Discussion, Multi-Source Assessment, DOPS

Health Advocate
Assessment methods: Case-Based Discussion, Multi-Source Assessment

Scholar
Assessmen methods: Case-Based Discussion, Multi-Source Assessment, DOPS

Professional
Assessment methods: Case-Based Discussion, Multi-Source Assessment, DOPS

Logbook

Throughout the training programme, each trainee is required to maintain a structured logbook that systematically documents:

- The scope and volume of patients managed, with clear classification according to disease categories.
- Clinical procedures performed, including musculoskeletal examinations, intra-articular injections, joint aspirations, and interpretation of imaging studies.
- Participation in multidisciplinary team meetings and specialist outpatient or inpatient clinics.
- Teaching activities delivered by the trainee, as well as educational sessions attended.
- Involvement in research activities, clinical audits, and presentations at scientific meetings.

The logbook must be reviewed on a regular basis and formally validated by the educational supervisor. Completion of all mandatory components is required for eligibility for final certification.

Competency Assessment

Competency acquisition should be assessed continuously throughout the training period using a variety of assessment tools, each addressing different aspects of professional development and clinical performance. Both formal and informal reflection on these assessments is essential. Documentary evidence of achieved competencies, together with reflective commentary, should be collected and reviewed as part of the overall training evaluation.

TABLE 4. – Tools for evaluated competencies

Assesment	Purpose	Method
MiniCeX (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
DOPS (Directly observed procedural skills)	Assesses practical skills	Trainee undertakes a practical skill whilst being observed
LEADER	Focuses on leadership skills	A trainee is observed leading a team (e.g. during a resuscitation or a team meeting)
HAT (Handover assessment tool)	Evaluates handover skills	Handover episodes are supervised and discussed

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, patients and the trainee are sought

Summative Assessment

Summative assessment serves to confirm that the trainee has attained the required level of competence by the completion of the training programme.

- Annual Review of Competence Progression (ARCP): A structured annual evaluation of the trainee's progress, based on review of the training logbook, educational supervisor reports, and documented workplace-based assessment outcomes.
- Final entrustment decision: Trainers must confirm that the trainee is capable of performing all required Entrustable Professional Activities independently, corresponding to a minimum entrustment level of 4.
- Exit examination (where required by national authorities): Written, oral, and/or practical examinations may be undertaken in accordance with national training regulations.

Scholarly and Professional Development Requirements

By completion of the training programme, the trainee is expected to demonstrate:

- Presentation of at least one abstract at a recognised national or international scientific meeting.
- Completion of at least one research project or clinical audit, with results submitted for publication or presented in an appropriate academic or professional forum.
- Documented involvement in undergraduate and/or postgraduate teaching activities.
- Ongoing engagement in continuing professional development (CPD), evidenced by attendance at relevant courses, congresses, and educational workshops.

Certification

Award of final certification in Paediatric Rheumatology is conditional upon:

- Completion of the minimum required duration of training (two years full-time equivalent).
- Demonstrated achievement of all CanMEDS competencies and required Entrustable Professional Activities.
- Submission of a validated training logbook documenting adequate clinical exposure and procedural experience.
- Favourable reports from educational supervisors and satisfactory outcomes of summative assessments.
- Formal approval by the national training authority and recognition within the UEMS framework.

Governance

The oversight of an individual's training program will be managed by the Training Programme Director and the institution(s) where the program is conducted. A trainer, who meets the criteria specified, will be accountable to the Programme Director for providing the necessary training in their specialty.

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TRAINING REQUIREMENTS FOR TRAINERS

Process for recognition as trainer

Requested qualification and experience of trainers

The training staff in a centre should include at least two trainers. The Training Programme Director (TPD) must have been Paediatricians and practising Paediatric Rheumatology for at least five years.

There should be additional Trainers who should provide training across all aspects of the speciality and be research active in Paediatric Rheumatology. In some centers, an Educational Supervisor may assist the TPD in coordinating the training program for trainees. In order to provide a comprehensive education, if any specific aspect of training cannot be provided in one centre, the trainees will need to be taught at another suitable centre by a Paediatric Rheumatology trainer specifically identified for that purpose.

A Trainer is a person who holds acknowledged expertise in one or more fields of Paediatric Rheumatology. This person's contribution may be restricted to these areas of expertise. Trainers must have practised Paediatric Rheumatology for a minimum of two years.

Each center should provide a well-defined training programme to address the needs of the trainees in accordance with the available facilities of the institution. Regular reviews will be required to allow flexibility and a process to promptly identify and address any unmet educational needs. The trainer should work with the trainee to create a Personal Development Plan (PDP).

Trainers are expected to provide appraisal and assessment of progress. Appraisal consists of determining educational needs and using an objective tool to assess performance and achievements. Assessment should cover the following aspects provided in terms of:

- Training experience related to the syllabus
- Achievements related to the Personal Development Plan current plan (PDP)
- Professional achievements and career ambitions.

In order to provide appropriate individualised monitoring of the trainee, the number of trainees should not exceed the number of trainers in the centre.
The Training Programme Director and the trainers should meet with the trainee at the beginning of the programme to define the Personal Development Plan and the individual educational contract. Reviews of progress should take place at three-month intervals during the first year of training to allow the necessary adjustment measurements to be adopted.

An annual global assessment should be conducted, ideally at a National level, to review attained skills and to assess the achievement of training objectives within the teaching program. Assessments should be detailed and contain statements on the theoretical and practical experience accumulated by the

trainee. The trainee is also expected to provide an account of the training received and problems encountered (portfolio). Reports will be submitted to the TPD or national body.

Core competencies for trainers

Trainers in the field of Paediatric Rheumatology require a comprehensive understanding of all aspects of the specialty, encompassing both its clinical and academic dimensions. It is imperative that these trainers are not only proficient in the discipline itself, but are also thoroughly trained in the principles and practices of medical education. They should engage in continuous professional development to enhance their educational skills, as well as participate in conferences, and actively take part in professional development initiatives. A regular act as lecturers to peer audiences would be beneficial. Such activities contribute to maintaining a high standard of knowledge dissemination and pedagogical practice.

Programme directors and trainers should also have appropriate preparation in medical education. It is recommended that they complete a recognised “Training the Trainer” course or an equivalent programme in clinical education covering supervision of trainees, provision of feedback, and workplace-based assessment.

Responsibilities of trainers :

- Provide direct and structured supervision of clinical and academic training. An effective trainer must demonstrate advanced mentorship skills and be capable of fostering a safe, supportive, and inclusive learning environment that promotes both academic excellence and personal growth.
- Offer regular feedback to the trainee, including structured evaluations. Trainers should be adept at identifying and addressing the individual learning needs of their trainees, tailoring educational strategies accordingly to optimise learning outcomes. In addition, they must provide clear, constructive guidance to support trainees in achieving their academic, clinical, and professional development goals.
- Validate and sign the trainee’s logbook at regular intervals.
- Facilitate exposure to the full spectrum of pediatric rheumatic diseases.
- Support trainee participation in research, teaching, and international collaboration. Trainers must exhibit a high level of scientific literacy and critical appraisal skills. They should possess the ability to evaluate new data presented in scientific publications with a rigorous and discerning approach, differentiating between findings of significant clinical relevance and those of limited applicability. It is equally important that trainers impart these critical evaluation skills to their trainees, enabling them to independently assess new information and integrate valuable evidence into their clinical practice. To this end, trainers should also have a sound understanding of basic statistical concepts and methods, which are essential for the accurate interpretation of research findings and for the meaningful and appropriate application of new knowledge to everyday clinical work.
- Ensure that training is delivered in accordance with UEMS ETR standards.

Overall, these combined competencies—spanning clinical expertise, educational skill, scientific acumen, and leadership ability—are fundamental to ensuring that trainers in Paediatric Rheumatology can contribute effectively to the education, development, and professional formation of the next generation of specialists in the field.Trainers must demonstrate a commitment to medical education, including teaching, supervision, and assessment.

Trainer–trainee ratio

- The recommended ratio is 1 trainer for every 1–2 trainees to ensure adequate supervision.
- Larger ratios are acceptable only if there are multiple trainers with shared responsibility.

Quality management for trainers

General principles

The Training Program Director is responsible for ensuring and maintaining the quality of the paediatric rheumatology training program. The educational work of trainers and Training Programme Directors must be appraised on at least an annual basis within their institution, according to local regulations.

Appointment and recognition of trainers

Trainers, supervisors, and teachers must be officially recognized within their training institution. The skills, responsibilities, and duties required for each position must be clearly specified. Transparent procedures should be in place for the appointment of each role, specifying the competencies required for each position.

Competencies and continuing education

- Core competencies include medical expertise and regular updating of educational skills.
- Institutions must ensure that trainers have access to:
    - Regular training opportunities,
    - Sufficient time and resources to support their educational role.
- Continuing education should be promoted through:
    - Regular curriculum updates aligned with the latest medical advances and methodologies,
    - Training opportunities provided by national and international paediatric rheumatology societies.

Evaluation and feedback

The quality of training should be evaluated regularly. Trainers, supervisors, and teachers should receive regular and constructive feedback on their performance to ensure progressive professional development. This quality assessment should include input from trainees through methods such as interviews and requests for feedback, as well as monitoring of trainees' progress under the trainer's supervision.

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TRAINING REQUIREMENTS FOR TRAINING INSTITUTIONS

(if not covered by EU Directive on Professional Qualifications)

Process for recognition as training centre

Requirement on staff and clinical activities

Clinical activities requirements
A full training center must provide adequate experience in all fields of Paediatric Rheumatology including acute and emergency care. Training centres must have a sufficient throughput of patients, an appropriate case-mix to meet training objectives, and be adequately resourced with teaching staff. The training must expose the trainee to a broad range of clinical experience.

A group of related institutions can be considered as a centre and each constituent considered as a unit contributing one or more modules for training. Those Training Units are institutions that provide training in one or more aspects (Modules). They must provide adequate exposure to address the learning needs of trainees for each module and provide access to appropriately experienced teachers.

The centre must have access and working relationships with other relevant specialities such as imaging, ophthalmology, nephrology, cardiology, pulmology, gastroenterology, neurology, dermatology, orthopaedic surgery, physical medicine and rehabilitation, laboratory medicine, pathology and (clinical) molecular genetics. Demonstration of involvement of other members of the multidisciplinary team (particularly specialised nurse(s), physical and occupational therapists, paediatric dietician, social worker, and psychologist) is essential for recognition.

Scientific activities requirements
The centre must provide evidence of on-going clinical research, access to basic research, teaching and educational supervision. The centre will be responsible for a regular and planned programme of teaching with participation in regional / national meetings.

Composition of Training staff and trainee/trainer ratio

- The training staff in a Centre should include at least two trainers.
- To provide appropriate individualised monitoring of the trainee, the number of trainees should not exceed the number of trainers in the centre. (Trainee / trainer ratio of maximum 1).

The Training Programme Director (TPD) should have a minimum of 5 years of experience in practicing Paediatric Rheumatology and must hold a paediatric specialist accreditation.

Requirement on equipment, accommodation

Institutions must provide:

- Access to ophthalmology, nephrology, dermatology, immunology, orthopedics, rehabilitation, psychology, and physiotherapy services.
- Imaging facilities: ultrasound, MRI, CT, PET as required.
- Pediatric intensive care and emergency facilities.
- Access to laboratory diagnostics, including immunology and genetics.
- Access to vaccination and infection prevention programmes.

Academic and educational environment

A training center must be well-equipped and supported to facilitate the clinical practices expected of such an institution, thereby ensuring the provision of essential educational opportunities for trainees. This includes having advanced medical equipment, diagnostic tools, treatment facilities, and technological resources necessary for comprehensive paediatric rheumatology training.
Training institutions should provide a library and internet facilities with access to the latest global scientific literature, including prominent international Paediatric *Rheumatology* journals.

Basic textbooks in Paediatric Rheumatology should be readily available and there should be easy access to a comprehensive reference library either in paper or electronic format. They should also offer essential physical infrastructure for trainees, such as dedicated office spaces with computer access and quiet study areas.

Research environment

Given the importance of research in Paediatric Rheumatology, trainees should gain a thorough understanding of the design and execution of scientific research, either within their training institution or through collaborations with other centres or universities. Training programs should be flexible enough to accommodate periods of part-time research.
Institutions must support trainee participation in at least one research or audit project. Access to ongoing national and international registries and collaborations must be available.

Quality management within training institutions

Accreditation and reaccreditation by the national competent authority

For each EU Member country, a list of centres, units, training directors, tutors and teachers should be compiled and updated on an annual basis. Each centre is characterised by the available modules or areas of teaching activity, tutors and teachers available and the size of the clinical practice as defined by the needs of the trainee.

Accreditation will initially be given by the NTA and ultimately approved by EAP-UEMS.

Clinical Governance
Effective clinical governance within paediatric rheumatology training programs rests upon collaborative oversight by the Training Programme Director (TPD) and the involved institutions. The TPD assumes primary responsibility for the program's governance, ensuring that it aligns with established standards and objectives. Concurrently, the hosting institutions are accountable for providing an environment conducive to high-quality training delivery.

Each trainer bears direct responsibility to the TPD for imparting comprehensive training within their respective areas of specialization. This accountability necessitates a structured approach to workforce management within training institutions, accommodating the specific demands of specialty training. Central to this approach is the effective management of workload, where priority is consistently given to fostering a supportive environment for training activities.

Manpower planning as part of the defined national manpower plan
In the realm of paediatric rheumatology training, effective manpower planning is fundamental to the success and sustainability of specialised educational programs. It is recommended that training institutions appoint a dedicated coordinator tasked with orchestrating the composition, implementation, and supervision of the specialty training program. This coordinator plays a pivotal role in ensuring that the program meets defined educational goals and adheres to regulatory standards.

Clear delineation of roles between trainers and trainees is crucial to the smooth operation of the training program. It is imperative that both parties understand their respective responsibilities and expectations. To facilitate optimal learning outcomes, scheduled sessions specifically allocated for interactive specialty training sessions should be established. The frequency and duration of these sessions should be tailored to local infrastructural capabilities and resource availability, ensuring consistency and depth in training delivery.

Manpower planning within paediatric rheumatology training programs falls under the jurisdiction of individual member states, each tasked with assessing and responding to the specific regional and national needs for skilled specialists in the field. This adaptive approach ensures that the allocation of resources and the deployment of personnel align closely with evolving healthcare demands and educational priorities.

Regular report on teaching and scientific activities sent to relevant authorities
Regular reports should be submitted annually. Assessments should be detailed and contain statements of theoretical and practical experience accumulated by the trainers and trainees. Reports will be submitted to the TPD or national body.

External auditing
The Paediatric Rheumatology European Society (PReS) is leading an initiative to conduct visits and provide accreditation for paediatric rheumatology training centers. This initiative will involve collaboration with the European Academy of Paediatrics (EAP). During these visits, the evaluation

groups will review different aspects of the training programs, including curriculum, assessment procedures, teaching methods, and trainee outcomes. A critical component of the external auditing process is the maintenance of a comprehensive database of all recognized training centers in Europe. The database will be updated regularly, with input from national experts. This database will serve as a valuable resource for trainees seeking to find appropriate centers for their paediatric rheumatology training. By providing up-to-date information on accredited training centers, the database will help ensure that trainees have access to all possible training opportunities. Upon completion of the audits, detailed reports will be given to the training centers, outlining their findings and recommendations. Centers that meet the required standards will receive accreditation, signaling their commitment to excellence in paediatric rheumatology training. For centers that do not initially meet these standards, the audit reports will serve as a roadmap for necessary improvements, with a follow-up planned to ensure progress. Moreover, the accreditation process will be dynamic, with regular re-evaluations to ensure that training centers continue to meet the standards of paediatric rheumatology education. As an external auditing and continuous monitoring process is already on place, a centre qualified as full member of the European Reference Network-Rare Immunodeficiency, Autoinflammatory and Autoimmune Disease Network *(ERN RITA - paediatric rheumatology stream)* should be considered a Training centre and not subject to audit by the PReS.

Transparency of training programmes
According to national and regional guidelines, UEMS highly recommends that training institutions create clear training programmes and make them accessible to the public, such as by posting them on their website. Training centres are expected to detail the training they offer, including specifics about the clinical services provided and the trainers involved. This information should cover the structure of the training programmes, the clinical or laboratory experiences available to trainees, and the support and interaction with the trainer and TPD. Additionally, there should be a designated person for prospective trainees to contact for more information about the programme.

Structure for coordination of training
A TPD is required to oversee and organize the official education program. The TPD will be supported by trainers who contribute their expertise to the program. In some centers, an Educational Supervisor may assist the TPD in coordinating the training program for trainees, ensuring the smooth delivery of educational activities.

Framework of approval – how are they approved
The content of training programs must be meticulously outlined to specify how and by whom the key achievements of the training will be assessed. This assessment process must be thorough and transparent, ensuring that the accomplishments of trainees are verified through both relevant documents and the testimony of trainers and other staff who have directly worked with the trainee. This dual approach ensures a comprehensive evaluation of the trainee's capabilities and progress.
It is essential that a European medical specialist with competence in Paediatric Rheumatology can provide adequate and universally accepted evidence of having successfully completed the training program when relocating from one European country to another. This means that the qualifications training institution awards must meet the highest standards of paediatric rheumatology training. Furthermore, the approval framework must include rigorous mechanisms for quality assurance and continuous improvement. This includes regular audits and reviews of the training institution's

curriculum, teaching methodologies, and assessment procedures. After fulfilling the whole training programme, the framework of approval must guarantee that the trainee possesses not only the required knowledge but also the clinical skills and competencies essential for the role of a paediatric rheumatologist.

The framework for approving training institutions in Paediatric Rheumatology must be detailed and multifaceted, ensuring that training programs are rigorous, comprehensive, and aligned with European standards. This will not only enhance the quality of paediatric rheumatology care but also foster a cohesive and high-standard medical community across the continent.

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Governance and quality assurance

Programme Governance
Training programmes must be formally approved and monitored by the relevant national training authority. Each accredited training centre is required to appoint a Programme Director with overall responsibility for ensuring compliance with UEMS ETR standards. A designated training committee should oversee curriculum implementation, assessment processes, and monitoring of trainee progression. National authorities should establish mechanisms to promote consistency and comparability of training across all accredited centres.
Clear governance structures are essential to safeguard educational quality and alignment with European training standards.
Key responsibilities include:

- Programme Director: Responsible for programme structure, supervision arrangements, trainee progression, and remediation processes.
- Competence Committee: Reviews documented evidence for Entrustable Professional Activities and makes formal entrustment decisions.
- Training Institutions: Must ensure access to an appropriate case mix, multidisciplinary team resources, Physical and Rehabilitation Medicine services, imaging facilities, and critical care support.
- Documentation supporting professional mobility: Includes a validated logbook, EPA certification, training portfolio, and formal supervisor reports.

Quality Assurance
Quality assurance should be maintained through a combination of internal and external review processes.

- Internal quality review: Includes regular trainee and trainer feedback, evaluation of teaching quality, and review of clinical exposure and case mix.
- External quality review: Involves periodic accreditation visits or peer-review processes, conducted at least every five years.

Outcome measures may include:

- Trainee satisfaction and performance indicators.
- Success rates in national certification or board examinations.
- Scholarly output, such as publications, conference abstracts, and participation in clinical registries.
- Patient safety indicators and relevant clinical outcome measures.

Continuous Improvement
Training centres must demonstrate an ongoing commitment to continuous programme improvement. Feedback from trainees, trainers, and external reviewers should be systematically reviewed and incorporated into curriculum development and programme updates. Close collaboration with UEMS, EULAR, and PReS is recommended to support harmonisation with European and international standards and to facilitate timely integration of emerging diagnostic tools and therapeutic advances.

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GLOSSARY – List of acronyms

ACR – American College of Rheumatology
AYA – Adolescents and Young Adults
bDMARDs – biological Disease-Modifying Anti-Rheumatic Drugs
BMD – Bone Mineral Density
CanMEDS – Canadian Medical Education Directives for Specialists
CBC – Complete Blood Count
CBME – Competency-Based Medical Education
CRP – C-reactive Protein
CTF - Common Training Framework
DMARDs – Disease-Modifying Anti-Rheumatic Drugs
DWI – Diffusion-Weighted Imaging
DOC - discussion of correspondence
DOPS - Directly observed procedural skills
EAP - European Academy of Paediatrics
EBP - European Board of Paediatrics
EEA - European Economic Area
EJD - European Junior Doctors
EPA – Entrustable Professional Activity
ESR – Erythrocyte Sedimentation Rate
ETR - European Training Requirements
EULAR – European Alliance of Associations for Rheumatology
FLAIR – Fluid-Attenuated Inversion Recovery
ICF – International Classification of Functioning, Disability and Health
ILAR – International League of Associations for Rheumatology
JDM – Juvenile Dermatomyositis
JIA – Juvenile Idiopathic Arthritis
MAS – Macrophage Activation Syndrome
Mini-CEX - mini clinical evaluation exercise
MJC - Multidisciplinary Joint Committee
MRI – Magnetic Resonance Imaging
MSK – Musculoskeletal
NGS – Next-Generation Sequencing
NMCA - National Medical Competent Authority
NTA - national training authority
NSAIDs – Non-Steroidal Anti-Inflammatory Drugs
PRINTO – Paediatric Rheumatology International Trials Organisation
PRM – Physical and Rehabilitation Medicine
SLE – Systemic Lupus Erythematosus
UEMO - Union Européenne des Médecins Omnipraticiens
UEMS - Union Européenne des Médecins Spécialistes (European Union for Medical Specialists)
UN - United Nations

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US – Ultrasound
WHO - World Health Organization
WMA - World Medical Association

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APPENDIX

APPENDIX 1. Entrustable Professional Activities (EPAs) in Paediatric Rheumatology

Prepared in alignment with UEMS Paediatric Rheumatology ETR, 2025

EPA 1 — Diagnose and Manage All Subtypes of Juvenile Idiopathic Arthritis (JIA)

Juvenile idiopathic arthritis represents the most frequent chronic rheumatic condition in childhood and requires early recognition, accurate classification, prompt initiation of therapy, and long-term follow-up in order to prevent disability, growth disturbances, uveitis, and irreversible structural damage. Owing to its heterogeneous clinical presentation, variable disease course, and immunological diversity, effective management of JIA requires advanced specialist expertise in paediatric rheumatology.

Specification
Independently assess, diagnose, classify, and manage all subtypes of juvenile idiopathic arthritis, including systemic, oligoarticular, polyarticular (RF-positive and RF-negative), enthesitis-related, psoriatic, and undifferentiated forms.

Key Tasks

- Perform a comprehensive paediatric musculoskeletal assessment, including active and limited joint counts.
- Apply ILAR classification criteria accurately.
- Recognise clinical red flags requiring urgent evaluation, such as persistent fever, rash, or organ involvement.
- Request and interpret relevant laboratory investigations (ANA, RF, HLA-B27, ESR, CRP).
- Initiate appropriate therapy using NSAIDs, corticosteroids, conventional synthetic DMARDs, and biologic agents (including anti-TNF, IL-1, IL-6 inhibitors, and CTLA4-Ig).
- Monitor disease activity using validated assessment tools (e.g. JADAS, CHAQ).
- Identify and manage disease- and treatment-related complications, including growth impairment, osteoporosis, and drug toxicity.
- Ensure appropriate screening and referral for uveitis in patients at risk.
- Provide structured long-term follow-up and manage disease flares.
- Communicate diagnosis, treatment strategy, and care plans effectively to families, schools, and members of the multidisciplinary team.

Potential Risks if Not Adequately Performed

- Delayed or incorrect classification leading to suboptimal treatment.
- Irreversible joint damage and impaired growth.
- Undetected uveitis resulting in permanent visual loss.
- Functional limitation, chronic pain, and disability.

- Significant psychosocial impact and reduced quality of life.

CanMEDS Roles: Medical Expert, Communicator, Collaborator, Health Advocate, Leader

Required Knowledge, Skills, and Attitudes

- Knowledge: ILAR classification; immunopathogenesis of JIA; treatment algorithms; indications for biologic therapies; long-term monitoring strategies.
- Skills: Paediatric musculoskeletal examination; interpretation of laboratory and imaging findings; shared decision-making; coordination of multidisciplinary care.
- Attitudes: Accuracy, vigilance, empathy, and a family-centred approach to care.

Assessment Tools: Mini-CEX, Case-Based Discussion, imaging interpretation assessment, review of JADAS scoring, portfolio evidence, multisource feedback.

Entrustment Level: Level D

Period to Expiration: Reassessment every five years or following major updates to international JIA management guidelines.

EPA 2 — Recognise, Investigate, and Initiate Emergency Management of Macrophage Activation Syndrome (MAS)

Macrophage activation syndrome is a life-threatening hyperinflammatory condition that most frequently occurs in association with systemic juvenile idiopathic arthritis, but may complicate other inflammatory diseases. Despite advances in treatment, mortality remains significant if MAS is not recognised promptly. Early identification and rapid initiation of immunosuppressive therapy, including corticosteroids, cyclosporine, and IL-1 blockade, are crucial for patient survival.

Specification

Independently recognise the clinical and laboratory features of MAS, initiate an appropriate diagnostic work-up, commence emergency treatment, and coordinate escalation of care, including referral to paediatric intensive care when indicated.

Key Tasks

- Recognise early clinical warning signs, including persistent high fever, hepatosplenomegaly, lymphadenopathy, neurological symptoms, and clinical deterioration in a child with known or suspected inflammatory disease.
- Interpret key laboratory abnormalities suggestive of MAS, including markedly elevated ferritin, low fibrinogen, hypertriglyceridaemia, cytopenias, elevated D-dimer, and raised liver enzymes (AST/ALT).
- Apply validated classification criteria for MAS (EULAR/ACR/PRINTO).
- Differentiate MAS from important differential diagnoses, particularly sepsis, malignancy, and primary haemophagocytic lymphohistiocytosis.
- Initiate emergency treatment with high-dose intravenous corticosteroids.

- Start additional immunosuppressive therapy, such as cyclosporine, and consider IL-1 blockade (e.g. anakinra) where clinically indicated.
- Arrange timely transfer to paediatric intensive care in the presence of haemodynamic instability, organ failure, or rapid clinical deterioration.
- Closely monitor clinical status and dynamic laboratory trends, including ferritin trajectory, platelet count, and fibrinogen levels.
- Communicate the emergency management plan clearly and effectively with parents or caregivers and all members of the multidisciplinary team.

Potential Risks if Missed

- Rapid progression to multiorgan failure.
- Severe cytopenias with bleeding complications.
- Uncontrolled hyperinflammatory response leading to fatal outcome.
- Delay in initiating appropriate immunomodulatory therapy.

CanMEDS Roles: Medical Expert, Collaborator, Professional

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Diagnostic criteria for MAS; pathophysiology of cytokine storm; differential diagnosis including sepsis and HLH; emergency treatment protocols.
- Skills: Rapid interpretation of evolving laboratory results; emergency clinical decision-making; effective communication in high-stress situations; coordination of acute multidisciplinary care.
- Attitudes: Calmness under pressure, sense of urgency, responsibility for patient safety, and situational awareness.

Assessment Tools: OSCE (acute emergency scenario), case simulation exercises, Mini-CEX, portfolio evidence, MDT feedback, and crisis resource management evaluation.

Entrustment Level: Level D — independent practice.

Expiration: Reassessment required after three years if the activity has not been practiced, reflecting the high-risk and low-frequency nature of this emergency skill.

EPA 3 — Diagnose and Manage Paediatric Connective Tissue Diseases (SLE, JDM, SSc, MCTD)

Paediatric connective tissue diseases often present with more aggressive and multisystem involvement than their adult-onset counterparts. They require a high index of suspicion, early diagnosis, prompt initiation of immunosuppressive therapy, and close interdisciplinary collaboration in order to prevent irreversible organ damage, functional impairment, and increased mortality.

Specification

Independently assess, diagnose, and manage children and adolescents with systemic lupus erythematosus, juvenile dermatomyositis, systemic sclerosis, mixed connective tissue disease, and overlap syndromes.

Key Tasks

- Apply current ACR/EULAR classification criteria to support accurate diagnosis.
- Interpret immunological and serological investigations, including ANA, anti-dsDNA antibodies, extractable nuclear antigen panels, complement levels, and myositis-specific antibodies.
- Identify, assess, and monitor organ involvement, including renal, neurological, cardiac, pulmonary, and gastrointestinal manifestations.
- Initiate and adjust induction and maintenance immunosuppressive therapies, including corticosteroids, mycophenolate mofetil, cyclophosphamide, and biologic agents such as rituximab, in line with disease severity.
- Monitor disease activity, damage accrual, and treatment-related toxicity over time.
- Coordinate multidisciplinary care with nephrology, dermatology, pulmonology, neurology, physical and rehabilitation medicine, and other relevant specialties.
- Monitor growth, pubertal development, bone health, and psychosocial well-being throughout long-term follow-up.
- Provide counselling regarding medication adherence, ultraviolet protection, vaccination strategies, and fertility-related considerations when appropriate.

Potential Risks if Missed

- Progression to renal failure or central nervous system involvement.
- Development of calcinosis, joint contractures, or chronic muscle weakness.
- Accumulation of irreversible organ damage.
- Increased morbidity and mortality in severe disease phenotypes**.**

CanMEDS Roles: Medical Expert, Leader, Collaborator, Health Advocate

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Immunopathogenesis of connective tissue diseases; organ-specific assessment; evidence-based treatment strategies and international guidelines.
- Skills: Comprehensive systemic assessment; interpretation of complex laboratory and imaging findings; coordination of multidisciplinary care pathways.
- Attitudes: Thoroughness, clinical responsibility, empathy, and a patient- and family-centred approach.

Assessment Tools: Case-Based Discussion, Mini-CEX, MDT feedback, laboratory and imaging interpretation tasks, portfolio review.

Entrustment Level: Level D
Expiration: Reassessment required every five years.

EPA 4 — Diagnose and Manage Paediatric Vasculitides

Paediatric vasculitides encompass a broad spectrum of inflammatory vascular diseases, ranging from self-limiting conditions to severe, life-threatening disorders. Early recognition and timely initiation of appropriate therapy are key determinants of prognosis and long-term outcomes, particularly in conditions with cardiovascular or renal involvement.

Specification

Independently evaluate, diagnose, treat, and coordinate care for children with paediatric vasculitides, including IgA vasculitis, Kawasaki disease, polyarteritis nodosa, Takayasu arteritis, and ANCA-associated vasculitis.

Key Tasks

- Recognise clinical red flags suggestive of vasculitis, such as prolonged or unexplained fever, purpura, abdominal pain, hypertension, and systemic symptoms.
- Interpret laboratory findings indicative of inflammation and organ involvement.
- Request and interpret appropriate imaging studies, including echocardiography, vascular ultrasound, CT, or MRI, depending on the suspected diagnosis.
- Diagnose coronary artery involvement in Kawasaki disease and assess cardiovascular risk.
- Initiate prompt treatment for Kawasaki disease with intravenous immunoglobulin, with or without corticosteroids, according to current recommendations.
- Manage systemic vasculitides, such as PAN or ANCA-associated vasculitis, using high-dose corticosteroids and additional immunosuppressive agents, including cyclophosphamide or rituximab.
- Monitor blood pressure, renal function, inflammatory markers, and signs of end-organ damage throughout the disease course.
- Develop and implement coordinated multidisciplinary management plans in collaboration with cardiology, nephrology, infectious disease, and other relevant specialties.
- Provide structured long-term follow-up, including surveillance for relapse and late complications.

Potential Risks if Missed

- Development of coronary artery aneurysms and long-term cardiac morbidity.
- Progression to renal failure or irreversible organ damage.
- Ischaemic complications affecting vital organs.
- Stroke, uncontrolled hypertension, and poor long-term outcomes due to delayed treatment.

CanMEDS Roles: Medical Expert, Collaborator, Health Advocate

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Classification criteria for paediatric vasculitides; immunopathogenesis; principles of immunosuppressive therapy; interpretation of vascular and cardiac imaging.
- Skills: Early clinical recognition of vasculitis; integration of laboratory and imaging data; coordination of multidisciplinary care.
- Attitudes: Precision, vigilance, and awareness of the potential severity of disease.

Assessment Tools: Case-Based Discussion, OSCE (acute Kawasaki disease scenario), MDT feedback, portfolio review.

Entrustment Level: Level D

EPA 5 — Diagnose and Manage Autoinflammatory Diseases (FMF, MKD, CAPS, TRAPS, and Others)

Autoinflammatory diseases represent a group of disorders characterised by recurrent or persistent systemic inflammation driven by innate immune dysregulation. Accurate recognition of clinical patterns, appropriate use of genetic testing, and timely initiation of targeted therapy are essential to prevent long-term complications such as amyloidosis and irreversible organ damage.

Specification
Independently diagnose and manage genetically mediated and idiopathic autoinflammatory syndromes, including the assessment of acute inflammatory episodes and long-term therapeutic strategies.

Key Tasks
- Recognise characteristic clinical patterns of periodic fever syndromes, including associated systemic and organ-specific features.
- Request, interpret, and contextualise genetic testing appropriately, recognising its limitations and clinical relevance.
- Exclude infectious, malignant, and autoimmune mimics through targeted evaluation.
- Initiate appropriate first-line and targeted therapies, including colchicine, IL-1 blockade, or TNF inhibitors, according to the specific condition.
- Monitor disease activity and treatment response over time.
- Screen for long-term complications, particularly amyloidosis, through regular surveillance (e.g. proteinuria monitoring).
- Provide counselling to patients and families regarding disease triggers, treatment adherence, prognosis, and the need for family screening where appropriate.
- Coordinate long-term multidisciplinary care involving genetics, nephrology, and other relevant specialties.

Potential Risks if Missed
- Development of secondary amyloidosis with subsequent organ failure.
- Ongoing uncontrolled inflammation leading to cumulative tissue damage.
- Reduced quality of life due to recurrent inflammatory episodes.
- Inappropriate or unnecessary immunosuppression resulting from misdiagnosis.

CanMEDS Roles: Medical Expert, Communicator, Collaborator

Required Knowledge, Skills, and Attitudes (KSA)
- Knowledge: Periodic fever syndromes and diagnostic algorithms; genetic principles; IL-1–mediated inflammatory pathways.

- Skills: Pattern recognition; interpretation of genetic results; longitudinal disease monitoring; multidisciplinary coordination.
- Attitudes: Diagnostic accuracy, attentiveness to detail, and commitment to long-term patient-centred care.

Assessment Tools: Case-Based Discussion, portfolio review, multisource feedback, Mini-CEX.

Entrustment Level: Level C–D, depending on disease complexity and severity.

Expiration: Reassessment required every five years.

EPA 6 — Perform a Complete Paediatric Musculoskeletal Examination and Document Findings

A comprehensive paediatric musculoskeletal (MSK) examination is a core clinical skill in paediatric rheumatology. It requires age-appropriate techniques adapted to the child's developmental stage, level of cooperation, and pain sensitivity. Accurate examination and documentation are essential for diagnosis, treatment decisions, and longitudinal disease monitoring.

Specification
Independently perform, interpret, and document a complete musculoskeletal examination in infants, children, and adolescents, using validated paediatric assessment tools.

Key Tasks
- Conduct a structured, age-appropriate MSK examination, including inspection, palpation, assessment of range of motion, and functional evaluation.
- Assess for joint swelling, warmth, tenderness, pain, and limitation of movement.
- Evaluate gait, posture, spinal alignment, and developmental variants.
- Perform and document active and limited joint counts.
- Identify enthesitis and features of axial involvement.
- Recognise red flags requiring urgent evaluation, such as septic arthritis, malignancy, inflammatory myopathy, or fractures.
- Apply validated assessment tools, including pGALS, pREMS, and standardised joint count methods.
- Document findings clearly, accurately, and reproducibly to support follow-up and treatment monitoring.
- Explain examination findings in an understandable manner to children, families, and members of the multidisciplinary team.

Potential Risks if Missed
- Failure to recognise active arthritis or inflammatory disease, leading to delayed treatment and joint damage.
- Misdiagnosis or inappropriate referral.
- Inconsistent or inadequate documentation compromising longitudinal care.
- Suboptimal treatment decisions due to incomplete clinical assessment.

CanMEDS Roles: Medical Expert, Communicator

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Joint anatomy; normal developmental variations; structured MSK examination approaches; red flag conditions.
- Skills: Gentle, systematic examination techniques; use of validated tools; clear clinical documentation; child-centred communication.
- Attitudes: Patience, attentiveness, empathy, and respect for the child's comfort and dignity.

Assessment Tools: Direct Observation of Procedural Skills (DOPS), Mini-CEX, portfolio-based documentation review.

Entrustment Level: Level D

Expiration: Reassessment required every five years.

EPA 7 — Perform Intra-articular Corticosteroid Injections in Children

Intra-articular corticosteroid injections are a core therapeutic intervention in paediatric rheumatology, allowing rapid control of synovitis and prevention of joint damage. In children, these procedures require specific expertise in anatomy, pain management, and sedation, as well as careful communication with both the child and caregivers.

Specification
Independently perform safe and effective intra-articular corticosteroid injections in large, medium, and small joints in children, using appropriate analgesia or sedation and adhering to strict procedural safety standards.

Key Tasks

- Select appropriate joints for injection based on clinical disease activity and imaging where indicated.
- Obtain informed consent from parents or caregivers and assent from the child, ensuring understanding of the procedure and potential risks.
- Choose the appropriate corticosteroid preparation and dose according to joint size and clinical indication.
- Prepare and maintain a sterile field and follow infection prevention protocols.
- Perform injections using landmark-based or ultrasound-guided techniques as appropriate.
- Coordinate sedation or analgesia in collaboration with anaesthesia or sedation teams.
- Document the procedure accurately, including joint injected, medication used, dose, and any immediate complications.
- Provide clear post-procedure care instructions, including activity modification and warning signs of complications.
- Monitor for and manage complications such as infection, bleeding, post-injection flare, or skin atrophy.

- Integrate post-procedure rehabilitation planning in collaboration with physiotherapy or PRM services.

Potential Risks if Missed
- Persistent local inflammation leading to progressive joint damage.
- Procedural complications due to inadequate technique or asepsis.
- Psychological distress or needle-related trauma in the child.
- Septic arthritis or other serious adverse events.

CanMEDS Roles: Medical Expert, Professional

Required Knowledge, Skills, and Attitudes (KSA)
- Knowledge: Joint anatomy; corticosteroid pharmacology; indications and contraindications; sedation and analgesia protocols.
- Skills: Injection techniques; ultrasound guidance where applicable; pain and anxiety management; procedural documentation.
- Attitudes: Calmness, reassurance, procedural confidence, and respect for the child's experience.

Assessment Tools: Direct Observation of Procedural Skills (DOPS), OSCE, supervisor sign-off, portfolio of documented procedures.

Entrustment Level: Level D

Expiration: This procedural skill requires reassessment after three years without practice.

EPA 8 — Interpret Laboratory and Imaging Studies Relevant to Paediatric Rheumatic Diseases

Accurate interpretation of laboratory investigations and imaging studies is central to diagnosis, disease monitoring, and therapeutic decision-making in paediatric rheumatology. Misinterpretation may lead to delayed diagnosis, inappropriate treatment, or failure to recognise organ-threatening complications.

Specification
Independently interpret laboratory, immunological, genetic, and imaging studies relevant to paediatric rheumatic diseases and integrate findings into clinical decision-making.

Key Tasks
Laboratory investigations
- Interpret inflammatory markers, including ESR and CRP, in the appropriate clinical context.
- Analyse immunological investigations such as ANA, ENA profiles, anti-dsDNA antibodies, complement levels, RF, anti-CCP antibodies, and HLA-B27.
- Recognise laboratory patterns suggestive of specific diseases, including SLE, JDM, autoinflammatory syndromes, and vasculitides.

- Monitor safety laboratory parameters, including full blood count, liver enzymes, and renal function, in patients receiving immunosuppressive therapies.

Imaging studies

- Interpret paediatric musculoskeletal ultrasound findings, including synovitis, effusions, tenosynovitis, and enthesitis.
- Recognise MRI features of inflammatory arthritis, sacroiliitis, myositis, and early structural damage.
- Identify radiographic changes such as erosions, growth disturbances, and alignment abnormalities.
- Collaborate effectively with radiology services to request appropriate imaging modalities and interpret complex findings.

Potential Risks if Missed

- Incorrect or delayed diagnosis.
- Over-treatment or under-treatment of inflammatory disease.
- Failure to detect organ involvement, including nephritis, interstitial lung disease, or inflammatory myopathy.
- Missed early sacroiliitis or risk markers for uveitis.

CanMEDS Roles: Medical Expert, Scholar, Collaborator

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Principles of immunological testing; imaging modalities and disease-specific patterns; normal developmental variations.
- Skills: Integration of laboratory and imaging data with clinical findings; effective multidisciplinary communication.
- Attitudes: Accuracy, analytical thinking, and clarity in clinical interpretation.

Assessment Tools: Imaging interpretation assessments, Case-Based Discussion, Mini-CEX, portfolio review.

Entrustment Level: Level C–D, depending on complexity and clinical context.

Expiration: Reassessment required every five years.

EPA 9 — Design, Monitor, and Adapt Treatment Plans (DMARDs, Biologics, Targeted Therapies, Vaccination)

Management of paediatric rheumatic diseases requires advanced expertise in immunology, pharmacology, treatment sequencing, and long-term safety monitoring. The therapeutic landscape is rapidly evolving, particularly with the introduction of biologic agents and targeted therapies, making continuous reassessment of treatment strategies essential.

Specification

Independently design, monitor, and adapt individualised, evidence-based treatment plans for children with rheumatic diseases, incorporating conventional synthetic DMARDs, biologic agents, targeted therapies, corticosteroid tapering strategies, and vaccination planning.

Key Tasks

- Select appropriate first-line and second-line therapies based on diagnosis, disease activity, prognostic factors, and comorbidities.
- Prescribe and monitor conventional synthetic DMARDs, including methotrexate, leflunomide, and sulfasalazine.
- Initiate biologic therapies such as anti-TNF agents, IL-1 and IL-6 inhibitors, CTLA4-Ig, and anti-IL-17 agents in accordance with current guidelines.
- Prescribe and monitor targeted synthetic therapies, including JAK inhibitors, where indicated.
- Adjust treatment regimens based on disease activity measures, treatment response, and adverse events.
- Implement corticosteroid-sparing and tapering strategies to minimise long-term toxicity.
- Monitor safety laboratory parameters and screen for treatment-related adverse effects.
- Assess immunisation status and manage vaccination schedules in immunosuppressed children.
- Collaborate with pharmacists, infectious disease specialists, and immunology teams to optimise treatment safety.
- Educate patients and families regarding treatment rationale, adherence, potential risks, and safety monitoring.

Potential Risks if Missed

- Uncontrolled inflammatory disease with progressive tissue damage.
- Increased risk of serious infections.
- Growth impairment and steroid-related toxicity.
- Inappropriate use or overuse of corticosteroids.
- Gaps in vaccination coverage leading to preventable infections.

CanMEDS Roles: Medical Expert, Health Advocate

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Pharmacology of DMARDs, biologics, and targeted therapies; immunological mechanisms; treatment guidelines; vaccination recommendations.
- Skills: Treatment planning; risk–benefit assessment; safety monitoring; clear communication regarding complex treatment decisions.
- Attitudes: Responsibility, vigilance, and balanced consideration of therapeutic benefit and potential harm.

Assessment Tools: Case-Based Discussion, Mini-CEX, prescription review, portfolio evidence.

Entrustment Level: Level D

Expiration: Reassessment required every three to five years, depending on therapeutic advances and clinical exposure.

EPA 10 — Identify and Manage Drug-Related Complications and Infection Risks in Immunosuppressed Children

Children receiving immunosuppressive and immunomodulatory therapies for rheumatic diseases are at increased risk of infections, treatment-related toxicity, and long-term complications. Early identification, prevention, and prompt management of these risks are essential to ensure patient safety and optimise outcomes.

Specification
Independently identify, prevent, and manage drug-related complications and infection risks in immunosuppressed paediatric rheumatology patients.

Key Tasks
- Screen for latent infections prior to initiation of immunosuppressive therapy, including tuberculosis and hepatitis B and C.
- Monitor laboratory parameters regularly to detect treatment-related toxicity, including cytopenias, liver enzyme abnormalities, and renal dysfunction.
- Recognise early clinical signs and symptoms of serious infections in immunosuppressed children.
- Adjust or temporarily withhold immunosuppressive therapy during acute infections when clinically indicated.
- Counsel patients and families on infection prevention measures, including hygiene practices and early presentation for medical review.
- Manage immunisation schedules appropriately in children receiving immunosuppressive therapies, in accordance with national and international recommendations.
- Collaborate closely with infectious disease specialists, microbiology services, and pharmacists in complex cases.
- Recognise warning signs suggestive of malignancy or severe adverse drug reactions.
- Document and report adverse drug reactions in accordance with institutional and regulatory requirements.

Potential Risks if Missed
- Severe or life-threatening infections, including sepsis, pneumonia, or reactivation of latent infections.
- Over-immunosuppression resulting in preventable complications.
- Progressive liver toxicity, bone marrow suppression, or renal impairment.
- Delayed recognition of malignancy or serious adverse drug reactions.
- Increased morbidity, hospitalisation, and adverse long-term outcomes.

CanMEDS Roles: Medical Expert, Health Advocate, Professional

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Infection surveillance strategies; immunosuppressive drug toxicity profiles; vaccination principles in immunocompromised hosts.
- Skills: Early recognition of complications; clinical decision-making regarding treatment modification; interdisciplinary collaboration.
- Attitudes: Vigilance, a safety-first mindset, and proactive risk management.

Assessment Tools: Case-Based Discussion, adverse event review, multisource feedback, portfolio documentation.

Entrustment Level: Level D

Expiration: Reassessment required every three years.

EPA 11 — Coordinate Multidisciplinary Care and Lead MDT Meetings

Paediatric rheumatic diseases frequently involve multiple organ systems and require coordinated input from a range of healthcare professionals. Effective multidisciplinary collaboration is essential to ensure coherent care planning, timely decision-making, and optimal long-term outcomes. Poor coordination may result in fragmented care, delays in treatment escalation, and increased morbidity.

Specification
Independently coordinate multidisciplinary care and lead multidisciplinary team (MDT) meetings for children with complex rheumatic diseases.

Key Tasks

- Identify patients who require multidisciplinary review due to disease complexity, multisystem involvement, or treatment challenges.
- Prepare, structure, and chair MDT meetings in an organised and goal-oriented manner.
- Integrate input from relevant specialties, including ophthalmology, nephrology, dermatology, cardiology, pulmonology, physical and rehabilitation medicine, psychology, dietetics, nursing, and social care.
- Facilitate clear, respectful, and inclusive discussion, promoting shared decision-making among team members.
- Ensure development of a coherent, consensus-based management plan.
- Document MDT discussions, decisions, and agreed action points accurately.
- Communicate outcomes of MDT meetings to patients, families, and referring teams in a timely manner.
- Ensure follow-up and implementation of MDT recommendations.
- Liaise with schools, community services, and allied health professionals when required.
- Facilitate joint or combined clinics when appropriate.

Potential Risks if Missed

- Fragmentation of care and inconsistent treatment plans.
- Increased morbidity due to delayed or inappropriate interventions.

- Conflicting advice given to patients and families.
- Loss to follow-up or poor continuity of care.
- Inefficient use of healthcare resources.

CanMEDS Roles: Collaborator, Leader, Communicator, Medical Expert

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Roles and responsibilities of MDT members; disease-specific care pathways and guidelines.
- Skills: Leadership, effective communication, coordination of complex care, and conflict resolution.
- Attitudes: Respect for professional expertise, inclusivity, accountability, and commitment to patient-centred care.

Assessment Tools: Multisource feedback, direct observation of MDT leadership, Case-Based Discussion, portfolio review.

Entrustment Level: Level D

Expiration: Reassessment required every five years.

EPA 12 — Communicate Effectively with Children and Families, Including Delivering Difficult News

Effective communication in paediatric rheumatology requires sensitivity to developmental stage, emotional context, cultural background, and family dynamics. Complex and potentially distressing discussions are common and must be conducted in a structured, empathetic, and child-centred manner to support understanding, trust, and adherence.

Specification
Independently conduct developmentally appropriate, empathic, and family-centred communication, including breaking bad news, discussing uncertainty, and facilitating shared decision-making.

Key Tasks

- Adapt language and communication style to the child's age, developmental level, and cognitive capacity.
- Establish rapport through active listening, clarity, and emotional attunement.
- Use visual aids, play techniques, and analogies to support understanding where appropriate.
- Deliver diagnoses and complex information sensitively and in a structured manner.
- Address emotional responses, fears, and misconceptions expressed by children and caregivers.
- Discuss prognosis honestly while maintaining hope and realistic expectations.
- Present treatment options and risks using shared decision-making principles.
- Provide written information, care plans, and flare management instructions.
- Engage professional interpreters to address language or cultural barriers.
- Manage conflict, distress, or disagreement constructively and respectfully.

Potential Risks if Missed

- Psychological distress or trauma for the child or family.
- Misunderstanding of diagnosis or treatment plans.
- Poor adherence to therapy and follow-up.
- Loss of trust in healthcare providers.
- Increased anxiety and reduced acceptance of chronic disease.

CanMEDS Roles: Communicator, Health Advocate, Professional

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Communication models; child development; cultural competence principles.
- Skills: Active listening, motivational interviewing, conflict management, and delivering difficult information.
- Attitudes: Empathy, patience, humility, and respect.

Assessment Tools: Mini-CEX (communication), OSCE, multisource feedback, patient or caregiver feedback, portfolio review.

Entrustment Level: Level D

Expiration: Reassessment required every five years, recognising the need for ongoing skills maintenance.

EPA 13 — Manage the Structured Transition of Adolescents with Rheumatic Disease to Adult Rheumatology

Adolescents with chronic rheumatic diseases require a structured transition process to adult care to ensure continuity, promote autonomy, and prevent loss to follow-up. Poorly managed transitions are associated with disease flares, treatment interruption, and adverse psychosocial outcomes.

Specification

Independently plan, deliver, and coordinate a structured transition process in collaboration with adolescents, families, and adult rheumatology teams.

Key Tasks

- Assess readiness for transition, including developmental, cognitive, and psychosocial factors.
- Use structured transition assessment tools where appropriate.
- Develop an individualised, written transition plan.
- Educate adolescents regarding their condition, medications, monitoring, and self-advocacy.
- Facilitate joint paediatric–adult transition clinics or shared consultations.
- Ensure continuity of prescriptions, monitoring, and follow-up during transfer.
- Address adolescent concerns and parental expectations sensitively.
- Provide a comprehensive handover summary to the adult rheumatology team.
- Monitor post-transfer adaptation and engagement with adult services.

- Involve mental health or social care services when indicated.

Potential Risks if Missed
- Loss to follow-up during transfer of care.
- Medication non-adherence and disease flare.
- Psychosocial deterioration or disengagement from healthcare services.
- Increased morbidity and poorer long-term outcomes.

CanMEDS Roles: Leader, Collaborator, Health Advocate, Communicator

Required Knowledge, Skills, and Attitudes (KSA)
- Knowledge: Adolescent development; legal and consent frameworks; transition models.
- Skills: Coaching, coordination across services, shared care planning.
- Attitudes: Patience, empowerment, and respect for emerging autonomy.

Assessment Tools: Transition plan audit, multisource feedback, Case-Based Discussion, portfolio documentation.

Entrustment Level: Level D

Expiration: Reassessment required every five years or following major policy updates.

EPA 14 — Lead or Participate in Research, Audit, and Quality Improvement in Paediatric Rheumatology

Ongoing engagement in research, audit, and quality improvement is essential to advance care in paediatric rheumatology, particularly in rare and complex conditions. Active participation supports evidence-based practice, patient safety, and service development.

Specification
Independently contribute to clinical research, audit cycles, and quality improvement initiatives relevant to paediatric rheumatology.

Key Tasks
- Identify clinically relevant research or audit questions.
- Participate in patient registries and multicentre studies.
- Conduct clinical audits, including data collection, analysis, and feedback.
- Apply quality improvement methodologies, such as Plan–Do–Study–Act cycles.
- Present findings within MDT meetings or at national and international scientific forums.
- Critically appraise medical literature and integrate evidence into practice.
- Adhere to research governance, ethical standards, and consent requirements.

Potential Risks if Missed
- Stagnation of clinical practice.
- Continued use of outdated or suboptimal therapies.

- Reduced care quality and patient outcomes.
- Loss of benchmarking and service improvement opportunities.

CanMEDS Roles: Scholar, Leader, Professional

Required Knowledge, Skills, and Attitudes (KSA)
- Knowledge: Research methodology; basic statistics; principles of audit and QI.
- Skills: Data analysis, presentation, scientific writing.
- Attitudes: Curiosity, diligence, and ethical integrity.

Assessment Tools: Audit reports, portfolio review, presentation evaluation, research supervisor feedback.

Entrustment Level: Level C–D, depending on level of responsibility.

Expiration: Reassessment required every five years through CPD and maintenance of competence activities.

EPA 15 — Uphold Ethical and Professional Standards, Safeguarding, and Advocacy for Vulnerable Children

Paediatric rheumatology frequently involves vulnerable populations, including children with chronic illness, disability, rare diseases, and complex psychosocial circumstances. High ethical standards, safeguarding awareness, and advocacy are integral to professional practice.

Specification
Demonstrate ethical integrity, uphold professional standards, ensure safeguarding, and advocate for equitable access to care for vulnerable children.

Key Tasks
- Apply principles of informed consent and assent appropriately.
- Manage confidentiality and sensitive information, particularly in adolescent care.
- Recognise safeguarding concerns, including abuse, neglect, or fabricated illness.
- Follow institutional and legal safeguarding procedures and escalation pathways.
- Advocate for equitable access to medications, specialist services, and diagnostic investigations.
- Address social determinants of health impacting disease outcomes.
- Recognise and challenge bias or inequity in care delivery.
- Support families coping with the burden of chronic disease.
- Maintain personal well-being, resilience, and professional boundaries.
- Act as a role model and provide guidance to junior colleagues.

Potential Risks if Missed
- Harm to the child due to unrecognised safeguarding concerns.
- Ethical or legal breaches.

- Loss of trust between families and healthcare providers.
- Inequitable access to care and poorer outcomes.
- Professional burnout and reduced team morale.

CanMEDS Roles: Professional, Health Advocate, Leader

Required Knowledge, Skills, and Attitudes (KSA)

- Knowledge: Ethical frameworks; safeguarding legislation; cultural humility principles.
- Skills: Conflict resolution, reflective practice, advocacy, and bias mitigation.
- Attitudes: Integrity, compassion, justice, and humility.

Assessment Tools: Ethics-focused OSCE, multisource feedback, Case-Based Discussion, portfolio reflection, safeguarding training certification.

Entrustment Level: Level D–E — independent practice, with ability to supervise others.
Expiration: Safeguarding training every three years; ethics review every five years.

TABLE 5. – Summary of extended Entrustable Professional Activities (EPAs) in Paediatric Rheumatology

EPA No.	Title	Core Focus / Scope	Expected Entrustment Level	Key CanMEDS Roles
EPA 1	Diagnose and manage all subtypes of Juvenile Idiopathic Arthritis (JIA)	Full diagnostic workup, classification, treatment initiation & adjustment, monitoring	Level D	Medical Expert, Communicator
EPA 2	Recognise, investigate, and manage Macrophage Activation Syndrome (MAS)	Early recognition, urgent labs, HLH criteria, treatment escalation, ICU liaison	Level D	Medical Expert, Collaborator, Leader
EPA 3	Diagnose and manage paediatric connective tissue diseases (SLE, JDM, SSc, MCTD)	Systemic evaluation, high-complexity immunosuppression, flare control	Level D	Medical Expert, Scholar
EPA 4	Diagnose and manage paediatric vasculitides	PAN, cPAN, HSP/IgA vasculitis, Kawasaki, Takayasu, ANCA vasculitis	Level D	Medical Expert, Collaborator
EPA 5	Diagnose and manage autoinflammatory diseases	Periodic fevers, systemic autoinflammatory syndromes, genetic testing	Level C–D	Medical Expert, Scholar
EPA 6	Perform comprehensive paediatric MSK examination	pGALS, pREMS, joint swelling assessment, pain evaluation	Level D	Medical Expert

EPA 7	Perform intra-articular corticosteroid injections	Joint selection, sedation plan, asepsis, documentation, follow-up	Level C–D	Medical Expert, Professional
EPA 8	Interpret laboratory, immunologic, and imaging investigations	Autoantibodies, complements, cytokines, MRI, US, X-ray interpretation	Level D	Scholar, Medical Expert
EPA 9	Design and adjust treatment plans (DMARDs, biologics, JAK inhibitors)	MTX, sulfasalazine, leflunomide, biologics, tapering, escalation	Level D	Medical Expert, Leader
EPA 10	Monitor safety, infections, and complications of immunosuppression	Vaccinations, screening, infection management, toxicity	Level D	Medical Expert, Health Advocate
EPA 11	Coordinate multidisciplinary team (MDT) care	MDT meetings, joint planning, cross-specialty communication	Level D	Collaborator, Leader
EPA 12	Communicate effectively with children & families (including breaking bad news)	Diagnosis disclosure, prognosis, shared decision-making	Level D	Communicator, Professional
EPA 13	Manage structured transition to adult rheumatology	Transition planning, readiness, joint clinics, handover	Level D	Leader, Communicator
EPA 14	Lead/participate in research, audit & QI	Studies, registries, audit cycles, EBM integration	Level C–D	Scholar, Leader
EPA 15	Uphold ethical standards, safeguarding & advocacy	Consent, assent, confidentiality, bias mitigation, child protection	Level D–E	Professional, Health Advocate

TABLE 6. – Detailed mapping of Entrustable Professional Activities (EPAs) to CanMEDS roles in Pediatric Rheumatology

EPA No.	EPA Title	Medical Expert	Communicator	Collaborator	Leader	Health Advocate	Scholar	Professional
1	Diagnose and manage Juvenile	Applies comprehensive	Explains diagnosis, prognosis,	Works with physiother	Coordinates care	Advocates for early therapy to	Integrates ACR/EULAR	Maintains ethical standards

	Idiopathic Arthritis (all subtypes)	differential diagnosis; classifies JIA subtypes; implements treat-to-target strategies; monitors disease activity	and treatment options to families; supports shared decision-making	apists, PRM specialists, ophthalmologists	pathways; implements evidence-based algorithms	prevent disability	guidelines and emerging evidence	and accurate documentation
2	Recognise, investigate, and provide emergency management of MAS	Identifies early laboratory and clinical red flags; initiates emergency protocols	Communicates risks clearly to families in crisis situations	Collaborates with PICU, haematologists, infectious disease specialists	Leads emergency care response	Ensures rapid access to lifesaving interventions	Applies current evidence on MAS diagnostics and treatment	Acts with integrity under high-risk conditions
3	Diagnose and manage connective tissue diseases (SLE, JDM, SSc, MCTD)	Conducts complex immunological assessment; interprets serology and organ involvement	Communicates long-term risks and therapeutic plans clearly	Coordinates multidisciplinary care (nephrology, dermatology, pulmonology)	Organises long-term follow-up systems	Advocates for specialist monitoring and prevention of complications	Critically appraises guidelines (ACR SLE, SHARE JDM)	Upholds professional accountability and shared decision-making
4	Diagnose and manage paediatric vasculitides	Applies diagnostic criteria and manages disease-specific emergencies	Provides guidance on monitoring complications	Coordinates care with nephrologists, cardiologists	Ensures timely escalation and resource allocation	Promotes vaccination and infection prevention	Uses evidence from EULAR/ACR vasculitis guidance	Maintains ethical communication in uncertain prognostic scenarios
5	Diagnose and manage autoinflamm	Interprets genetic and cytokine-	Explains chronic disease mechanis	Coordinates care with immunolo	Leads long-term monitor	Advocates for access to rare-	Engages with registries and	Ensures confidentiality and clarity in

	atory disorders	related diagnostics	ms to families	gy, genetics	ing strategies	disease therapies	literature updates	genetic counselling
6	Perform a complete paediatric musculoskeletal examination	Demonstrates mastery of examination techniques (pGALS, pREMS)	Provides clear explanations and reassurance during examination	Works with physiotherapists and PRM	Prioritises structured care pathways	Supports early detection and prevention of deformities	Engages in continuous training in MSK assessment	Maintains professionalism during intimate examinations
7	Perform intra-articular corticosteroid injections	Demonstrates procedural competence, sedation indications, and ultrasound guidance	Obtains informed consent; explains risks	Works with anaesthesia and radiology teams	Ensures procedural quality and safety	Minimises discomfort and complications	Keeps updated on best practice and safety standards	Demonstrates aseptic technique and ethical conduct
8	Interpret laboratory and imaging results for paediatric rheumatic diseases	Integrates lab markers, autoantibodies, cytokine profiles; interprets XR/US/MRI	Explains results in a family-friendly manner	Collaborates with radiology and lab teams	Manages diagnostic workflows	Advocates for appropriate investigations	Critically evaluates new diagnostic tools	Ensures accuracy and transparency
9	Design, monitor, and adapt treatment plans (DMARDs, biologics, JAK inhibitors)	Selects and adjusts therapy; monitors safety; manages side-effects	Discusses long-term risks and adherence needs	Coordinates with pharmacists, nurses, MDT	Leads therapeutic strategy meetings	Advocates for access to optimal therapies (biosimilars, rare disease meds)	Evaluates clinical trials and emerging treatments	Ensures safe prescribing and ethical practice
10	Deliver difficult news and provide communication for	Demonstrates medical accuracy in	Provides empathetic and developmentally	Engages MDT to support family coping	Organises family meetings	Advocates for psychosocial support	Teaches communication skills;	Demonstrates emotional maturity and

	chronic illness	explanations	appropriate communication		sensitively		integrates evidence	ethical clarity
11	Coordinates multidisciplinary care for complex rheumatic diseases	Integrates complex medical data across systems	Communicates care plans within the team	Leads MDT meetings and referrals	Designs coordinated service pathways	Advocates for comprehensive care access	Engages in QI and interprofessional training	Models professionalism within the MDT
12	Manage acute and chronic pain in paediatric rheumatology	Applies pharmacologic and non-pharmacologic strategies	Explains pain pathways to children and families	Collaborates with pain specialists, psychology	Implements pain management protocols	Advocates for functional rehabilitation	Uses evidence from pain science and paediatric studies	Provides trauma-informed, ethical care
13	Support neurodevelopmental, psychosocial, and school functioning in chronic disease	Integrates biopsychosocial factors into management	Communicates with schools and families effectively	Coordinates with psychology, PRM, social care	Leads structured school reintegration plans	Advocates for disability rights, school accommodations	Applies developmental science	Demonstrates sensitivity, confidentiality, and holistic care
14	Manage vaccination, infection prevention, and immunosuppression safety	Applies immunology, vaccine scheduling, risk stratification	Communicates risks and prevention strategies	Coordinates with infectious disease teams	Implements safety protocols	Advocates for vaccination and infection control	Evaluates evolving vaccine evidence	Ensures safe and ethical prevention strategies
15	Participate in research, guideline implementation, and quality improvement	Applies methodological and clinical knowledge	Communicates scientific concepts clearly	Collaborates with research teams	Leads QI, registries, audits	Advocates for evidence-based care	Critically appraises research; contributes to scholarship	Ensures research integrity and ethics

TABLE 7. – EPA Progression Levels (1–5) for Paediatric Rheumatology

EPA No.	EPA Title	Level 1	Level 2	Level 3	Level 4 (Target)	Level 5 (Optional)

1	Diagnose and manage JIA (all subtypes)	Observes assessments	Performs exam with direct supervision	Manages under indirect supervision	Independent diagnosis & treat-to-target management	Supervises juniors in JIA clinics
2	Recognise and manage MAS	Observes emergency protocols	Participates under direct supervision	Performs initial MAS workup with indirect oversight	Independently initiates MAS protocol	Teaches recognition & emergency response
3	Manage connective tissue diseases (SLE, JDM, SSc, MCTD)	Observes MDT	Performs parts of assessment	Manages under indirect supervision	Independently leads care	Supervises MDT planning
4	Manage paediatric vasculitides	Observes evaluations	Assists in diagnostics	Manages cases with indirect oversight	Independently guides diagnostics & therapy	Leads vasculitis MDT
5	Manage autoinflammatory syndromes	Observes clinic	Performs limited assessments	Works up cases independently with oversight	Fully independent management	Supervises genetic counselling context
6	Perform paediatric MSK examination	Observes pGALS/pREMS	Performs with direct supervision	Performs reliably under indirect supervision	Fully independent MSK examination	Teaches MSK examination
7	Perform intra-articular corticosteroid injections	Observes procedure	Performs under direct supervision	Performs with indirect supervision	Performs independently	Teaches injections; supervises trainees
8	Interpret labs & imaging	Observes interpretation	Interprets with direct supervision	Interprets independently with oversight	Fully independent integration into plans	Teaches imaging interpretation
9	Design and adapt treatment plans	Observes decision-making	Participates with direct supervision	Develops plans with indirect supervision	Fully independent prescribing	Supervises prescribing practices

10	Deliver difficult news & complex communication	Observes family meetings	Conducts conversation with supervision	Leads conversations with indirect supervision	Independent high-stakes communication	Teaches communication skills
11	Coordinate MDT care	Observes MDT	Participates under supervision	Leads parts of MDT discussions	Independently leads MDT	Supervises team-based learning
12	Manage acute and chronic pain	Observes pain assessments	Performs pain evaluation with supervision	Manages pain autonomously with oversight	Fully independent pain management	Teaches multimodal pain approaches
13	Support psychosocial & school functioning	Observes school/social work liaison	Supports plans with supervision	Independently coordinates school/psychosocial needs	Fully independent	Supervises interdisciplinary collaboration
14	Manage vaccination & infection prevention	Observes vaccination counselling	Counsels with supervision	Manages immunosuppression schedules with oversight	Fully independent risk assessment	Teaches immunisation safety
15	Participate in research, guideline implementation, QI	Observes research processes	Participates under guidance	Conducts research/QI with oversight	Independently executes QI and implements guidelines	Supervises junior researchers

Legend:

- Level 1 – Observation only (not allowed to perform).
- Level 2 – Performs with direct, proactive supervision (supervisor present).
- Level 3 – Performs with indirect supervision (supervisor immediately available).
- Level 4 – Independent practice, no supervision required.
- Level 5 – Supervises and teaches others in this EPA.

APPENDIX 2 – Transitional care for Adolescents and Young adults (AYA) in Pediatric Rheumatology

Prepared according to UEMS Educational Training Requirements standards

Definition of Transitional Care in Paediatric Rheumatology

In paediatric rheumatology, transitional care is defined as a structured, goal-oriented process that prepares and supports adolescents and young adults (AYAs) with rheumatic and autoinflammatory diseases as they move from paediatric to adult healthcare systems. AYAs with chronic, complex, or rare rheumatic conditions—including Juvenile Idiopathic Arthritis (JIA), childhood-onset Systemic Lupus Erythematosus (cSLE), Juvenile Dermatomyositis (JDM), autoinflammatory syndromes, vasculitides, and connective tissue disorders—require developmentally appropriate transition pathways to ensure continuity of care and to prevent deterioration in health status.
The transition into adult rheumatology should be adolescent-centred and responsive to individual developmental needs. It must consider the medical, psychological, emotional, social, educational, and vocational dimensions of living with a chronic rheumatic condition. High-quality transitional care promotes equity, strengthens autonomy and self-management skills, and recognises the influence of chronic inflammation, pain, disability, fatigue, treatment burden, and immunosuppression on adolescent and young adult development.
A rheumatology-focused transition programme also incorporates condition-specific issues, such as fertility preservation, reproductive counselling, vaccination strategies for immunosuppressed patients, adherence challenges, psychosocial vulnerability, body-image concerns, and the variable course of disease activity throughout adolescence.

CanMEDS-Based Competency Roles in Transitional Care for Paediatric Rheumatology

Upon completion of training, the trainee must demonstrate the following competencies in the context of AYA transitional care.

TABLE 8. – CanMEDS Roles and Competency Expectations in Paediatric Rheumatology Transitional Care

CanMEDS Role	**Competency Description**	**Examples in Paediatric Rheumatology Transitional Care**
Medical Expert	Demonstrates strong clinical competence in managing chronic rheumatic disease throughout adolescence, applying developmentally appropriate and evidence-based decision-making.	Provides age- and maturity-appropriate care for AYAs with JIA, cSLE, JDM, vasculitis and autoinflammatory conditions; integrates understanding of disease trajectories with adolescent developmental needs; uses validated assessment tools (HEADSSS, TRAQ, Transition-Q); recognises flare risk during transfer; identifies contributors to non-adherence; applies ICF principles to evaluate functioning and disability; manages

		reproductive issues, vaccination timing, medication safety and growth/puberty concerns.
Communicator	Communicates clearly and sensitively, using youth-centred, trauma-informed and developmentally appropriate approaches.	Explains diagnoses, prognosis and treatment plans in language suited to developmental level; balances confidentiality with caregiver participation; discusses reproductive health, teratogenic medication risks and long-term complications; engages AYAs in shared decision-making; manages challenging conversations about disease progression, functional limitations, expectations for transition or escalation of therapy.
Collaborator	Works effectively with professionals across paediatric and adult services to achieve coordinated, safe and structured transition.	Organises joint appointments between paediatric and adult rheumatology teams; involves ophthalmology in uveitis management, nephrology for lupus nephritis, dermatology for cutaneous JDM/SLE features and psychology for chronic pain or adjustment issues; coordinates PRM for functional assessment; leads MDT discussions for complex or refractory cases; liaises with school staff and social workers to arrange educational and disability supports.
Leader / Manager	Recognises system-level barriers to effective transition and leads initiatives to enhance continuity and quality of care.	Develops or refines transition pathways for rheumatology; contributes to institutional guidelines on vaccination in immunosuppressed adolescents; streamlines prescribing and biologics authorisation across paediatric–adult services; advocates for resources to support transition clinics; leads QI projects such as improving adherence documentation or reducing post-transfer loss to follow-up.
Health Advocate	Promotes equitable, inclusive and developmentally appropriate care for all AYAs with rheumatic disease.	Supports vulnerable groups (migrants, LGBTQ+ youth, young people in foster care or with disabilities); addresses social determinants affecting attendance and adherence; ensures access to biologics, rehabilitation and psychosocial supports; advocates for inclusive physical activity and safe school participation; promotes vaccination and infection-prevention strategies.
Scholar	Participates in teaching, critical appraisal and research relevant to transitional care in paediatric rheumatology.	Engages in QI audits (e.g., adherence trends after transfer); teaches junior trainees about adolescent development and chronic rheumatic disease; contributes to studies on long-term

		AYA outcomes; evaluates readiness assessment tools; presents cases at MDT meetings and in journal club teaching sessions.
Professional	Upholds ethical standards, respects autonomy, practices cultural humility and demonstrates resilience in the care of AYAs with chronic disease.	Maintains confidentiality in complex situations; manages ethical dilemmas involving risk-taking behaviours, reproductive decision-making or caregiver conflict; demonstrates awareness of personal biases; provides compassionate, respectful care for adolescents navigating identity, disability and chronic illness; applies trauma-informed practices during examinations, procedures and discussions.

Learning Outcomes for Transitional Care in Paediatric Rheumatology

Trainees are expected to acquire and demonstrate competence across the following areas:

Knowledge

- Understanding of adolescent biological, psychological, and cognitive development, particularly in the context of chronic rheumatic disease.
- Awareness of how inflammation, pain, disability, puberty, and immunosuppressive therapies influence development in adolescents and young adults.
- Familiarity with established transition models and frameworks (e.g., Got Transition, Six Core Elements).
- Recognition of condition-specific issues relevant to transition:
    - **JIA:** risk of disease flare, potential for joint damage, continuity of uveitis screening.
    - **cSLE:** neuropsychiatric manifestations, monitoring of lupus nephritis, reproductive and contraceptive counselling.
    - **JDM:** calcinosis, persistent muscle weakness, consequences of long-term corticosteroid use.
    - **Autoinflammatory diseases:** the role of genetic counselling, the need for lifelong surveillance, and access to IL-1–targeted therapies.
- Knowledge of medication-related considerations, including teratogenic risks, fertility preservation, and barriers to adherence.
- Principles of vaccination for immunosuppressed adolescents and young adults.
- Legal and ethical responsibilities related to consent, confidentiality, and assessment of decision-making capacity.

Skills

- Carry out developmentally appropriate assessments using tools such as HEADSSS, TRAQ, SDQ, and relevant patient-reported outcome measures.
- Communicate in a trauma-informed, adolescent-sensitive manner.
- Coordinate and participate in joint consultations with adult rheumatology teams.
- Formulate personalised, written transition plans.

- Provide structured education on disease flare recognition, medication safety, reproductive health, and lifestyle considerations.
- Promote self-management skills and support shared decision-making.

Attitudes

- Maintain a youth-centred, respectful, and culturally informed approach to care.
- Demonstrate empathy for the challenges associated with living with a chronic rheumatic disease.
- Uphold principles of equity and actively advocate for young people's needs.
- Engage in professional reflection and take responsibility for ongoing development.

TABLE 9. – Learning Outcomes by Transitional Care Domain

Domain	Knowledge (K)	Skills (S)	Attitudes (A)
1. Adolescent development & chronic rheumatic disease	Understand key developmental stages, autonomy formation, peer and school influences, risk-taking, and vulnerabilities specific to AYA living with JIA, cSLE, and JDM.	Use developmentally appropriate interviewing; assess autonomy and maturity; incorporate developmental context into clinical planning.	Respect for emerging autonomy; cultural humility; open, non-judgmental communication.
2. Transitional care frameworks	Knowledge of structured transition models (Got Transition, EULAR principles), readiness assessments and transfer-planning tools.	Apply TRAQ, HEADSSS and similar tools; prepare structured transfer documentation; arrange and conduct joint visits.	Commitment to continuity of care and shared decision-making.
3. Chronic disease activity & AYA monitoring	Familiarity with JIA activity indices, nephritis monitoring, muscle strength measures, vasculitis surveillance and AID flare recognition.	Perform MSK and functional assessments; interpret investigations; coordinate monitoring schedules.	Precision, vigilance and a strong sense of responsibility.
4. Medication safety & adherence	Understand mechanisms, risks and monitoring requirements of DMARD/biologics; concepts of teratogenicity; relevant vaccination guidance.	Deliver medication safety counselling; identify adherence challenges; maintain uninterrupted therapy during transition.	Responsibility for patient safety; anticipatory guidance; protective approach to care.
5. Psychosocial, mental health &	Knowledge of mental health comorbidities; academic and workplace	Use PHQ-9, GAD-7, SDQ; refer appropriately;	Empathy, inclusivity and sensitivity to lived experiences.

school/work needs	supports; pain, fatigue and identity-related challenges.	coordinate functional and psychosocial supports.	
6. Reproductive and sexual health	Understand pregnancy risks in cSLE/JIA, teratogenic medication profiles, contraception and adolescent sexual maturation.	Provide reproductive counselling; discuss safe sex practices and medication-related risks.	Respect, confidentiality and professional conduct.
7. Interdisciplinary coordination	Know the roles of ophthalmology, nephrology, dermatology, PT/OT, psychology and social care in transitional care.	Lead MDT discussions; communicate effectively across teams; align follow-up plans.	Collaboration, leadership and reliability.
8. Self-management & empowerment	Knowledge of health literacy, behaviour change principles and shared decision-making approaches.	Support goal-setting; strengthen self-efficacy; encourage AYA responsibility for care.	Encouragement, partnership and an empowerment-focused mindset.
9. Digital health & remote transitional care	Understand eHealth principles, GDPR/privacy requirements and telemedicine practice.	Conduct telehealth assessments; assess digital literacy; promote safe online behaviour.	Openness to innovation; cautious respect for privacy and data protection.

Core Competencies in AYA Transitional Care for Paediatric Rheumatology

TABLE 10. – Summary of core competencies

Domain	Expected Competencies
Biopsychosocial Development	Understand developmental stages, impact of chronic inflammation, functional limitations, and medication effects.
Disease-Specific Transition Needs	Integrate knowledge of JIA, cSLE, JDM, vasculitis, autoinflammatory syndromes into transition planning; anticipate flares and adherence issues.
Readiness Assessment	Use validated tools (TRAQ, Transition-Q); evaluate autonomy, health literacy, and self-management skills.
Communication	Deliver adolescent-centred, culturally sensitive communication; address confidentiality, consent, and caregiver roles.
Coordination of Care	Organize joint clinics, MDT meetings, school/social support engagement, and continuity with adult rheumatology.
Self-Management Promotion	Guide AYAs in shared decision-making, treatment understanding, goal setting, and long-term health planning.

Professionalism	Uphold ethical practice, manage risk behaviours and sensitive disclosures, maintain boundaries, demonstrate reflective practice.

Purpose and Use of the Appendix

This Appendix offers a rheumatology-specific structure designed to complement the general UEMS Transitional Care ETR. Its aim is to ensure that trainees develop the essential competencies required to support adolescents and young adults with chronic rheumatic conditions as they transition into adult healthcare services.
By aligning expectations across European training programmes, the Appendix strengthens patient safety, promotes consistent standards of care, and helps maintain continuity for AYAs living with lifelong inflammatory and autoimmune diseases.

EPAs for Transitional Care in Paediatric Rheumatology

TABLE 11. – Learning Outcomes Mapped to EPA Groups

EPA Group	EPA Numbers	Learning Outcomes (Summary)
1. AYA communication & autonomy	EPA 1, 2, 7, 14	Conduct developmentally appropriate consultations; manage confidentiality and consent; foster autonomy; offer counselling suited to digital-age risks and behaviours.
2. Disease-specific transitional care	EPA 8, 9, 10, 11, 12	Apply condition-specific monitoring; coordinate interdisciplinary transitions; prepare detailed, disease-focused transfer summaries; anticipate and prevent disease flares.
3. Medication safety & therapeutic continuity	EPA 4, 8, 9, 13	Support uninterrupted access to therapy; ensure safe DMARD/biologic use; provide reproductive and risk-related counselling.
4. MDT and system navigation	EPA 3, 5, 6, 14	Coordinate paediatric–adult handover; lead and collaborate within MDTs; integrate psychological, social and rehabilitation services.
5. Empowerment & self-management	EPA 6, 7, 14	Build AYA confidence and skills in self-management, shared decision-making, and navigating adult-oriented healthcare.

TABLE 12. – Summary of Entrustable Professional Activities (EPAs) for Transitional Care in Paediatric Rheumatology

EPA No.	Title	Scope / Specification	Key Risks if Missed	CanMEDS Roles	Target Entrustment
1	Conduct an AYA-appropriate	Developmental and psychosocial	Missed mental health concerns;	Medical Expert, Communicator,	**D**

	rheumatology consultation	assessment; confidentiality practices; use of HEADSSS; transition-readiness evaluation.	unrecognised non-adherence; delayed intervention.	Health Advocate	
2	Manage confidentiality, autonomy & consent	Ethical and legal decision-making; assessment of capacity; GDPR compliance; safe disclosure processes.	Loss of trust; legal breaches; unsafe or unsupported autonomy.	Professional, Communicator, Leader	**D**
3	Coordinate paediatric–adult rheumatology transfer	Structured handover documentation; joint paediatric–adult visits; continuity of treatment and monitoring.	Medication interruptions; disease flares; fragmented care.	Leader, Collaborator, Medical Expert	**D**
4	Perform musculoskeletal examination & documentation	AYA-appropriate MSK assessment; functional and disability measures.	Missed active disease; progression of flare; avoidable disability.	Medical Expert, Communicator	**D**
5	Interpret imaging for transitional-age patients	Interpretation of X-ray, ultrasound and MRI in JIA, SLE, myositis.	Missed structural damage; inappropriate therapeutic decisions.	Medical Expert, Scholar	**C–D**
6	Lead MDT care planning	Coordination with ophthalmology, nephrology, dermatology, PT/OT and other services.	Fragmented care; unrecognised complications.	Collaborator, Leader	**D**
7	Counsel AYAs & caregivers; deliver difficult news	Shared decision-making; trauma-informed communication;	Misunderstanding; distress; disengagement from care.	Communicator, Health Advocate	**D**

		managing expectations.			
8	Transition management for JIA	Ensuring uninterrupted DMARD/biologic therapy; uveitis surveillance; structured summary.	Flares; joint damage; uveitis complications.	Medical Expert, Communicator	**D**
9	Transition management for cSLE	Review of organ involvement; reproductive counselling; coordination with nephrology.	Severe flare; nephritis relapse; pregnancy-related risk.	Medical Expert, Health Advocate	**D**
10	Transition management for JDM	Assessment of strength and skin activity; calcinosis monitoring; rehabilitation continuity.	Functional decline; calcinosis progression; disability.	Medical Expert, Collaborator	**C–D**
11	Transition management for vasculitides	Renal and cardiac surveillance; clear monitoring plan; subspecialist coordination.	Renal deterioration; cardiac complications; loss to follow-up.	Medical Expert, Collaborator	**C–D**
12	Transition management for autoinflammatory diseases	Adherence to IL-1 inhibitors or colchicine; review of genetic diagnosis; flare planning.	Life-threatening flare; amyloidosis; medication interruption.	Medical Expert, Health Advocate	**D**
13	Medication safety & biologic continuity	Prevention of therapy interruption; risk counselling; monitoring schedules.	Disease flare; infection; unplanned pregnancy; treatment gap.	Professional, Medical Expert	**D**
14	Psychosocial & functional	Mental health screening; school/work and	School/work withdrawal; chronic pain	Communicator, Health Advocate	**C–D**

	transition coordination	functional planning; PT/OT coordination.	escalation; depression; disengagement.		