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## CLINICAL SCIENCE

## Points to consider: EULAR–UEMS standards for the training of European rheumatologists

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**ABSTRACT**

**Background** Postgraduate rheumatology training programmes are already established at a national level in most European countries. However, previous work has highlighted a substantial level of heterogeneity in the organisation and, in part, content of programmes.

**Objective** To define competences and standards of knowledge, skills and professional behaviours required for the training of rheumatologists.

**Methods** A European Alliance of Associations for Rheumatology (EULAR) task force (TF) of 23 experts, including two members of the European Union of Medical Specialists (UEMS) section of rheumatology, was convened. The mapping phase consisted of the retrieval of key documents on specialty training in rheumatology and other related specialties across a broad set of international sources. The content of these documents was extracted and represented the foundation for the document draft that underwent several rounds of online discussion within the TF, and afterwards was also distributed to a broad group of stakeholders for collecting feedback. The list of generated competences was voted on during the TF meetings, while the level of agreement (LoA) with each statement was established by anonymous online voting.

**Results** A total of 132 international training curricula were retrieved and extracted. In addition to the TF members, 253 stakeholders commented and voted on the competences through an online anonymous survey. The TF developed (1) an overarching framework indicating the areas that should be addressed during training, (2) 7 domains defining broad areas that rheumatology trainees should master by the end of the training programme, (3) 8 core themes defining the nuances of each domain and (4) 28 competences that trainees should acquire to cover each of the areas outlined in the overarching framework. A high LoA was achieved for all competences.

**Conclusion** These points to consider for EULAR–UEMS standards for the training of European rheumatologists are now defined. Their dissemination and use can hopefully contribute to harmonising training across European countries.

**WHAT IS ALREADY KNOWN ON THIS TOPIC**

- ⇒ The structure and, content of postgraduate rheumatology training programmes across Europe are highly heterogeneous.
- ⇒ The development of a common set of standards of knowledge, skills and professional behaviours would be helpful to harmonise training programmes across Europe.

**WHAT THIS STUDY ADDS**

- ⇒ A European Alliance of Associations for Rheumatology (EULAR) task force, also including members of the of Union Européenne des Médecins Spécialistes (UEMS) section of rheumatology, developed a document including an overarching framework, 7 domains, 8 core themes and 28 competences.
- ⇒ This document was inspired by existing specialty training curricula in rheumatology and related specialties and was approved by a broad audience of stakeholders.

**HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY**

- ⇒ This competence-based document seeks to provide guidance, act as a useful resource and help stakeholders to analyse their own training programmes and inspire positive change.
- ⇒ This document marks the collaboration between EULAR and UEMS, both of which pursue the harmonisation of this process across European countries and is flexible enough to be adapted according to country/training centre-specific settings while still ensuring the overarching goals are achieved.

**INTRODUCTION**

Postgraduate rheumatology training programmes define the curriculum of knowledge, skills and behaviours needed for physicians to be recognised as specialists in rheumatology. These programmes are already established at a national level in European countries. Previous work has highlighted consistent heterogeneity, with substantial variations

in structure and approach and, to a lesser extent, content across different training programmes.<sup>1</sup> While in some countries there is a standardised national approach, in others the implementation of the national programmes can vary widely between regions and training centres.<sup>2</sup> Finally, a high degree of heterogeneity in the strategies used for the assessment of trainees has also been identified.<sup>3,4</sup>

In an era of frequent movement of specialists across European countries, a pan-European standard that defines the key aspects of training required would be helpful. In this regard, the European Alliance of Associations for Rheumatology (EULAR) has taken several steps forward to achieve this goal by providing, for example, guidance on the assessment of competences and development of a portfolio for use by trainees.<sup>5,6</sup> While having no formal role in the licensing of rheumatologists in individual countries, a common set of standards for training rheumatologists would assist in harmonising training programmes across Europe. This work might also serve as a useful resource to individuals or organisations with responsibility for rheumatology training. The aim of this project was to define core competences required to qualify as a trained rheumatologist and the corresponding standards of knowledge, skills and professional behaviours. This work was inspired by existing national and international training documents, including the Union Européenne des Médecins Spécialistes (UEMS) curriculum published in 2014,<sup>7</sup> to learn from the many approaches currently used in training.

## METHODS

An international task force (TF) was convened by the steering group, including the convenor (CJE), the project coleaders (FS and TA), the methodologists (SR and CH) and the fellow (AA). The project followed the EULAR standard operating procedures (SOPs)<sup>8</sup> as applicable to the specific nature of this work. The TF included rheumatologists (two of whom represented the Emerging EULAR Network (EMEUNET)), a health professional in rheumatology (HPR), an educationalist, people with rheumatic and musculoskeletal (MSK) diseases and two representatives of the rheumatology section of UEMS. Due to the unique nature of the project, a mapping of existing training documents was performed instead of a systematic literature review (usually conducted as per EULAR SOP). In addition, to overcome travel limitations due to the pandemic, all TF meetings were held online, and the steering group opted for more meetings (four instead of the usual two) of a shorter duration.

## Mapping

The mapping phase consisted of the retrieval of key documents on specialty training in rheumatology but also other related specialties (eg, internal medicine) across a broad set of international sources (the latter were selected in line with previous projects from our group).<sup>1,2,4</sup> We started with the collection of general templates/main documents developed by UEMS, the Accreditation Council for Graduate Medical Education (ACGME), the framework developed by the Royal College of Physicians and Surgeons of Canada (CanMEDS) and the Royal Australasian College of Physicians (RACP). We also searched for additional documents pertaining to specialty training in rheumatology and other related specialties developed by each of these institutions. Then we searched for specialty training documents developed by international boards other than those mentioned previously (eg, European or American associations or scientific societies for the various specialties). We contacted the international boards via email and if no response was received after two

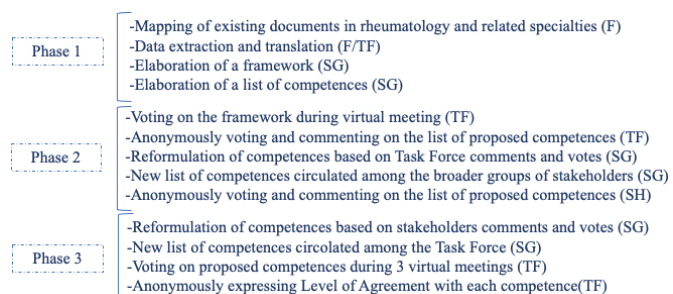
reminders, the website of the association was carefully browsed to identify any link to relevant published or unpublished documents. Finally, based on previous work that we conducted in this field,<sup>1</sup> we selected role-model European countries with a structured rheumatology training process (Austria, Denmark, Finland, France, Germany, Italy, Netherlands, Poland, Portugal, Slovenia, Spain, Sweden and UK). We retrieved national training documents, translated them into English using DeepL or Google Translate. In order to ensure accuracy of the translation, we liaised with native speaker TF members or contacted persons familiar with the document.

## Development and approval of a framework

The whole content of all the aforementioned documents (including information about the structure of each document) was extracted by the fellow (AA) into a standardised extraction sheet. This underwent revision by the other steering group members, and similar areas of content across documents were identified. Following several rounds of online discussion, the steering group prepared an overarching framework defining the key areas to be addressed by rheumatologists in training, alongside a summary of the data and key themes extracted from the existing documents to present during the first meeting to the TF. During this meeting, the TF reached an agreement on the backbone of the document (overarching framework and domains) by informal voting, while during the second meeting, the TF agreed, by informal voting, on the domain substructure (the core themes).

## Development and approval of a list of competences

The competences listed in each of the aforementioned documents were classified and placed within each of the domains and core themes approved by the TF. The steering group then formulated a draft statement for each competence summarising the related content obtained from the various reviewed documents from the mapping exercise. This list of competences was reviewed by TF members using the SoSci Survey platform with three options available for each statement: ‘I agree with the statement as is’; ‘I disagree with the statement as is and suggest rephrasing as follows (free text)’; and ‘I disagree with this statement as is and suggest removing it’. Replies were anonymous and respondents were blinded to each other’s responses. The competences receiving <50% of agreement were rephrased according to feedback from the TF, and the updated list of competences was distributed to a broad group of stakeholders including rheumatologists, health professionals in rheumatology, people with rheumatic and musculoskeletal diseases (PAREs) and caregivers in order to collect feedback. The choice of professional stakeholders was based on their exposure to and/or involvement in the development of national/international training documents. In addition, we gathered the opinion of PAREs and their caregivers with particular regard to the competences related to the physician–patient relationship. Using the same online platform and three options for each statement (‘I agree with the statement as is’; ‘I disagree with the statement as is and suggest rephrasing as follows (free text)’; and ‘I disagree with this statement as is and suggest removing it’), the link was distributed through email and social media to the following stakeholders: national European rheumatology societies under the EULAR umbrella, young rheumatologist members of EMEUNET, HPR, PAREs and their caregivers, as well as non-clinical stakeholders involved in the development of rheumatology training curricula.



**Figure 1** Phases of the project. F, fellow; SG, steering group; SH, stakeholder; TF, task force.

In the subsequent two TF meetings, the results of both surveys were presented. All competences (both those that received <50% of agreement in the previous TF discussion round that therefore were rephrased and those that received >50% of agreement in the previous TF voting round that therefore were unchanged) were rediscussed within the TF and, if needed, were rephrased before formal voting for each individual competence. Each competence was accepted if at least 75% of the TF approved the wording in the first round. If this threshold was not reached, further discussion ensued, and wording was refined. At least a 67% approval rate was required in the second voting round. If a third voting round was necessary, a simple majority was sufficient for approval. Finally, each TF member anonymously indicated their level of agreement (LoA) with each statement via an online platform (Numerical Rating Scale ranging from 0='I do not agree at all' to 10='I totally agree'). The phases of the project are shown in [figure 1](#). The final manuscript was reviewed and approved by all TF members, followed by ratification by the EULAR Council and the rheumatology section and board of the UEMS.

## RESULTS

A total of 112 European, American, Canadian and Australasian associations were identified, and 119 international training curricula were retrieved and extracted (online supplemental tables S1 and S2). National rheumatology training documents from 13 countries were also reviewed and extracted (online supplemental figure S1). On assessment of the content of these 132 documents, we observed that their organisation could be competence-based (48%), role-based (47%) or problem-based (5%). [Table 1](#) provides an overview of the features of rheumatology documents from UEMS, ACGME, CanMEDS and RACP.

Overall, 253 stakeholders commented and voted on the competences through the broad online anonymous survey (online supplemental table S3).

Based on the information retrieved in the mapping phase and expert opinion (also looking forward to the implementation phase), the TF agreed to develop a competence-based document.

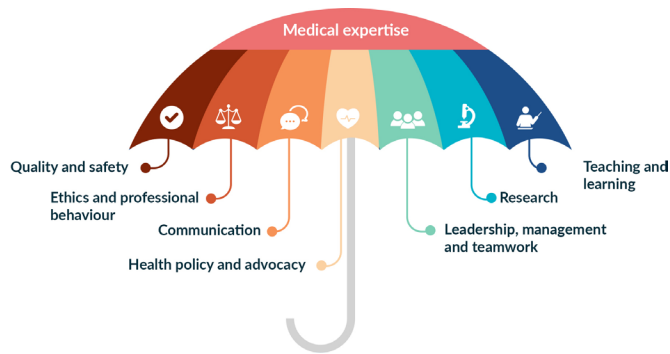
[Figure 2](#) shows the overarching framework indicating the areas that should be addressed during training and conveying the message that every area, including professional behaviours, is vital in the development of a fully trained specialist. Medical expertise is specifically displayed on top of the umbrella, overarching all the other areas, to emphasise its paramount importance as the main goal of the training programme.

The TF agreed on 7 domains, 8 core themes and 28 competences ([table 2](#)). The domains define broad areas that rheumatology trainees should master by the end of the training programme (eg, domain 4, the management of chronic rheumatology conditions). Each domain can be then organised into core themes defining the nuances within each domain (eg, core themes 4A, general aspects; 4B, individual rheumatic and musculoskeletal diseases (RMDs); and 4C, specific situations). Finally, each domain/core theme is further composed by a list of competences (ranging from 1 to 4) that trainees should acquire to cover

**Table 1** Overview of rheumatology documents from international overarching institutions describing possible structures of training

Institution and geographical area	Structure	Details of structure	Competences (n)
UEMS Europe	Competence-based	<ul style="list-style-type: none"> <li>▶ Theoretical knowledge.</li> <li>▶ Practical and clinical skills.</li> <li>▶ Competence.</li> </ul>	9
ACGME USA	Competence-based	<ul style="list-style-type: none"> <li>▶ Patient care.</li> <li>▶ Medical knowledge.</li> <li>▶ Practice-based learning and improvement.</li> <li>▶ Interpersonal and communication skills.</li> <li>▶ Professionalism.</li> <li>▶ Systems-based practice.</li> </ul>	12
CanMEDS Canada	Role-based	<ul style="list-style-type: none"> <li>▶ Medical expert (the integrating role).</li> <li>▶ Communicator.</li> <li>▶ Collaborator.</li> <li>▶ Leader.</li> <li>▶ Health advocate.</li> <li>▶ Scholar.</li> <li>▶ Professional.</li> </ul>	27
RACP Australia and New Zealand	Competence-based	<ul style="list-style-type: none"> <li>▶ Communication.</li> <li>▶ Quality and safety.</li> <li>▶ Teaching and learning.</li> <li>▶ Cultural competence.</li> <li>▶ Ethics and professional behaviour.</li> <li>▶ Clinical decision making.</li> <li>▶ Leadership, management and teamwork.</li> <li>▶ Health advocacy.</li> <li>▶ Broader context of health.</li> </ul>	38

ACGME, Accreditation Council for Graduate Medical Education; CanMEDS, framework developed by the Royal College of Physicians and Surgeons of Canada; RACP, Royal Australasian College of Physicians; UEMS, Union Européenne des Médecins Spécialistes.



**Figure 2** Overarching framework defining the key areas to be addressed by rheumatologists in training.

each domain and, ultimately, each of the areas outlined in the overarching framework.

A high LoA was achieved for all competences ( $\geq 95\%$ ). For the sake of completeness and to facilitate understanding and implementation, the group developed explanatory tables for each competence (table 3, online supplemental tables S4–S23, online supplemental text S1) and relevant lists (eg, laboratory tests) as deemed appropriate (online supplemental text S2–S5). The details included in these explanatory tables are not supposed to cover all aspects of knowledge/skills/behaviours related to the competence, but rather they are meant as examples to help clarify what is meant by a given competence and what is needed to achieve it.

### Domain 1: basic activities in rheumatology

The first domain includes basic competences that every rheumatologist should develop and master with regard to history taking and physical examination (core theme 1A), as well as interventional and investigational procedures related to RMDs (core theme 1B). The TF deemed it appropriate to point out that, due to the systemic nature of most RMDs, trainees should be able to perform a general physical examination, in addition to the assessment of the MSK system (competence 1). In addition, while the injection and aspiration of joints and periarticular structures were a requirement for all trainees (competence 2), the group recognised the heterogeneity across different training programmes with regard to the performance of some investigative procedures, such as MSK ultrasonography or synovial fluid analysis (competence 3). Therefore, competence 3 was phrased in a more flexible way ('Select, interpret and, where applicable, perform (...)'), than competence 2 ('Perform (...)').

### Domain 2: new-onset RMDs

By defining this domain, the TF aimed at outlining the clinical reasoning required when approaching a new, non-diagnosed patient for the first time. In this setting, the diagnostic process (core theme 2A) requires the correct application of the knowledge, skills and behaviours of domain 1 ('history taking, physical examination and interpretation of investigations') to different clinical scenarios. By taking a thorough history and integrating it with the signs detected on physical examination, a tailored plan for differential diagnoses can be elaborated, including both RMDs and other conditions, and additional investigations can be performed or prescribed (competence 4). The core theme 2B and the corresponding competence 5 encompass the capacity to establish a management plan appropriate to the problem(s) of the patient and set the stage for subsequent domains pertaining to long-term management of RMDs (see domain 4).

### Domain 3: emergencies in rheumatology

Given the need for specific skills and behaviours due to the pressure of the clinical emergency, the TF deemed that it was appropriate to include recognition and management of time-sensitive conditions as a separate domain. This is in line with documents from other specialties such as anaesthesiology and emergency medicine, which stratify conditions according to the window of opportunity for treatment (eg, minutes, hours and days). In fact, the recognition and management of time-sensitive conditions (competence 6) requires the trainee to be prepared to provide the same high standards of medical expertise while adapting to the time available to complete the diagnostic and management process.

### Domain 4: the management of chronic rheumatology conditions

This domain includes several competences that pertain to general aspects of RMD management (core theme 4A) and that encompass not only the management of individual RMDs (core theme 4B) but also the management of these conditions in specific situations. Within this domain, the TF included a specific competence referring to the assessment of disease activity and impact, functional status and cumulative damage (competence 7), underpinning the need to make use of both objective measurements and patient-reported outcome measures in order to achieve a comprehensive overview of the individual's experience and tailor the management of the disease. In addition, the TF acknowledged the importance of regularly updating the management plan by incorporating scientific evidence, objective and subjective measurements of the disease status and patient preferences (competence 7). The different statements about individual RMDs (competences 9–12) include various conditions and groups of diseases listed in more detail in online supplemental text S2. There was extensive discussion about which diseases to specifically include in order to be comprehensive yet concise. One example is that the TF recognised the importance of autoinflammatory diseases and included them in competence 9 but agreed not to list the individual conditions in online supplemental text S2. Finally, the TF highlighted specific situations requiring additional knowledge, skills and behaviours, such as the management of RMDs in different age groups (competence 13), in the context of preconception, pregnancy and breast feeding (competence 14) and in the context of multimorbidity (competence 15). The role of the rheumatologist in the management of MSK manifestations of diseases other than RMDs has also been highlighted (competence 16).

### Domain 5: the physician–patient relationship

This domain recognises that successful management of PAREs requires a physician–patient relationship based on trust and shared decision making. The three core themes of this domain define the general aspects of the physician–patient relationship (5A) and effective communication (5B) while also outlining the roles and responsibilities of the rheumatologist within the society (5C). The foundations of a trustful physician–patient relationship are mutual trust and respect (competence 17) and the application of laws, regulations, ethical principles and recommendations while respecting patients' individual goals and preferences (competence 18).

The TF also elaborated statements that underline the importance of effective communication not only between physicians, patients and their families (competence 19) but also with other stakeholders involved in patient care (competence 20).

**Table 2** Framework and list of competences setting the standards for training rheumatologists

Domain	Core theme	Competence	Level of agreement		
			Mean (SD)	% ≥8/10	
1 Basic activities in rheumatology	1A History taking and physical examination	1 (1.A.1) Elicit a medical history and perform a general physical examination including the musculoskeletal system.	10 (0)	100	
		2 (1.B.1) Perform aspiration and injection of joints and periarticular structures.	10 (0)	100	
	3 (1.B.2) Select, interpret and, where applicable, perform investigative procedures related to rheumatology and appropriate to the patient.	9.8 (0.5)	100		
2 New-onset RMDs	2A Diagnostic process	4 (2.A.1) Elaborate an appropriate plan for differential diagnoses based on history taking, physical examination and interpretation of investigations.	10 (0)	100	
	2B Initial management of RMDs	5 (2.B.1) Establish a management plan appropriate to the problem(s) of the patient.	10 (0)	100	
3 Emergencies in rheumatology		6 (3.1) Recognise and manage time-sensitive conditions.	9.7 (0.6)	100	
4 The management of chronic rheumatology conditions	4A General aspects	7 (4.A.1) Assess disease activity and impact, functional status and cumulative damage.	10 (0.4)	100	
		8 (4.A.2) Establish and regularly update an evidence-based management plan according to disease status and patient preferences.	9.8 (0.5)	100	
	4B Individual RMDs	9 (4.B.1) Manage rheumatoid arthritis, spondylarthritis, crystal arthropathies and other inflammatory musculoskeletal diseases including autoinflammatory diseases.	9.8 (0.8)	95	
		10 (4.B.2) Manage connective tissue diseases, vasculitis and other related systemic inflammatory diseases.	9.9 (0.4)	100	
		11 (4.B.3) Manage osteoarthritis and metabolic bone diseases including osteoporosis and Paget's disease.	9.7 (0.8)	95	
		12 (4.B.4) Manage chronic local and widespread pain syndromes including fibromyalgia.	9.2 (1.8)	95	
	4C Specific situations	13 (4.C.1) Manage RMDs in different age groups.	9.6 (0.9)	95	
		14 (4.C.2) Manage RMDs in the context of preconception, pregnancy and breast feeding.	9.8 (0.6)	100	
		15 (4.C.3) Manage RMDs in the context of multimorbidity.	9.7 (0.8)	95	
		16 (4.C.4) Manage musculoskeletal manifestations of diseases other than RMDs.	9.4 (0.9)	95	
	5 The physician–patient relationship	5A General aspects	17 (5.A.1) Establish professional relationships with patients and their families that are based on mutual trust and respect.	9.9 (0.3)	100
			18 (5.A.2) Practice according to the applicable laws, regulations, ethical principles and recommendations while respecting patients' individual goals and preferences.	9.9 (0.3)	100
5B Communication		19 (5.B.1) Effectively communicate with patients and their families.	10 (0)	100	
		20 (5.B.2) Effectively communicate with other stakeholders involved in the patient's care.	9.8 (0.4)	100	
5C The rheumatologist and the society		21 (5.C.1) Deliver and promote education and involvement of patients, families and caregivers in all aspects relevant to their care.	9.8 (0.6)	100	
		22 (5.C.2) Understand and respond to the health needs of the community.	9.5 (0.8)	100	
6 The interdisciplinary and multidisciplinary teams		23 (5.C.3) Actively contribute to the integration of new technologies and methods to improve healthcare	9.5 (0.9)	95	
		24 (6.1) Demonstrate effective, appropriate, and timely cooperation with other health professionals	9.8 (0.5)	100	
7 Research, teaching and learning	7A Individual learning plan	25 (6.2) Demonstrate capacity and responsibility as future leader of a rheumatology team	9.5 (0.9)	95	
		26 (7.A.1) Develop, implement, monitor and revise a personal learning plan to enhance professional practice.	9.8 (0.5)	100	
	27 (7.A.2) Be able to critically appraise and understand implications of research findings.	9.6 (0.8)	95		
	7B Knowledge transfer	28 (7.B.1) Promote and disseminate relevant knowledge to patients, students, healthcare providers and the public.	9.7 (0.7)	100	

RMDs, rheumatic and musculoskeletal diseases.

Finally, from a societal perspective, the rheumatologist should deliver and promote education and involvement of patients, families and caregivers in all aspects relevant to their care (competence 21). Furthermore, rheumatologists should understand and

respond to the health needs of the community (competence 22) and be engaged in the formulation and integration of new technologies and methods aimed at improving daily healthcare work (competence 23).

**Table 3** Representative explanatory table for one competence (competence 1) shown in table 2 (the other tables are included in the online supplemental materials)

Domain 1: Basic activities in rheumatology		
Core theme 1.A History taking and physical examination		
Competence 1.A.1 Elicit a medical history and perform general physical examination including the musculoskeletal system		
Knowledge	Skills (psychomotor and cognitive)	Others
<ul style="list-style-type: none"> <li>▶ Anatomy and physiology of musculoskeletal tissues.</li> <li>▶ RMDs and other conditions pertaining to rheumatology (online supplemental text S2).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Develop patient-centred interviewing skills.</li> <li>▶ Recognise the importance of a collateral history in certain situations, for example, unreliable history.</li> <li>▶ Perform regional musculoskeletal examination and GALS screening examination.*</li> <li>▶ Ensure history and physical examination recognise non-articular manifestations with potential implications in the diagnosis and/or management of musculoskeletal conditions.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Fully address patients' concerns, ideas and expectations.</li> </ul>
Assessment methods	Learning strategies	
OSCE and DOPS	Self-study, learning in daily clinical work, courses and department teaching	
*EULAR School of Rheumatology: the GALS screen (available at <a href="https://esor.eular.org/course/view.php?id=119">https://esor.eular.org/course/view.php?id=119</a> ).		
DOPS, direct observation of practical skill; EULAR, European Alliance of Associations for Rheumatology; GALS, gait, arms, legs and spine; OSCE, objective structured clinical examination; RMDs, rheumatic and musculoskeletal diseases.		

### Domain 6: the interdisciplinary and multidisciplinary teams

While addressing the competences of this domain, discussions within the TF stressed the concept of how crucial the multidisciplinary team is to ensure optimal and comprehensive management of PAREs. In this regard, the interaction with other healthcare providers, including both physicians and other professionals (nurses, occupational therapists or physiotherapists, to cite only a few), should be effective, appropriate and timely (competence 24). Furthermore, the TF agreed on the concept that the rheumatologist should be capable of leading such a team (competence 25) and recognised the key role of each team member in optimising the management in various clinical scenarios.

### Domain 7: research, teaching and learning

This domain encompasses both the individual learning plan (core theme 7A) and the concept of knowledge transfer (core theme 7B). The capability to develop, implement, monitor and revise a personal learning plan to enhance professional practice (competence 26) requires the trainee to set individual goals, recognise learning opportunities, reflect on outcomes and feedback from trainers, and modulate the plan as needed. While setting these goals and modulating the plan, trainees should also consider work–life balance. In fact, trainees should also be proactive in discussing these aspects with colleagues and supervisors to ultimately achieve a satisfactory and sustainable career.

The trainee should also be able to critically appraise and understand implications of research findings (competence 27), as these represent the foundation of both their clinical and their own research activity. In addition, the trainees should promote and disseminate relevant (namely, tailored) knowledge to patients, students, healthcare providers and the public (competence 28).

## DISCUSSION

To date, 41 EULAR countries provide rheumatology specialty training and owing to national and local organisations; each country has a different training structure, content and assessment strategy, resulting in a wide heterogeneity.<sup>4</sup> This competence-based document proposes standards in postgraduate rheumatology training and marks the collaboration between EULAR and UEMS, both of which pursue the harmonisation of this process across European countries. We also envisage that this document will require regular update to be aligned with new developments (eg, new diagnostic procedures).

The approach we used, starting from the mapping of existing documents, allows the incorporation of a wide range of perspectives and attitudes currently represented in medical training programmes. In doing so, it aims to overcome local barriers and encourage broad acceptance, with the ultimate goal to improve the management of PAREs Europe-wide. Our document includes all the competences that should be achieved by the end of specialty training to ultimately fulfil the areas included in the overarching framework (figure 1). The competence-based structure and the content of the document are flexible enough to be adapted according to country/training centre-specific settings while still ensuring the overarching goals are achieved. In this regard, we are currently planning the implementation phase by liaising with national institutions in charge of training programmes. This document in no way attempts to undermine local regulations, but, rather, it seeks to provide guidance, act as a useful resource, and help stakeholders to analyse their own training programmes and inspire positive change.

It can also be used to map educational activities and congresses to ensure they cover all aspects required for a rheumatology trainee. Collaboration between UEMS and international institutions has already happened in other medical areas such as nephrology and has brought synergies and improvements in the respective field.<sup>9</sup> Therefore, we hope that this will also happen in rheumatology and that this joint endeavour will encourage harmonisation of rheumatology training across Europe to ultimately facilitate the movement of trainees among different institutions in EULAR countries.

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#### REFERENCES

- Sivera F, Ramiro S, Cikes N, *et al.* Differences and similarities in rheumatology specialty training programmes across European countries. *Ann Rheum Dis* 2015;74:1183–7.
- Sivera F, Ramiro S, Cikes N, *et al.* Erratum to: rheumatology training experience across Europe: analysis of core competences. *Arthritis Res Ther* 2016;18:300.
- Alunno A, Najm A, Sivera F, *et al.* Assessment of competences in rheumatology training: results of a systematic literature review to inform EULAR points to consider. *RMD Open* 2020;6:e001330.
- Najm A, Alunno A, Sivera F, *et al.* Strategies for the assessment of competences during rheumatology training across Europe: results of a qualitative study. *RMD Open* 2020;6:e001183.
- Sivera F, Alunno A, Najm A, *et al.* 2019 EULAR points to consider for the assessment of competences in rheumatology specialty training. *Ann Rheum Dis* 2021;80:65–70.
- van Onna M, Ramiro S, Haines C, *et al.* EULAR Portfolio for rheumatology training: a EULAR school of rheumatology initiative. *RMD Open* 2021;7:e001684.
- (UEMS). Training requirements in rheumatology. 2014. Available: <https://uemsrheumatology.eu/news-and-events/news/news-more/training-requirements-in-rheumatology>
- van der Heijde D, Aletaha D, Carmona L, *et al.* 2014 update of the EULAR standardised operating procedures for EULAR-endorsed recommendations. *Ann Rheum Dis* 2015;74:8–13.
- Cannata-Andia JB, Weinstein T, Slotki I, *et al.* The European certificate in nephrology: towards harmonization and excellence in training. *Clin Kidney J* 2019;12:167–71.



## Correction: *Points to consider: EULAR–UEMS standards for the training of European rheumatologists*

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This is the correct version of the author affiliations. The incorrect version appeared in the August 2023 print issue.

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