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CONCISE REPORT

Differences and similarities in rheumatology specialty training programmes across European countries

Francisca Sivera,[1] Sofia Ramiro,[2,3] Nada Cikes,[4] Maxime Dougados,[5] Laure Gossec,[6,7] Tore K Kvien,[8] Ingrid E Lundberg,[9] Peter Mandl,[10] Arumugam Moorthy,[11] Sonia Panchal,[11] José A P da Silva,[12] Johannes W Bijlsma,[1,13] on behalf of the Working Group on Training in Rheumatology across Europe

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For numbered affiliations see end of article.

Correspondence to
Dr Francisca Sivera, Rheumatology Department, Hospital General Universitario de Elda, ctra Sax s/n, Elda 03600, Spain; fransimas@yahoo.es

FS and SR are joint first authors.

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ABSTRACT

Objectives To analyse the similarities and discrepancies between the official rheumatology specialty training programmes across Europe.

Methods A steering committee defined the main aspects of training to be assessed. In 2013, the rheumatology official training programmes were reviewed for each of the European League Against Rheumatism (EULAR) countries and two local physicians independently extracted data on the structure of training, included competencies and assessments performed. Analyses were descriptive.

Results 41 of the 45 EULAR countries currently provide specialist training in rheumatology; in the remaining four rheumatologists are trained abroad. 36 (88%) had a single national curriculum, one country had two national curricula and four had only local or university-specific curricula. The mean length of training programmes in rheumatology was 45 (SD 19) months, ranging between 3 and 72 months. General internal medicine training was mandatory in 40 (98%) countries, and was performed prior to and/or during the rheumatology training programme (mean length: 33 (19) months). 33 (80%) countries had a formal final examination.

Conclusions Most European countries provide training in rheumatology, but the length, structure, contents and assessments of these training programmes are quite heterogeneous. In order to promote excellence in standards of care and to support physicians' mobility, a certain degree of harmonisation should be encouraged.

INTRODUCTION

Rheumatology specialty training is the educational process required for a physician to be officially recognised as a specialist in rheumatology. Terminology can be confusing as this process can be designated as residency, fellowship, specialist registrar or postgraduate medical training depending on the country. It is defined by an officially approved training programme, which aims to bring physicians to an agreed standard of proficiency with regard to the management of patients with rheumatic and musculoskeletal diseases (RMDs).

The definition of the aims, structure and contents of each country's medical specialty training programmes is under the exclusive domain of national authorities. However, within the European Union (EU), the free circulation of medical specialists has been consolidated by the mutual recognition of qualifications for physicians.[1] Movement of medical specialists within Europe is already an active and significant phenomenon.[2] The harmonisation of rheumatology specialist training in Europe is deemed essential for the free movement of rheumatology specialists across countries facilitating equal standards of care for patients with RMDs.[3] However, accurate data on how rheumatology training is performed and assessed in the different European countries are scarce.[4 5]

The aim of this project, supported by the European League Against Rheumatism (EULAR), was to analyse the similarities and discrepancies between the official rheumatology specialty training programmes across Europe.

METHODS

A Steering Group composed of 12 European rheumatologists with an interest in education discussed and agreed upon the main aspects of training to be assessed in the survey, after review of diverse national training programmes and the UEMS European Rheumatology Curriculum Framework.[6] A representative from each of the 45 EULAR member countries (national principal investigator (PI)) was identified and oversaw national data extraction. These representatives constituted the Working Group.

Data sources

The source documents consisted of official national training programmes and curricula and were obtained before data extraction began. In countries with only local training programmes (without a national curriculum) or if local training programmes substantially modified and/or complemented national curricula in the aspects surveyed, the local curriculum of the training centre with the greatest number of trainees was incorporated. If countries had more than one national training programme, a similar method was followed and the curriculum that produced the greatest number of trainees per year was included in the analysis. In countries lacking rheumatology specialty training programmes, this was confirmed through the National Rheumatology Society.

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Data extraction

Data were extracted onto an on-line data extraction sheet (Survey Monkey Inc., Palo Alto, USA), which had been piloted by a selected group of national PIs. Questions (n=61) concerned the official regulations regarding the structure and length of training, internal medicine training requirements, the competencies which trainees are expected to achieve, research training and activities and assessments required before certification. Regarding competencies, data were gathered on a prespecified list of 29 clinical competencies, 10 technical skills and 15 generic competencies (see online supplementary tables S2 and S3, figure 1) selected by the Steering Group from the UEMS European Rheumatology Curriculum Framework.[6] Clinical competencies were selected in order to capture information on the core rheumatology diseases, including a broad spectrum of RMDs, while generic competencies were selected to provide insight into the different roles defined by the European Rheumatology Curriculum Framework.[6]

In each country, the national PI and a second data extractor (both rheumatologists or rheumatology trainees) independently extracted the data. Their answers were then compared and discrepancies were resolved by consensus after consulting source documents. Data collection took place in 2013.

Data analysis

Analyses were descriptive, using Stata SE V.12 (StataCorp, College Station, Texas, USA).

RESULTS

Forty-one, out of the 45 EULAR countries, provide specialist medical training in rheumatology, in the remaining four rheumatologists are trained abroad. Of the 41 countries, 36 (88%) had a single official national curriculum, one country had two official national curricula (one for trainees with prior training in internal medicine and another for trainees with prior rehabilitation medicine training) and four (10%) had only local or university-specific curricula. In four additional countries, local curricula included information relevant to the survey (for details, see online supplementary text 1).

Length and structure of training programme

The mean total length of official training programmes in rheumatology was 45 (SD 19) months, but training programmes could be as short as 3 months or as long as 72 months (table 1, see online supplementary figure S1). Internal medicine training was not mandatory in one country (though it was commonly performed by all trainees). It could be performed within the rheumatology training programme (n=12, 29%), prior to the rheumatology programme (n=14, 34%) or at both time points (n=14, 34%). The mean length of total general internal medicine training was 33 (SD 19) months. Overall, the mean minimum time spent in training, from the beginning of medical school until becoming a certified rheumatologist, was 140 (SD 17) months.

For further information on training regulations, see online supplementary text 1 and online supplementary table S1.

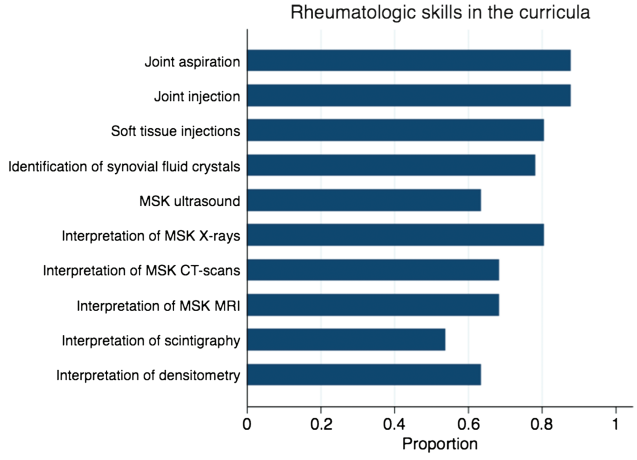

Figure 1 Procedures and practical skills included in the official rheumatology curricula. MSK, musculoskeletal.

Clinical and generic competencies, skills and procedures

All curricula implied a list of competencies expected to be achieved. Out of the preselected 29 clinical competencies, an average of 21 (SD 10) was specified in the training programmes, while a mean of 8 (SD 6) out of the selected 15 generic competencies was mentioned (table 1, see online supplementary tables S2 and S3). Most countries also mentioned procedures such as joint aspiration (n=36, 88%), joint (n=36, 88%) and soft tissue injection (n=33, 80%), crystal identification in a synovial fluid sample (n=32, 78%) or performing a musculoskeletal ultrasound (n=26, 63%) (figure 1; see online supplementary text 1).

Assessment of competencies

Six countries (15%) reported that trainees did not have a clinical or educational supervisor and nine (22%) reported having no portfolio or logbook in which to register training activities.

Two countries (5%) reported having no final assessment before rheumatology certification. One of these countries reported having periodic assessments; in the other automatic certification was acquired on completion of the training programme, without in-training or post-training formal assessment. Thirty-three countries reported having some sort of final examination (written, oral and/or practical). One country reported requiring completion of the EULAR on-line course for certification. Each country had a mean of 4 (SD 2) types of final assessments (figure 2).

DISCUSSION

To our knowledge, this is the first study to explore rheumatology training in such a wide range of countries. In this study, we captured the official regulations governing each country's rheumatology specialty training. Rheumatology specialty training programmes are offered in most European countries, but the structure, contents and the prerequisite assessments of the training programmes are quite heterogeneous. Training programmes were defined as per the national curriculum: in some countries, they incorporate all the training from the end of medical school until rheumatology certification, while in others, prior training (eg, in internal medicine) is required before entering a designated rheumatology training programme. While there is an increasing shift towards competency-based training, the significant difference between training programme lengths (from 3 months to 6 years) most probably results in a significant difference in the number and the depth of competences achieved.

While a complete homogenisation of the national curricula is unnecessary, a minimum common understanding of what a rheumatologist is and of his core competencies—as is the case in other medical specialties[7 8]—would be highly desirable. The UEMS/EBR, in its strive to promote high-quality medical training developed several documents, which were in effect in 2013 and had been endorsed by curriculum authorities of over 19

Table 1 Main characteristics of the training structure by country

Country	Estimated number of trainees per year*	Length of medical school (months)	Length of (mandatory) GIM training prior to rheumatology (months)	Length of rheumatology training programme (months)	Length of (mandatory) GIM training during rheumatology training programme (months)	Total length of (mandatory) GIM training (months)	Length from beginning of medical school to end of rheumatology training (months)	Clinical competencies (from the 29 prespecified)†	Generic competencies (from the 15 prespecified)†	Skills and procedures (from the 10 prespecified)†
Albania	5	72	0	36	2	2	120	29 (100%)	0 (0%)	1 (10%)
Armenia	3	60	24	24	0	24	108	25 (86%)	11 (73%)	8 (80%)
Austria	8	72	72	27	0	72	147	0 (0%)	1 (7%)	4 (40%)
Belarus	18	72	12	24	3	15	108	29 (100%)	8 (53%)	5 (50%)
Belgium	7	72	36	36	0	36	144	24 (83%)	13 (87%)	10 (100%)
Bosnia	1	72	48	24	0	48	144	5 (17%)	12 (80%)	9 (90%)
Bulgaria	10	72	0	48	24	24	120	29 (100%)	11 (73%)	10 (100%)
Croatia	3	72	1.5	60	22	23.5	144	29 (100%)	15 (100%)	10 (100%)
Czech Republic	5	72	24	36	0	24	132	24 (83%)	4 (27%)	8 (80%)
Denmark	19	72	12	60	12	24	156	20 (69%)	15 (100%)	5 (50%)
Estonia	1	72	0	48	9	9	120	0 (0%)	11 (73%)	8 (80%)
Finland	5	72	0	72	27	27	144	29 (100%)	12 (80%)	10 (100%)
France	25	72	0	48	0	0	120	29 (100%)	5 (33%)	10 (100%)
Georgia	3	72	24	24	2	26	132	29 (100%)	1 (7%)	0 (0%)
Germany	49	72	0	72	36	36	144	5 (17%)	6 (40%)	10 (100%)
Greece	12	72	24	48	0	24	168	0 (0%)	0 (0%)	0 (0%)
Hungary	7	72	0	60	24	24	132	0 (0%)	0 (0%)	8 (80%)
Ireland	4	60	36	60	48	84	168	28 (97%)	14 (93%)	9 (90%)
Israel	8	72	51	30	0	51	150	29 (100%)	0 (0%)	10 (100%)
Italy	35	72	1	60	24	25	144	6 (21%)	1 (7%)	10 (100%)
Latvia	2	72	36	33	0	36	141	22 (76%)	0 (0%)	6 (60%)
Lebanon	2	84	36	24	0	36	144	21 (72%)	12 (80%)	9 (90%)
Lithuania	3	72	0	48	24	24	120	28 (97%)	2 (13%)	10 (100%)
Macedonia	3	60	51.6	24	0	51.6	144	17 (59%)	6 (40%)	10 (100%)
Malta	1	60	27	48	36	63	156	28 (97%)	15 (100%)	9 (90%)
Moldova	4	72	36	22	3	39	130	28 (97%)	15 (100%)	10 (100%)
The Netherlands	23	72	0	72	36	36	144	29 (100%)	15 (100%)	4 (40%)
Norway	23	72	4	72	24	28	168	28 (97%)	15 (100%)	10 (100%)
Poland	55	84	62.4	36	0	62.4	156	24 (83%)	7 (47%)	6 (60%)
Portugal	10	72	4	60	12	16	144	15 (52%)	7 (47%)	5 (50%)
Romania	24	72	0	48	18	18	120	29 (100%)	5 (33%)	9 (90%)
Russia	N/A	72	12	24	4	16	108	29 (100%)	13 (87%)	9 (90%)
Serbia	10	72	48	24	0	48	144	29 (100%)	15 (100%)	6 (60%)
Slovakia	4	72	0	72	24	24	144	18 (62%)	4 (27%)	7 (70%)
Slovenia	2	72	2	72	24	26	156	12 (41%)	2 (13%)	6 (60%)
Spain	55	72	0	48	12	12	132	27 (93%)	9 (60%)	4 (40%)
Sweden	18	66	6	60	24	30	144	24 (83%)	11 (73%)	3 (30%)
Switzerland	15	72	0	72	24	24	144	8 (28%)	15 (100%)	10 (100%)

Continued

Table 1 Continued

Country	Estimated number of trainees per year*	Length of medical school (months)	Length of (mandatory) GIM training prior to rheumatology (months)	Length of rheumatology training programme (months)	Length of (mandatory) GIM training during rheumatology training programme (months)	Total length of (mandatory) GIM training (months)	Length from beginning of medical school to end of rheumatology training (months)	Clinical competencies (from the 29 prespecified)†	Generic competencies (from the 15 prespecified)†	Skills and procedures (from the 10 prespecified)†
Turkey	8	72	48	36	0	48	156	27 (93%)	7 (47%)	9 (90%)
Ukraine	16	72	60	3	0	60	123	22 (76%)	5 (33%)	4 (40%)
The UK	30	60	28	60	24	52	168	29 (100%)	15 (100%)	9 (90%)
Summary‡	13.4 (14.4)	70.8 (4.8)	20.2 (21.8)	45.2 (18.6)	12.7 (13.6)	32.9 (18.5)	139.8 (16.5)	21.0 (10.0)	8.2 (5.5)	7.3 (3.0)

*These figures are estimates, as numbers fluctuate and in most of the countries are not readily available. In one country (Russia), the number of trainees was impossible to estimate.
†n (%).
‡Mean (SD).
GIM, general internal medicine.

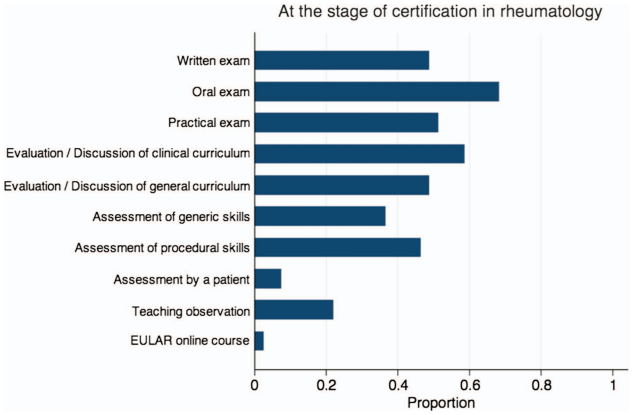

Figure 2 Final assessment at the completion of rheumatology training programme. Some countries offer several types of assessment at the stage of certification.

countries. It is important to highlight that UEMS/EBR holds no power upon national organisations, serving only as a source of recommendations and voluntary benchmarking. These documents developed by UEMS provide recommendations on the structure of the training programme. For example, they recommend a minimum training period of 6 years, including 2 years of internal medicine. However, only six countries comply with these recommendations, suggesting that its uptake has been until now limited. Many factors contribute to this poor uptake such as economic barriers to an increase in the training period, the reluctance of individual countries to any encroachment into their national prerogatives, the lack of a perceived need and the vague nature of these documents. Recently, a revision of these documents has been prepared, but not yet implemented.[9] This and other similar initiatives performed under the auspices of pan-European organisations (such as EULAR or the UEMS/EBR) are desirable to aim at harmonisation of training across Europe. Such initiatives have been successfully conducted in other specialties, such as intensive care medicine with the CoBaTrICE Initiative,[7] providing a positive momentum in European intensive care training. This successful initiative—that can be regarded as an example—started by assessing how training was performed across Europe and by involving stakeholders from all countries in the development of a list of common core competences to be achieved by the trainee.

Some aspects should be considered when interpreting these findings. Even though we tried to optimise the reliability of data collection, errors may still have occurred when interpreting the wording of the question or when consulting the source documents. More importantly, in this study we capture the structure of the training programmes, but differences in implementation can substantially modify the quality of training and the final acquisition of competencies. Furthermore, it is acknowledged that the same outcome (ie, achievement of a competency) can be reached in a variety of manners and teaching methods. Thus, whether differences in the educational process or structure—as shown in our study—translate into differences in outcomes remains unknown.

In summary, this study reports that most European countries provide training in rheumatology, but that the length, structure, content and assessments of these training programmes are quite diverse. In order to promote a high standard of patient care across Europe and support increasing doctor mobility, attempts to develop and implement a consensus list of core competencies

should be encouraged. Increased knowledge about national training programmes provides the background information necessary for further harmonisation attempts.

Author affiliations
[1]Rheumatology Department, Hospital General Universitario de Elda, Elda, Spain
[2]Amsterdam Rheumatology Center, Amsterdam, the Netherlands
[3]Hospital Garcia de Orta, Almada, Portugal
[4]University Hospital Centre Zagreb, Zagreb, Croatia
[5]Department of Rheumatology, Université Paris Descartes University, Hôpital Cochin, Assistance Publique-Hôpitaux de Paris; INSERM (U1153); Epidemiologie Clinique et Biostatistiques, PRES Sorbonne Paris-Cité, Paris, France
[6]UPMC Univ Paris 06, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Sorbonne Universités, Paris, France
[7]Department of Rheumatology, AP-HP, Pitié Salpêtrière Hospital, Paris, France
[8]Department of Rheumatology, Diakonhjemmet Hospital, Oslo, Norway
[9]Rheumatology Unit, Department of Medicine, Karolinska University Hospital, Solna, Karolinska Institute, Stockholm, Sweden
[10]University of Vienna, Vienna, Austria
[11]University Hospitals of Leicester NHS Trust, Leicester, UK
[12]Centro Hospitalar e Universitário de Coimbra, Faculdade de Medicina da Universidade de Coimbra, Coimbra, Portugal
[13]University Medical Center Utrecht, Utrecht, the Netherlands

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Collaborators Members of the Working Group on Training in Rheumatology across Europe: (Albania) Ledio Collaku, (Armenia) Armine Aroyan, (Austria) Helga Radner, (Belarus) Anastasyia Tushina, (Belgium) Ellen De Langhe (University Hospital Leuven, Leuven, Belgium), (Bosnia & Herzegovina) Sekib Sokolovic, (Bulgaria) Russka Shumnalieva (Department of Internal Medicine, Clinic of Rheumatology, Medical University-Sofia), (Croatia) Marko Baresic (Division of Clinical Immunology and Rheumatology, Department of Internal Medicine, School of Medicine, University Hospital Center Zagreb), (Czech Republic) Ladislav Senolt (Institute of Rheumatology and Department of Rheumatology, First Faculty of Medicine, Charles University in Prague), (Denmark) Mette Holland-Fischer (Department of Rheumatology, Aalborg University Hospital), (Estonia) Mart Kull, (Finland) Antti Puolitaival (Department of Medicine, Kuopio University Hospital, Kuopio), (Georgia) Khatuna Letsveridze, (Germany) Axel Hueber (Department of Internal Medicine 3, University of Erlangen-Nuremberg), (Greece) Antonis Fanouriakis (Department of Rheumatology, Clinical Immunology and Allergy, University Hospital of Heraklion), (Ireland) Paul MacMullan (Clinical Assistant Professor, Division of Rheumatology, University of Calgary, Alberta, Canada), (Israel) Doron Rimar, (Italy) Serena Bugatti, (Latvia) Julija Zepa, (Lebanon) Jeanine Menasssa, (Lithuania) Diana Karpec, (Macedonia) Snezana Misevska-Percinkova, (Malta) Karen Cassar, (Moldova) Elena Deseatnicova, (the Netherlands) Sander Tas (Department of Clinical Immunology & Rheumatology, Academic Medical Center/University of Amsterdam, Amsterdam), (Norway) Espen Haavardsholm, (Poland) Jan Sznajd, (Romania) Florian Berghea, (Russia) Elena Trifonova, (Serbia) Ivica Jeremic, (Slovakia) Vanda Mlynarikova, (Slovenia) Mojca Frank-Bertoncelj (Center of Experimental Rheumatology, University Hospital Zurich), (Sweden) Aikaterina Chatzidionysiou, (Switzerland) Alexandre Dumusc, (Turkey) Gulen Hatemi, (Turkey) Erhan Ozdemirel (Ankara University Medical Faculty, PMR Department, Rheumatology Division, Ankara), (Ukraine) Iuliia Biliavska.

Contributors FS and SR designed the study and the data extraction sheet. All coauthors critically reviewed and modified it. Working Group members and second data extractors collected data from curricula, FS and SR analysed the data, all the authors critically interpreted the results, FS and SR drafted the manuscript and all the authors critically reviewed and commented on it and approved the final version of the manuscript.

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Notes