

Rheumatology Education in Europe: results of a survey of young rheumatologists

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ABSTRACT

Objective. To evaluate the level of education and participation in an internship abroad and to European league against rheumatism (EULAR) on line course of young rheumatologists. To define new tools for learning.

Methods. Questionnaires were administered to 170 trainees and young specialists in 2008-2009 during official EULAR meetings or using the mailing list of European young rheumatologists in training. The questions with related visual analogical scale (VAS score 0–10) for satisfaction encompassed the following issues: languages, computer, daily hours employed, different items of medical culture, internship abroad, EULAR on-line course and bursaries. VAS>6 was considered a good level of satisfaction.

Results. 170 young rheumatologists (113 trainees and 57 specialists, 33±4.2 years old) from 32 EULAR countries did not approve their own national training (42.3%), believed in an European common education system (90.5%), had a good knowledge of English (85.7%) and computer (90.5%) and spent the majority of time in clinical practice (57.5%) in comparison with study and research. The young rheumatologists had higher competence in drug management (93.5%) than in clinical assessment and knowledge of imaging and anatomy, and mostly suggested new ways of communication (61.4% on-line courses and 66.1% DVD) to improve their education. 38% made stage abroad and participated to EULAR on-line course, with high satisfaction, but only half of them were granted by bursaries.

Conclusion. Young rheumatologists are low in confidence in their own education and believe that visits to other training centres and new ways of learning (on-line and DVD) might improve their competence.

Introduction

The patterns of rheumatology health care is highly variable across different countries in Europe, for historical reasons and local factors (1). Furthermore, there is still considerable diversity among European training centers in providing an adequate spectrum of expertise and experience to ensure the

future specialists competence and suitability (2). The European rheumatologists in training organisation (EURORITS), recently integrated in the Emergent EULAR Network (EMEUNET), collaborates with European league against rheumatism (EULAR) Standing Committee on Educational and Training (ESCET) and Union Européenne des Médecins Specialist (UEMS) to create a common high quality educational system. The first core curriculum in rheumatology created in 1999 for undergraduate students by ESCET (3), was successively developed in the UEMS European curriculum for young rheumatologists (4), that defined skills, attitude and knowledge that must be provided to trainees, with this objective. To date, however, there are no studies to confirm whether such curriculum is followed in medical schools and if the new doctors feel their training adequate for their education and practical skills. Only few surveys were developed for single national realities (5, 6) or for specific items (7-9). Furthermore, integration of rheumatologists into a health care network might be obtained through encouraging and facilitating trainee visits to other centres in Europe and European meetings or on line network with the opportunity to discuss the dissimilar practices. For these reasons, EULAR supported exchanges between different countries with bursaries and created residential post-graduate and on line courses for young rheumatologists, until now not investigated with a survey. The aim of this study was to evaluate the level of education and the participation of young European Rheumatologists to international exchanges and EULAR on line course. A secondary purpose was to define new tools for common education, useful to develop guidelines for future EULAR courses that might be recommended to national and local training programs.

Methods

Study design

Questionnaires were administered to 170 trainees and young specialists (under 40 years old), personally (during the X and XI EULAR postgraduate and III EULAR capillaroscopy courses) or

by e-mail (via the EURORITS mailing lists of different countries), from September 2008 to December 2009. The rheumatologists who had attended more than one course were evaluated only in the first analysis.

Questionnaire design and content

The questions encompassed the following issues: own national system of education and future common training European system approval (yes or no), daily hours spent (on clinical practice, study and research), competencies in different items of medical skills, languages spoken, use of computer, internships abroad, EULAR on-line courses, congresses and specific trainee sessions participation and bursaries (pharmaceutical companies, private foundation, university and EULAR).

Self-evaluation of knowledge encompassed four "educational red flags" (basic anatomy, clinical examination, imaging and drugs management), and the learning methods how they acquired their competencies and would like to improve them in the future (direct practice, on-line, DVD, books or formal lessons). A good level of satisfaction of their own competencies was defined using a visual analogue scale (VAS 0–10) score higher than 6/10. Specific imaging techniques were also investigated: ultrasonography (US), magnetic resonance (MRI), computerised tomography (CT), radiography, bone scintigraphy, electromyography, capillaroscopy, bone densitometry, joint injection, synovial fluid analysis, biopsies (synovial, salivary glands, etc.), arthroscopy, basic histopathology.

Results

The respondents, 113 trainees and 57 young specialists (33±4.2 years old) came from 32 EULAR countries: Albania, Austria, Belgium, Bulgaria, Czech Republic, Croatia, England, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Moldova, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovenia, Sweden, Spain, Switzerland, and Slovenia. 100/170 (58.8%) answered to questionnaires during EULAR courses and

Table I. Actual knowledge and future interests in diagnostic tools expressed by young rheumatologists.

Diagnostic tools	Actual	Future
X-ray	75.8%	28.2% ↓
Joint injection	68.2%	23.5% ↓
Synovial fluid analysis	51%	30.5% ↓
Ultrasound	50%	68.2% ↑
Bone mass density	43.5%	18.8% ↓
Computerised tomography	28.2%	31.7% ↓
Magnetic resonance	27.6%	61.7% ↑
Scintigraphy	25.2%	12.3% ↓
Biopsies	19.4%	26.4% ↑
Electromyography	14.7%	21.7% ↑
Synovial biopsies	12.3%	30.5% ↑
Hystology	10.5%	22.3% ↑
Capillaroscopy	6.4%	31% ↑
Arthroscopy	6.4%	19.4% ↑

70/170 (41.1%) by mail. Their practice was 15.8% private and 64.1% public, at hospitals and universities (44%); 42.3% of the participants did not approve of their national training system and 90.5% believed in a future common European system of education; 85.3% had a good knowledge of English (mean 7.3/10) and 51.7% spoke two languages (20% more than three). The majority of daily working hours (calculated on 12 hours) was spent on clinical practice (6.9/12; 57.5%), in comparison to study (0.9/12; 7.5%), PubMed exploration (1/12; 0.1%), basic (0.5/12; 4.1%) and clinical research (1.2/12; 1%). 90.5% and 75.1% had a good knowledge of computers (mean 7.2±2) and of PubMed (mean 6.6±2.2), respectively.

Educational red flags

A higher percentage of young rheumatologists were satisfied with their ability in drug management (93.5%, mean 7.1/10) than in clinical examination (70.5%, mean 5.9/10), imaging (69.4%, mean 5.7/10), and anatomy (52.3%, mean 4.8/10) competencies. Seventy-seven percent were more interested in improving their knowledge in biologics than in traditional treatment (DMARDs 38.8%, NSAIDs 24.1%, corticosteroids 24.1%). In the field of imaging, they had good competence in radiography understanding (75.8%) and joint injection (68.2%) and were interested in improving their skills in US (68%) and MRI (66%) (Table I).

Bursaries for courses were received by 46.4% from pharmaceutical companies (37%), more than from universities (13.5%), private foundations (6.4%) and EULAR (7.6%). In the past, they learnt mostly through direct practice (73.8%), books (50.8%) and formal lessons (48%); less, on-line (31.3%) and DVD (32%). In order to improve their education, and based on their previous experience, they suggested for the future to have more availability of DVDs (66.1%), on-line courses (61.4%), than direct practice (58.2%), books (40.7%) and formal lessons (40.1%). The preference of on-line teaching was the same if questionnaires of EULAR courses participants (actual use 33% and future employment 61.5%) were considered separately from the rheumatologists respondents by e-mail.

International exchanges

Regarding mobility, 38.2% had moved from 20 countries of western Europe (60%) and eastern Europe (40%) towards the 12 European community countries (EEC) (18% UK, 15% Germany, 13.3% Spain, 11.6% Italy, 10% Netherlands, 6.6% Austria and the other 8 less than 3% each one) and 5 non-EEC countries (6.6% USA and less than 3%: Australia, Canada, Peru, Lebanon), for a mean period of 5 months (range 1–28), with a high level of satisfaction (81.5%, mean 8.3/10). They visited other rheumatology centres during their training period

(70%), but also independently of their national educational system (38.3%). Their awareness was higher in clinical practice (60%) and in imaging skills (43.3%), than in basic (16.6%) and clinical (38.3%) research. Only 44.6% of interviewers were granted a bursary from EULAR (18.4%), pharmaceutical companies (6.1%), private foundations (13.8%) and universities (6.1%).

EULAR on-line course and congress participation

38.2% had participated in the EULAR on-line course with a high level of satisfaction (92.3%, mean 8.2/10) and 68.2% suggested that the EULAR on-line course could be mandatory for trainee educational core curriculum in the future. Otherwise, only 49.2% were supported by pharmaceutical companies (35.3%), EULAR (4%), universities (4%) and private foundations (1.5%). 84.1% participated in national (66.4%) and international congresses (EULAR 66.4%, ACR 22.3%, others 13.5%) with posters (68.2%), oral presentations (51.7%) and lectures (8%). 53% followed specific sessions for trainees during congresses (38.2% national, 25.8% EULAR, 9% ACR 8.2%) and 74.7% suggested an increase of these specific lectures.

Discussion

Our study showed that young rheumatologists were not satisfied with their national educational system or with their own competencies, spent little time on study and research, and hoped for a future European common training system. Only few previous surveys before the creation of the UEMS curriculum, investigated the rheumatology education in different European countries and elucidated the diversity between clinical practices, but did not really define a self-evaluation of competencies specific for young rheumatologists (1, 10). Our results do not support the recent aim of European educational training programmes in rheumatology that should provide young rheumatologists with experience and expertise to ensure their suitability and with adequate time and facilities to participate in research and international conferences (4). In the future, the implementation of Eu-

ropean educational guidelines and of international networks between countries will probably, in part, solve these discrepancies between aim and reality. It is indeed difficult to define and agree on all the competencies necessary in all countries but harmonisation should be reached in the near future, as required in our survey. Our research showed that a high percentage of the interviewees took great advantage of the international exchanges and demonstrated that this experience was fundamental in order to improve knowledge, which, for the most part, needs to be in practical skills and less in research. This result was in agreement with the idea that the diversity between training centres is not always a problem but also an important resource, and that harmonisation does not mean necessary complete homogeneity between training centres, in the future (1). Furthermore, our survey confirmed the realisation of an important objective of UEMS (4) and ESCET (11) that encouraged exchange visits within and between European countries. Otherwise, training periods abroad were granted only to half of the young rheumatologists interviewed, even though EULAR in the last few years has increased the number of bursaries (11) and diversified the period of visits in other countries, making these internships more flexible on the basis of the educational objectives. Probably, a better awareness of these facilities and the possibility to have feedback from young rheumatologists (with an evaluation of the quality of their training period) might improve this aspect in the future. Finally, young rheumatologists in our study suggested new ways of learning (on-line and DVD) and participated with great satisfaction in EULAR on-line courses. In fact, the changes in society over the last few years with the introduction of internet and the continuous development of new technology have had significant influence on education (12). Our results confirmed that the concept of learning has moved from "know all" to "know how", with an emphasis on active education by flexible methods of skills and attitudes acquisition, shifting from a teacher-oriented to a more learner-centered curriculum (13, 14).

In conclusion, young rheumatologists' confidence in their own education appears to be low and they believe that visits to other training centres and new ways of learning (on-line and DVD) might improve their competence.

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