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Editorial

Health economic course in rheumatology: a EULAR SCHOOL initiative

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An increasing interest in the area of health economics in rheumatology has been noticed over the last years, due to the impact of cost of diseases and access to care in many countries. Efficacy and effectiveness of interventions also in terms of economic burden are nowadays crucial parts of decisions rheumatologists need to make for the individual patients, taking into account the rules set by, among others, insurances, governments and local hospitals.

Young researchers who are involved in the evaluation of new diagnostics or treatments in rheumatic and musculoskeletal diseases (RMDs) are often required to include health economic considerations in their research. Many of them are not specifically trained in this area, neither are their supervisors. Therefore, to provide education and training on health economics, the first European League Against Rheumatism (EULAR) course on Health Economics in Rheumatology took place in 2016 in Nancy (France). The meeting registered the presence of participants from six countries and with different backgrounds and experience (scientists, rheumatologists, patient partners). That course was very positively evaluated by the attendees who recommended that educational experience to be renewed in the future for a similar target audience. The second Health Economics course took place two years later in Prague (Czech Republic) and was again a great success. That meeting was targeted to young rheumatologists/trainees/scientists with a confirmed interest in health economics and was focused on interactive learning with plenary lectures, workshops and networking opportunities. The programme covered the topics of economic burden of a disease, understanding all the cost components and their determinants.

This editorial introduces—in a time where face-to-face meetings are unfortunately limited—a series of four articles on health economics, based on the experience of key teachers of these EULAR Courses on Health Economics. This

series is not only interesting for young researchers with an interest to taking part in the EULAR courses, but it may also serve a wider audience with an interest to read economic evaluations of rheumatology health interventions. Furthermore, the articles make it clear why the specialty of rheumatology deserves its own training in economic evaluations and economic assessments.

The article ‘Health technology assessment—a framework’ by Joore *et al* focuses on the analysis of new health technologies, their effectiveness, safety and costs and its great interest in this difficult time of growing pressure on healthcare budgets.¹ Health Technology Assessment is described as a multidisciplinary process, encompassing different aspects such as medical, economic, organisational, social and ethical considerations. Health technology is indeed a complex concept that includes any product or activity used to promote health in different contexts and its assessment helps provide evidence to inform decision-making and helps develop guidance on the reimbursement and administration of new health technologies. The article critically analyses the different types of economic evaluations and their outcomes and describes the development of cost-effectiveness analyses that aim at assessing whether a new health technology provides value relative to other existing health technologies. Cost-utility analyses achieve the same, but in addition include health-related quality of life considerations. The methodology used for designing an economic evaluation within Health Technology Assessment is clearly described and the standard questions forming the scopes of the studies (ie, PICOTP: Population, Intervention, Comparators, Outcomes, Time horizon, Perspective) are summarised. Approaches to economic evaluation (ie, trial-based vs decision-analytic modelling-based approaches) are presented and their applicability discussed. In summary, the manuscript provides an interesting overview of types, cost measurements and consequences of Health

Economics evaluation. The Authors give a critical viewpoint on the relevant issue of Health Technology Assessment in the field of Health Economics.

The article 'Health economics: steps to implement health technology assessment' by Guillemin and *colleagues* describes the procedures to execute Health Technology Assessment.² This is an interesting manuscript which carefully reports the process leading to the choice of the most appropriate option to which a technology is compared and gives a critical overview on the assessment of the benefits and consequences between strategies balanced against the difference in costs. The authors present guidance on conducting and reporting health economic evaluation. The latter includes the incremental cost effectiveness ratio as the measure of cost effectiveness and the authors discuss the use of the cost effectiveness plane as a means of presenting uncertainty about cost effectiveness results. In the article it is explained that economic evaluation is mainly conducted from a specific perspective and it is used to inform national and/or local decisions about technologies to be used. This perspective directs the type of costs and benefits that are included in the analysis. In the manuscript it is also clarified that the comparator used in the evaluation of a new Health Technology should be specified, and justification is provided for choice of interventions and comparators, health outcomes and costs used. As an additional fundamental step to implement health technology, the time horizon over which the costs and consequences are evaluated is described. In conclusion, the manuscript by Guillemin *et al* reports a clear and detailed analysis of the application procedure of Health Technology Assessment, describing the various steps of this complex process.

In 'Cost assessment of health intervention and of Burden of Diseases',³ Fautrel explains that two essential steps in health economics assessment are health resource use and identification of related costs. Elicited costs need to be balanced with improvement in health outcome. Also, these elicited costs are part of the comparison of different diagnostic procedures or therapeutic strategies.

Costs are categorised in three domains: direct costs (related to the use of health resources), indirect costs (related to loss of productivity) and so-called intangible costs; this last category is not so easy to understand or calculate, for example, trying to put a cost on pain, or on not being in perfect health. Direct costs are the most easy to understand and calculate, but details that are taken into account may vary, for example, if a woman with rheumatoid arthritis (RA) visits the hospital (Out Patient Department (OPD)), we may calculate the actual OPD costs, but should we calculate the travel costs from home to OPD and back; should we calculate the costs of the nanny that came to look after the patients children as well? From these examples it becomes clear that researchers have to make a lot of decisions on how they calculate costs, and preferably adhere to existing guidelines, that however can differ from country to country. This dilemma illustrates the relevance of courses specific to health economics in the context of RMDs and provides

a platform for exchange of experience between young researchers and experienced seniors in the field.

Fautrel *et al* discuss the controversial topic of measuring indirect costs, which can be done by means of the Friction Cost method or the Human Capital method: the former considers productivity loss for only three months (thereafter a patient is replaced by an unemployed person), and the latter attaches no limitation on the duration of productivity loss. The choice of method may have a significant impact on cost and therefore on cost effectiveness. Considering these differences, it is understandable that this may make a huge difference in outcome, and may play a decisive role in whether a certain treatment, for example, a biological, is cost-effective. Some clear tables make this article an easy and practical reference.

In line with the previous discussion about calculation of costs it is evident that patients should be involved in all different steps of this research. Realising that choices need to be made at different stages and at different levels, involvement of patients is paramount. EULAR is fortunate to have started over ten years ago the development of a strong patient partners in research programme. One of the pioneers, Maarten de Wit, poses the question: 'Patient engagement in Health Technology Assessment (HTA): what about rheumatology?'⁴ This manuscript clearly describes the role patients need to play in research, certainly in chronic diseases. There is a clear role for patient engagement in priority-setting in healthcare, not only based on robust evidence, but also on unmet needs and patient values. In this manuscript, methods for generating patient-based evidence are described and an overview is given how patient partners in research can help in addressing challenges in health technology assessment. At this moment there is not a substantial body of knowledge demonstrating the added value of this patient engagement. It would be a challenge for EULAR, an organisation where scientists, physicians and other healthcare providers work together with patients to fight RMDs together, to provide such evidence. Patients need a more active role in healthcare decision-making; EULAR may help to show the way.

These four manuscripts illustrate the relevance of the topic and give some basic info. In fact, these articles are more an appetiser to stimulate young researchers in this field to attend one of these face-to-face courses, where interaction is crucial. Perhaps the knowledge part can be extended into an online course, but guidance and discussion are necessary to really master these techniques.

The EULAR Courses on Health Economics in rheumatology can be heartily advised.

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