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Epidemiology

Mapping inequalities in rheumatology care in Europe: the first edition of the EULAR RheumaFacts project

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ABSTRACT

Objectives: To describe inequalities in health indicators relevant for quality of care to people with rheumatic and musculoskeletal diseases (RMDs) across Europe by comparing RMD health system indicators across European Alliance of Associations for Rheumatology (EULAR) member countries.
Methods: RheumaFacts is an EULAR initiative to improve the quality of care across Europe by monitoring access to and outcomes of care for people living with RMDs. In this study, we present the first edition of this longitudinal mixed-sources study initiated in 2024. A standardised form including indicators on RMD health resources and organisation, national workforce, and access to care was sent to the 40 National Scientific Rheumatology Societies who were EULAR members in 2024 was sent to the EULAR-member National Scientific Rheumatology Societies of 40 countries. Complementary data on the demographic and economic status of the various countries were extracted from open-source databases such as the WHO and World Bank datasets. Analyses were descriptive.
Results: Standardised report forms were returned by 36 of 40 countries (90%). The density of rheumatologists ranged from 0.8 to 6.6 per 100,000 inhabitants (median, 2.9; IQR, 2.1-3.5) across the different countries. The reimbursement of nonpharmacological care on a chronic basis was limited: physiotherapy was reimbursed in 26 of 36 countries (72%), whereas psychological support was reimbursed in only 14 of 36 countries (39%).
In 94% of the countries, all conventional synthetic disease-modifying antirheumatic drugs (DMARDs) were available. Despite all countries indicating the availability of at least 1 biologic DMARD, only 12 countries (34%) had access to all biologic DMARDs, and only 18 of 35 (51%) had access to all targeted synthetic DMARDs.
Conclusions: Wide cross-national inequalities exist in workforce capacity and reimbursed care for people with RMDs. RheumaFacts delivers the first harmonised basis for monitoring these gaps, enabling EULAR and national societies to track progress and inform health policy makers to advocate for improving the quality of life of people with RMDs.

WHAT IS ALREADY KNOWN ON THIS TOPIC

- Although rheumatic and musculoskeletal diseases (RMDs) are major contributors to disability and healthcare burden in Europe, no harmonised, RMD-specific dataset was available to allow for systematic comparison of the rheumatology workforce, health resources, and access to care across European countries.

WHAT THIS STUDY ADDS

- RheumaFacts provides the first multinational results on RMD health-related resources, rheumatology workforce, and access to care across 36 European Alliance of Associations for Rheumatology (EULAR) countries.
- It reveals large disparities in workforce density, availability of nonpharmacological care, and access to biologic disease-modifying antirheumatic drugs and targeted synthetic disease-modifying antirheumatic drugs.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- RheumaFacts established a benchmark for systematic cross-country comparisons, allowing inequities and progress in rheumatology care to be monitored over time.
- Rheumafacts generates robust, comparable evidence to strengthen advocacy, inform workforce planning, and guide investment in equitable access to pharmacological and non-pharmacological care.
- This study positions EULAR at a central place in shaping musculoskeletal health policy in Europe and underscores the need for coordinated action.

INTRODUCTION

Rheumatic and musculoskeletal diseases (RMDs) are among the leading causes of disability worldwide, accounting for more than 149 million disability-adjusted life-years (DALYs) in the most recent Global Burden of Disease update—an estimate that has increased steadily since 1990 despite advances in therapeutics in some rheumatic conditions [1,2]. In Europe, these diseases are responsible for 1 in 5 years lived with disability, and their societal cost is amplified by long-term work loss and early retirement: musculoskeletal pain remains a top driver of sickness absence in European Union labour-force surveys [3]. However, compared to cardiovascular or oncological diseases, the public health response has been hindered by a lack of convincing insight into how this increasing burden is covered by healthcare systems across Europe and into the need for healthcare to halt or reverse this burden. The lack of these metrics results in RMDs not receiving the attention commensurate with their impact and limits the ability of clinicians and patient representatives to advocate for the allocation of essential resources. Increasing evidence indicates that a significant portion of the RMD burden is preventable [4–8]. Early diagnosis, prompt and effective treatment strategies, and access to interdisciplinary care can prevent joint damage, maintain work capacity, and reduce subsequent expenditures.

Unfortunately, optimal management is not distributed evenly. Comparative studies have already documented more than tenfold differences in the uptake of biologic and targeted synthetic disease-modifying antirheumatic drugs (DMARDs)

between European countries of differing income, with lower access clustering in settings where reimbursement criteria are restrictive, or specialist density is low [9]. Similar gradients exist for nonpharmacological care: fewer than half of countries apply national standards for chronic physiotherapy funding, and only a minority offer structured psychological support for people living with persistent pain [10].

There are numerous reasons for differences in the resources allocated to RMD care in Europe. The organisation of health systems varies significantly, as do the financing mechanisms for specialist consultations and rehabilitation. The mismatch between increasing demands and response in workforce planning has resulted in workforce shortages in most of the countries [11–13]. At the same time, fragmented budgeting often ignores the importance of multidisciplinary pain management and vocational rehabilitation. Social determinants, such as low socioeconomic status, educational attainment, and occupational exposures, further exacerbate inequities in disease incidence and outcomes [14–17].

These mismatches between need and access can translate directly into excess disease burden, which is well recognised in other specialities: for example, The European Society of Cardiology Atlas has shown that cardiovascular DALY rates were high across all countries, but 3 times higher in middle-income than in high-income member states, reflecting clear differences in workforce density of cardiologists, revascularisation capacity and preventive drug use [18]. These precedents demonstrate the power of granular, comparable indicators: once published, they have enabled benchmarking, stimulated targeted investment and provided a baseline against which progress can be measured. In cardiovascular medicine, this has contributed to a sustained decline in premature mortality across most of Europe over the past 3 decades—a public health success that rheumatology should emulate [19].

In the absence of regular and standardised measurement, these structural drivers remain unacknowledged, perpetuating a cycle in which insufficient data serves as an excuse for limited action. The European Alliance of Associations for Rheumatology (EULAR), as the umbrella organisation for rheumatology in Europe, is uniquely positioned to fill this gap.

The EULAR RheumaFacts initiative has been established to create a longitudinal repository of RMD indicators spanning health resources and organisation, national workforce and access to care, with regular updates. Importantly, the project incorporates representatives from all EULAR pillars—patient organisations (PARE), health professionals in rheumatology (HPR), and national scientific societies—into its governance structure, thereby ensuring that the chosen indicators are relevant to clinicians and to policy. By integrating newly collected national data with harmonised global sources, RheumaFacts seeks to provide a comprehensive overview of the burden of RMDs and available resources, as a preliminary measure towards addressing inequities in RMD care, ultimately striving to bridge Europe's musculoskeletal health gap.

METHODS

Study design

RheumaFacts is designed as a longitudinal, multinational study. Here, we present the cross-sectional results of the first round of data collection.

Participants

A working group (including epidemiologists, patient representatives, health professionals' representatives, and EULAR staff) was appointed by the Epidemiology subcommittee from the EULAR research committee to lead the project and establish the relevant indicators to be included in RheumaFacts.

Thereafter, all National Scientific Rheumatology Societies from the 40 EULAR countries were invited to participate in the project. The RheumaFacts group included the working group and a representative of each national scientific society. The chair of the Paediatric Rheumatology Committee of EULAR was also invited to be part of the group.

Procedure

In this project, 2 types of indicators were selected and defined by the steering group: 'global' and 'national—RMD' indicators. The 'global' indicators are not related to RMD; they measure global demographics and socioeconomics and are accessible as open data from various sources such as the United Nations (UN), World Bank, Eurostat, and the World Health Organisation. Concerning the set of 'national RMD' indicators to be provided by the national scientific societies, the steering committee drafted a proposal of indicators divided into the following categories: health resources and organisation, national workforce, and access to care. Afterwards, a standardised report form was prepared, including the name, definition, units of measure, year of collection and source for each indicator; also, a 'comments' section was available for national societies to include any relevant information concerning an indicator. This form was sent to all national scientific societies to review, and all indicators and their definitions were discussed during a face-to-face meeting in January 2024 with the whole RheumaFacts group. During this meeting, the definitions of national RMD indicators were extensively discussed, and it was also agreed to deprioritise some of the initially selected indicators due to the high challenges anticipated in data generation or collection. A consensus was achieved on the final set of national RMD indicators, including their agreed-upon definitions, to be incorporated in this first round of RheumaFacts data collection. Following a 12-month data collection period, the RheumaFacts group convened again in February 2025. During this meeting, the results for all indicators were presented, and the group concurred on the final set of indicators to be featured in the present edition.

Data collection

Global indicators

For this edition, the 2023 population by country, including children (ages 0-19 years) and adults (ages 20-100 years), was obtained from the UN database [20]. The definition of 'children' also included 18 and 19-year-olds because the UN data provides 5-year age categories (0-4, 5-9, 10-14, and 15-19), and we wanted to include in this definition patients aged 15 to 17 years old.

The 2023 gross national income (GNI) expressed in U.S. dollars (USD), using the Atlas method conversion factor, was obtained from the World Bank [21]. GNI represents the sum of value added by all resident producers, along with any product taxes (less subsidies) that are not included in the valuation of output, in addition to net receipts of primary income (compensation of employees and property income) from abroad. The purpose of the GNI Atlas conversion factor is to reduce the impact

of exchange rate fluctuations in cross-country comparisons of national incomes. Countries are immediately assigned on July 1 of each year, based on their estimate of Atlas GNI per capita for the previous calendar year. This classification remains constant throughout the fiscal year (from July 1 to June 30), even if country's income data experience fluctuations. In 2023, low-income countries were those characterised by a GNI (Atlas method) per capita of 1145 USD or less; lower-middle-income countries ranged from 1146 to 4515 USD; upper-middle-income ranged from 4516 to 14,005 USD; and high-income countries for GNI above 14,005 USD in 2023.

For the current analysis, as only 1 participating country (ie, Lebanon) was classified as lower-middle-income, it was decided to reclassify it with the upper-middle-income countries for stratification purposes, resulting in the establishment of a 'Middle-Income' category [22]. The 2023 Atlas GNI used for this analysis is presented in Supplementary Figure S1.

National RMD indicators

Three groups of indicators were defined: RMD health resources and organisation, National workforce, and access to care.

1. RMD health resources and organisation:

1.1 Rheumatology Departments were defined as hospital units, led by a specialist in rheumatology, with autonomy from other departments to manage their resources, and delivering care for patients with RMDs

- Academic rheumatology departments were defined as rheumatology departments that have both research and teaching activities linked to a university.

- Nonacademic rheumatology departments were defined as rheumatology departments within the general hospitals in the country.

1.2 Number of associations of patients with RMD: defined as the number of nonprofit institutions primarily representing the interests and needs of patients with RMDs, their families or caregivers.

2. National workforce

2.1 Rheumatologists (physical persons, ie, including both people working full-time and part-time) were defined as specialist physicians with a registered Rheumatology specialisation and the qualifications to be able to prescribe biologic DMARDs (bDMARDs; this latter part of the definition, ie, referring to the bDMARD prescription, was added by the group to allow the distinction from specialists in Physical Medicine and Rehabilitation working in Rheumatology Departments). The proportion of female/male rheumatologists was also collected.

2.2 Rheumatology trainees were defined as physicians registered (at the time of the collection) in the training programme for the Rheumatology specialisation.

2.3 Rheumatology full professors (physical persons) were defined as the professors with the highest rank in the university actively working in the field of Rheumatology. The proportion of female/male rheumatology full professors was also collected.

2.4 Specialists taking care of children with RMD (physical persons): for these indicators, the data provided by national rheumatology societies were complemented by the Paediatric Rheumatology Committee chairs of EULAR, who ran a survey using the Paediatric Rheumatology INternational Trials Organisation [23], an international research network that includes 731 centres in 95 countries worldwide. Because of the different requirements to be a specialist in paediatric rheumatology across the EULAR countries, 3 indicators were collected: (i) the total number (physical persons) of paediatric rheumatologists (ie, specialists [either paediatricians or rheumatologists] with a specific 'paediatric rheumatology' certificate), (ii) the total number of adult rheumatologists working in paediatric rheumatology (with no specific official certificate for paediatric rheumatology), and (iii) paediatricians (with no specific official certificate for paediatric rheumatology) working in paediatric rheumatology. Altogether, the aggregated numbers in these groups were collectively considered the workforce of specialists taking care of children with RMD.

2.5 Availability of a Certified Rheumatology training for HPR: the availability of an official certification recognising the 'specialisation' in rheumatology for nurses, physiotherapists, occupational therapists, and psychologists was collected in all countries.

3. Access to care

3.1 Possibility of self-referral by the patient to the rheumatologist in the public sector: Initially, the 'average time to referral to a rheumatologist' was included in the standardised form. However, retrieving this information at the country-level proved too challenging. Instead, 'self-referral', defined as the possibility for a patient to self-refer to the rheumatologist (ie, without needing to be referred by another physician) in the public sector (either partially or fully reimbursed), was collected.

3.2 Availability of reimbursed nonpharmacological treatment:

- Physical therapy: defined as the possibility in the country for patients with RMD to be reimbursed on a chronic basis (ie, not only at referral, but as part of chronic care) for physical therapy for their RMD.

- Psychological care: defined as the possibility in the country for patients with RMD to be reimbursed on a chronic basis (ie, not only at referral, but as part of chronic care) for psychological care for their RMD.

3.3 Availability of pharmacological treatments: defined as the availability of DMARDs in the country for physicians to legally prescribe such DMARDs, because of formal approval by the national authorities, regardless of the reimbursement policy.

The DMARDs included those drugs that were approved for at least 1 RMD indication by the European Medicines Agency at the time of data collection were: conventional synthetic DMARDs (csDMARDs: azathioprine, ciclosporin, hydroxychloroquine, leflunomide, methotrexate, and sulfasalazine), bDMARDs, either bio-original or biosimilar (abatacept, adalimumab, anakinra, canakinumab, certolizumab pegol, etanercept, golimumab, guselkumab, infliximab, ixekizumab, rituximab, risankizumab, sarilumab, secukinumab, tocilizumab, and ustekinumab), and targeted synthetic DMARDs (tsDMARDs: apremilast, baricitinib, filgotinib, tofacitinib, and upadacitinib).

Data presentation and analysis

Analyses were descriptive

Country-level indicators are presented graphically and stratified by income level (ie, by GNI) to provide contextual information, but no formal statistical comparisons between or within income groups were performed. Because several indicators were skewed and included extreme values, medians and IQR ranges were used as descriptive summaries rather than means.

These summaries should be interpreted alongside the full distribution of country-level values shown in the figures, particularly for the middle-income group, which included a limited number of countries.

The working group decided not to include formal inferential analyses in this first edition; this decision was made because RheumaFacts is intended to serve as an initial landmark and benchmark dataset for future longitudinal comparisons. Given that the analyses are based on country-level aggregated indicators, the limited number of participating countries, and the heterogeneity of national healthcare systems, regression coefficients could be overinterpreted as explanatory or causal estimates. Therefore, country-level indicators are presented graphically and stratified by income level, without formal testing of associations. For adult rheumatology indicators, the 'adult' population (ie, from 20 to 100 years) was used, whereas for paediatric rheumatology indicators, the paediatric population (aged 0 to 19 years) was used.

Patient and public involvement statement

Patients are actively involved in the design and governance of the RheumaFacts project. Patient Research Partners representatives of PARE were full members of the RheumaFacts working group from the outset. They contributed to the selection and prioritisation of indicators, ensuring that the chosen measures reflect aspects of care that are meaningful to people living with RMDs, including access to multidisciplinary care and treatment availability. PRPs participated in the workshops where indicator definitions and feasibility were discussed, and they contributed to the interpretation of results and dissemination strategy.

RESULTS

From the 40 EULAR current member countries, 36 (90%) participated in this first data collection for RheumaFacts (Supplementary Fig S1).

RMD health resources and organisation

Rheumatology departments

The median number of rheumatology departments was 0.37 per 100,000 adults (IQR = 0.19-0.48) and ranged from 0.02 in Slovakia to 1.14 in Belgium.

Figure 1 shows the number of rheumatology departments per 100,000 adults by GNI, whereas Supplementary Figures S2 and S3 represent the number of departments per 100,000 adults in high-income and middle-income countries; the median number of departments was 0.38 and 0.24 in high- and middle-income countries, respectively.

Academic and nonacademic rheumatology departments

For two-thirds (24/36, 66%) of the countries, rheumatology departments were mainly located in nonacademic centres. In some countries (Albania, Denmark, Israel, Serbia, and Slovakia), rheumatology departments were solely situated in academic centres. In contrast, in only 1 country (Cyprus), the 4 rheumatology departments were in nonacademic centres (Supplementary Fig S4).

Number of associations of patients with RMD

Only 2 countries (Albania and Armenia) had no official association of patient with RMD. Among those with at least one association of patient with RMD, the number ranged from 1 to 40 (the latter in the United Kingdom), with no difference regarding the income level of the country (Supplementary Fig S5).

National workforce

Rheumatologists

The median (IQR) number of rheumatologists (physical persons) per 100,000 adults was 2.9 (2.1-3.5), ranging from 0.8 (Ukraine) to 6.6 (Georgia) (Supplementary Fig S6). Figure 2 illustrates the number of rheumatologists per 100,000 adults by GNI, showing that overall, high-income countries had a larger number of rheumatologists, but not systematically, for example, high-income countries like Germany reported fewer rheumatologists than Georgia or Albania (belonging to the middle-income category). Data from Hungary and Switzerland were missing for this indicator.

The proportion of female vs male rheumatologists per country ranged from 33% in Austria (from a total of 183 rheumatologists) to 93% in Armenia (from a total of 54 rheumatologists) (Fig 3).

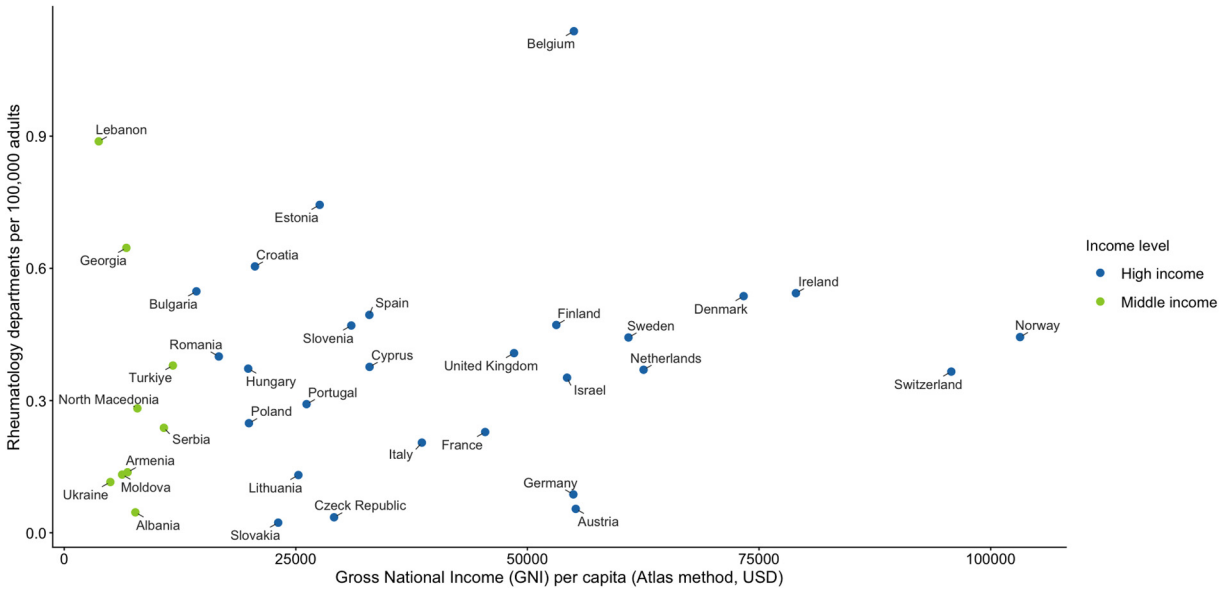

Figure 1. Rheumatology departments per 100,000 adults per country by income level (GNI, Atlas method, USD). GNI, gross national income.

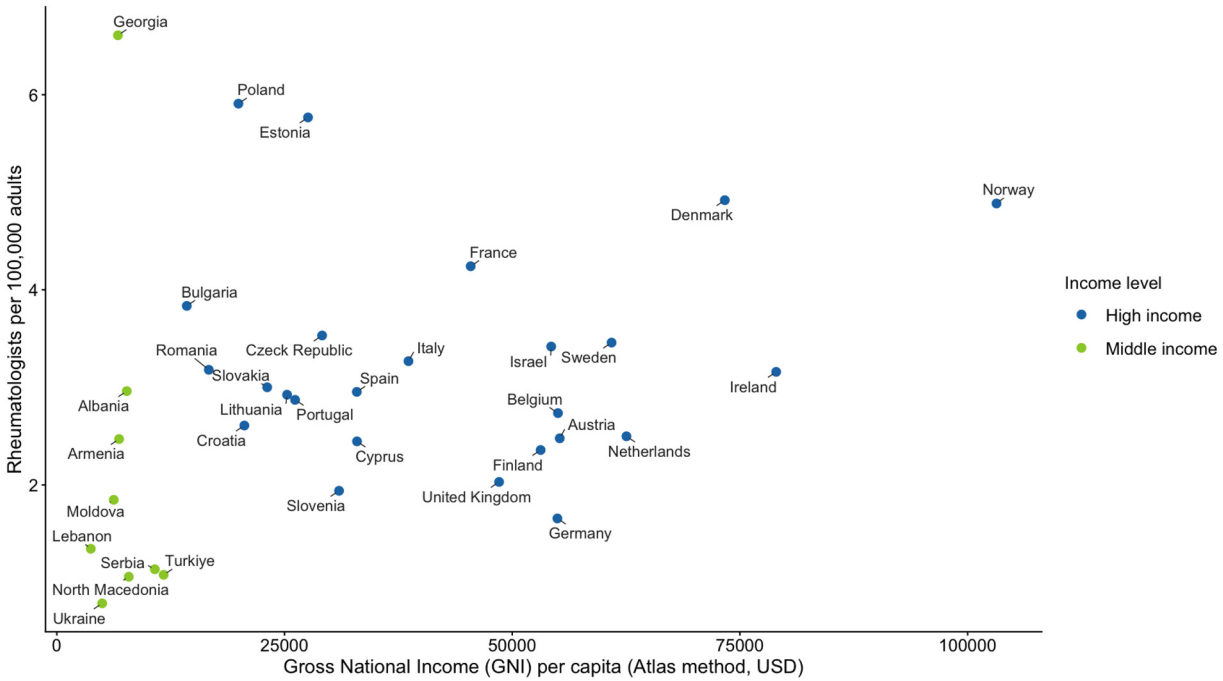

Figure 2. Rheumatologists (physical persons) per 100,000 adults per country by income level (GNI, Atlas method, USD). Data missing: Hungary and Switzerland. GNI, gross national income.

Rheumatology trainees

Among the 35 countries that provided data on that indicator, Cyprus was the only country with no Rheumatology trainees; among the other countries, the median (IQR) number of trainees per 100,000 adults was 0.64 (0.43-0.96), ranging from 0.13 in Lebanon to 2.47 in Romania. The median number of trainees was higher in high-income countries (0.76) compared with middle-income countries (0.46) (Supplementary Figs S7 and S8).

Rheumatology full professors

Among the 35 countries that provided data on that indicator, Cyprus was the only country without any Rheumatology full professors; among the rest of the countries, the median (IQR) number of Rheumatology full professors per 100,000 adults per country was 0.09 (0.05-0.16), ranging from 0.03 in Lebanon to 0.75 in Israel (Supplementary Fig S9). When looking at the proportion of women among the full professors, the median (IQR) proportion was 42% (21.1-71.9), with 6 countries in which 100% of rheumatology professors were women (Albania, Armenia, Estonia, Lithuania, Moldova, and Slovenia) and 1 country with no female professors (Lebanon) (Supplementary Fig S10).

Specialists taking care of children with RMD (physical persons)

Among the 31 countries that provided data on this indicator, the median and IQR number of specialists taking care of children with RMDs per 100,000 children was 1.33 (0.54-1.85), and higher in the high-income countries (1.40 [0.71- 1.86] vs 0.55 [0.37-0.61]) (Fig 4).

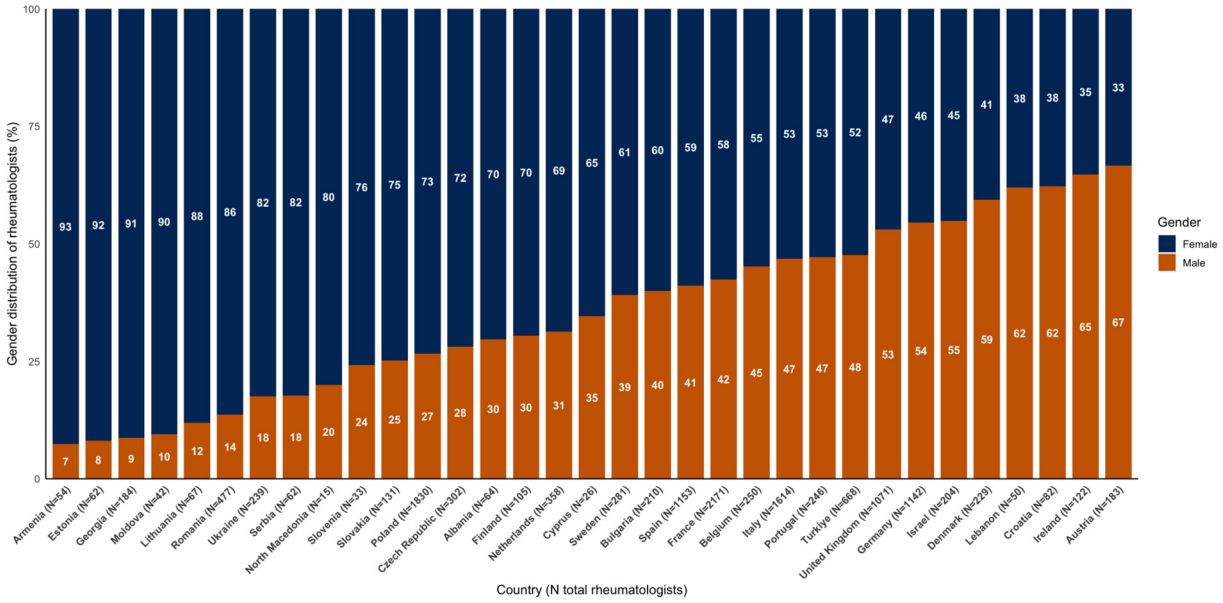

Figure 3. Gender distribution among rheumatologists (physical persons) per country.

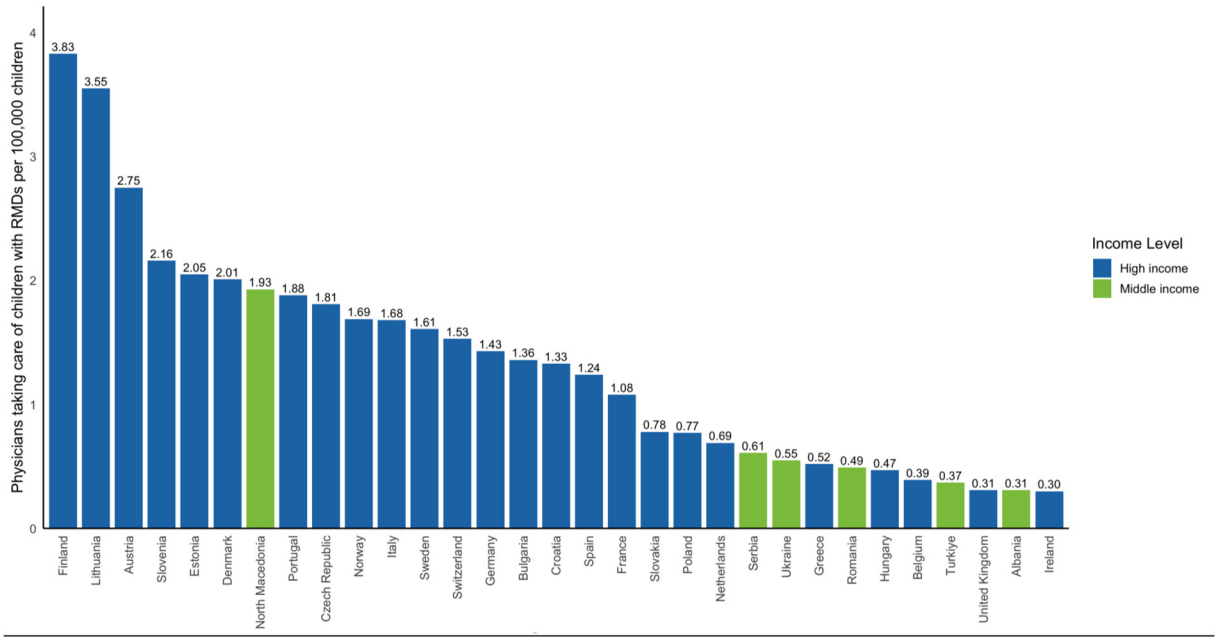

Figure 4. Number of specialists (physical persons: paediatric rheumatologists or paediatricians or adult rheumatologists) taking care of children with rheumatic and musculoskeletal diseases, per 100,000 children by income (GNI, Atlas method, USD). Data missing: Armenia, Cyprus, Georgia, Israel, Lebanon and Moldova. GNI, gross national income.

Certified rheumatology training for health professionals in the country

An official certification for rheumatology nurses was only available in 5 of 36 (14%) of the countries (Germany, Hungary, Ireland, the Netherlands, and Finland); only 4 (11%) countries (Germany, Hungary, the Netherlands and Sweden) had an official diploma for physiotherapists, and 3 (8%) countries (Germany, Hungary, and the Netherlands) for occupational therapists. No country had certified training in rheumatology for psychologists (Fig 5). Figure 6

Access to care

Self-referral

Among the 36 countries that provided data, self-referral by the patient to the rheumatologist in the public sector was possible in 18 (50%) of the countries; this was more frequent in the middle-income countries (37% vs 89%; Supplementary Fig S11).

Access to reimbursed nonpharmacological treatment

Among the 36 countries that provided information, reimbursement for physiotherapy on a chronic care basis for the RMD was reported in 26 (72%) of the countries; access was more frequent in the high-income countries group (78% of high-income countries vs 56% of middle-income countries).

Reimbursed psychological care on a chronic basis for patients with RMD was less common across countries (ie, only in 39% of countries), with no difference based on the country's income level observed (33% vs 41% for middle vs high-income countries) (Fig 7).

Availability of pharmacological treatments

All the 36 participating countries provided information on these indicators.

- csDMARDs*:* Thirty-five (97%) countries had all 6 csDMARDs available; except for North Macedonia, where only salazopyrine and azathioprine were available (Fig 8 and Supplementary Table S1).

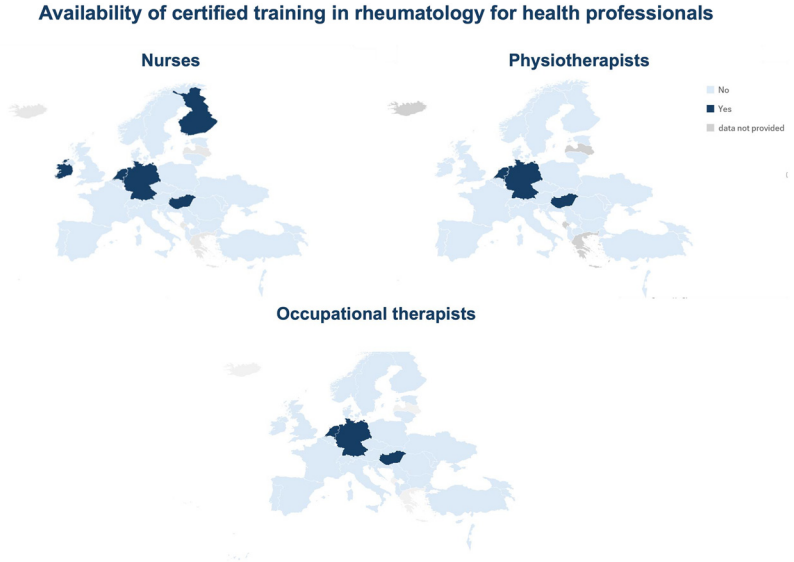

Figure 5. Availability of Certified Rheumatology training for health professionals.

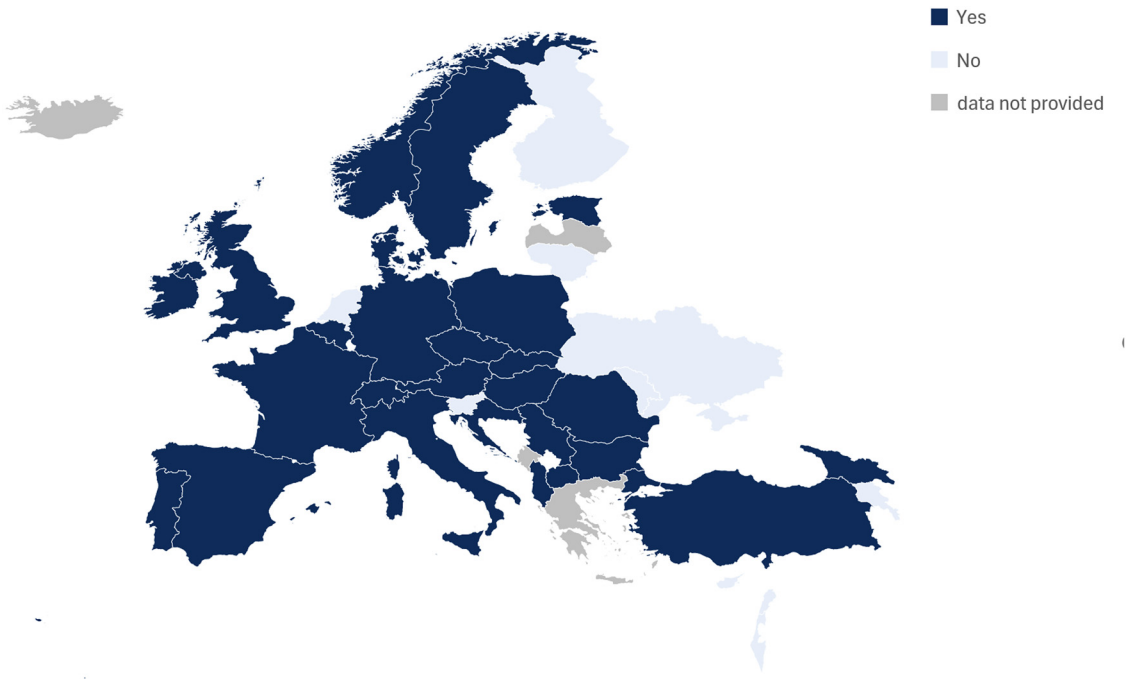

Figure 6. Possibility to access reimbursed physiotherapy on a chronic care basis for patients with RMD. RMD, rheumatic and musculoskeletal diseases.

- bDMARDs*:* At least 1 bDMARD was available in all countries, and 12 (34.3%) had all 20 bDMARDs available. Adalimumab and rituximab were the most frequently available bDMARDs across the countries; all countries had access to at least 1 TNFi, whereas all except North Macedonia had access to tocilizumab. Interestingly, more recent bDMARDs, such as risankizumab and guselkumab, were available in a large proportion of countries (ie, 65% and 81%, respectively) (Fig 8 and Supplementary Table S2). At the time of the data collection, the only biosimilars available were adalimumab, etanercept, infliximab, and rituximab. All 4 biosimilars were available in more than 70% of the countries: adalimumab biosimilars were available in all countries, whereas rituximab, infliximab, and etanercept biosimilars were available in 89%, 86%, and 78% of the countries, respectively. Conversely, only in a minority of countries was the biosimilar the only available biologic treatment: 5 (14%) for infliximab, 3 (9%) for adalimumab and rituximab, and 1 (3%) for etanercept.
- tsDMARDs: All countries except 1 (Moldova) had access to at least 1 tsDMARD, and all but 2 (Moldova and Georgia) had access to at least 1 JAK inhibitor. Tofacitinib was the most frequently available JAK inhibitor. Overall, only 18 of 35 (51%) had access to all targeted synthetic DMARDs (Fig 8 and Supplementary Table S3).

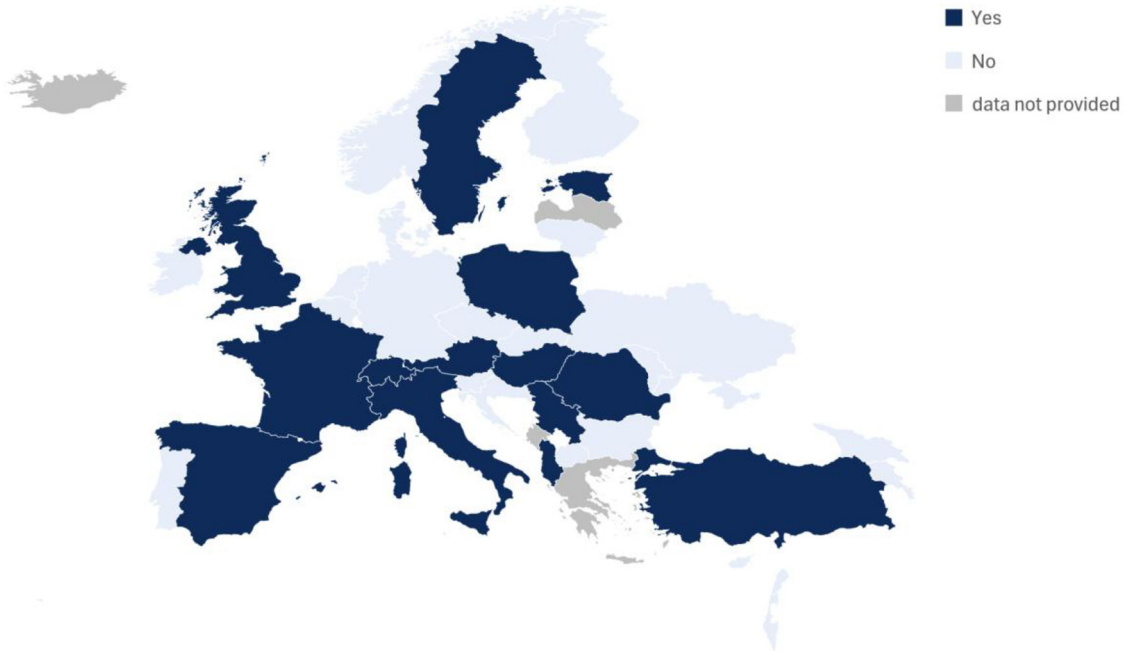

Figure 7. Possibility to access reimbursed psychological care on a chronic care basis for patients with RMD. RMD, rheumatic and musculoskeletal diseases.

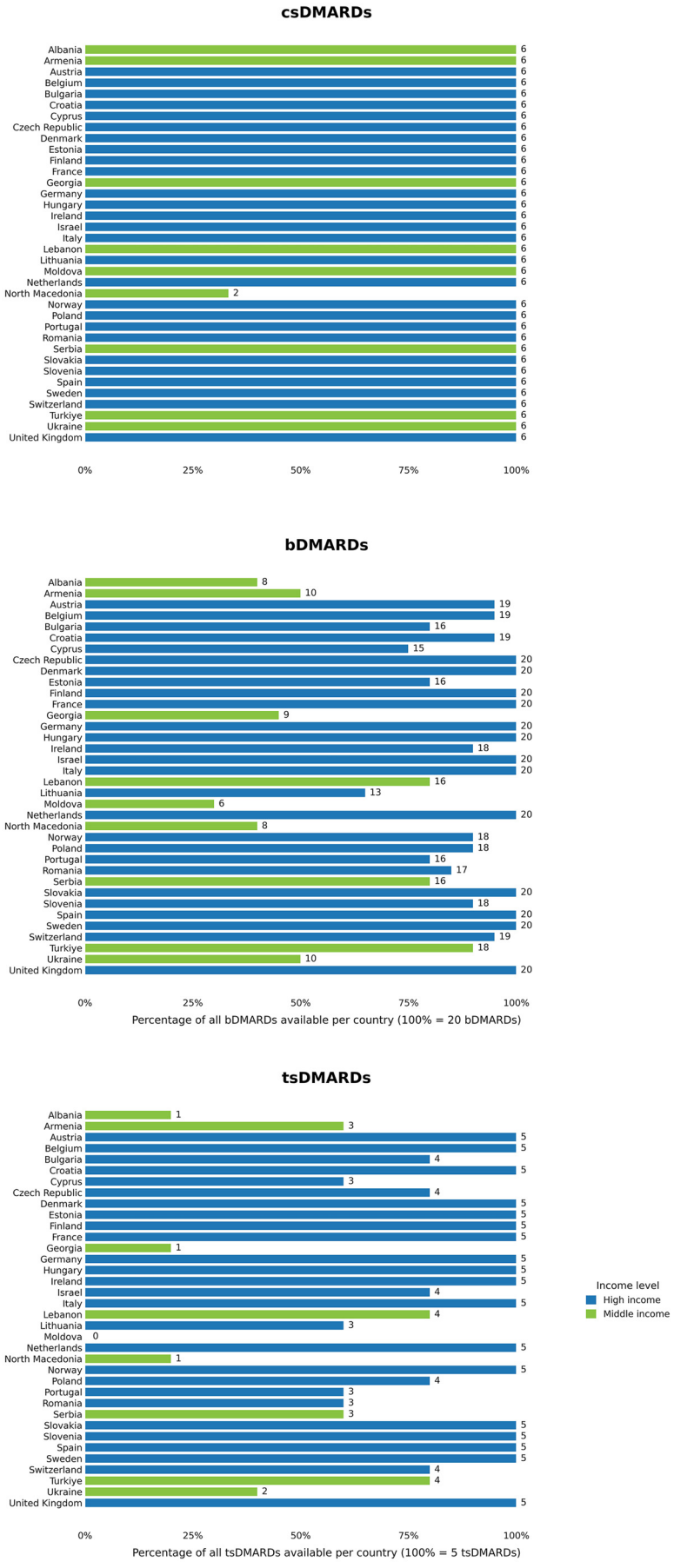

Figure 8. Availability of DMARDs per country. For bDMARD: 20 different bDMARDs = 16 bio-original bDMARDs (Adalimumab, Etanercept, Infliximab, Certolizumab pegol, Golimumab, Tocilizumab, Sarilumab, Ustekinumab, Abatacept, Rituximab, Canakinumab, Anakinra, Secukinumab, Risankizumab, Ixekizumab, Guselkumab) + 4 biosimilar bDMARDs (Adalimumab, Etanercept, Infliximab, and Rituximab). bDMARD, biologic DMARD; csDMARD, conventional synthetic DMARD; DMARD, disease-modifying antirheumatic drug; tsDMARD, targeted synthetic DMARD.

DISCUSSION

This first edition of the EULAR RheumaFacts initiative offers the first harmonised, multinational assessment of healthcare system capacity, workforce, and access to care for people living with RMD across Europe. Using data from 36 EULAR countries, our findings reveal significant cross-national disparities across the entire spectrum of rheumatology care. Notable differences were identified in the density of rheumatologists and rheumatology departments, the availability of rheumatology-certified health professionals, and the organisation of referral pathways, with only 50% of countries allowing patient self-referral within the public sector. Access to reimbursed nonpharmacological treatments—particularly psychological support—was limited in a substantial proportion of countries.

Differences in access to advanced pharmacological therapies remain 1 of the most visible and policy-relevant dimensions of inequity in RMD care. RheumaFacts builds on previous European work showing marked inequalities in access to biologic and synthetic DMARDs across countries [9] and provides a sustainable framework to monitor whether such differences persist or improve over time. In the present edition, almost all countries reported the availability of the full range of conventional synthetic DMARDs, and all countries had access to at least 1 bDMARD. However, only a minority of countries reported the availability of the complete range of bDMARDs, and only around half had access to all targeted synthetic DMARDs. These findings suggest that the existence of at least 1 advanced therapy in a country does not necessarily imply equitable access to the full therapeutic armamentarium recommended for contemporary RMD care. Importantly, in RheumaFacts, drug availability was defined as the possibility for physicians to legally prescribe the treatment following national approval, regardless of reimbursement policy. Therefore, these results should be interpreted as a first layer of access: they do not capture reimbursement restrictions, affordability for patients, prescribing criteria, administrative barriers, or real-world uptake. Future RheumaFacts editions should allow these indicators to be monitored longitudinally and may provide a platform for more detailed analyses of reimbursement policies and effective access to DMARDs across Europe.

The collection of sex distribution among rheumatologists and full professors was intended to inform 2 distinct dimensions of workforce and academic capacity. First, sex distribution may be relevant to workforce planning, as the increasing feminisation of rheumatology is sometimes proposed as 1 explanation for challenges in replacing retiring rheumatologists, based on the assumption that women may more often work part-time. However, this explanation is likely overly simplistic, as changing work patterns may also reflect broader generational shifts in work-life balance expectations and career organisation among younger physicians, irrespective of sex. In this first edition, rheumatologists were counted as physical persons rather than full-time equivalents, and age distribution was not collected, which limits interpretation. Future RheumaFacts editions will aim to collect full-time equivalent workforce data and, if feasible, age distribution stratified by sex, to better assess effective specialist capacity and distinguish sex-related from generational effects. Second, the sex distribution among full professors was included as a marker of women's representation at the highest levels of academic rheumatology. This indicator may help describe potential gender disparities in access to senior academic positions across countries, although causal explanations cannot be inferred from these descriptive data.

The indicators related to rheumatology trainees and full professors also deserve consideration as markers of future capacity. The number of trainees may reflect the ability of a country to renew and expand its rheumatology workforce, whereas an academic background of professors may secure the broader scientific and societal relevance of healthcare and the quality of training of next-generation rheumatology care providers. These indicators should not be interpreted as direct measures of unmet needs, as they are shaped by national academic systems, training pathways, and healthcare organisation. Nevertheless, they are highly relevant for workforce planning. Countries with limited current rheumatology workforce, few trainees, and low academic capacity may be particularly vulnerable to persistent or worsening gaps in access to care.

Workforce planning is an important issue for all countries, particularly in the context of population ageing and the associated increase in demand for rheumatology care. In future editions of RheumaFacts, the workforce is expected to remain a key area of interest, with continued data collection enabling the analysis of changes over time.

When considering the rheumatology workforce, it is also important to account for care delivered to patients with RMDs by nonrheumatologists, such as nurses specialised in rheumatology or physician assistants. These professionals may play an important role in addressing, at least in part, shortages in the rheumatologist workforce. This first edition of RheumaFacts revealed that the vast majority of countries do not have a specific certification for health professionals working in rheumatology. A next step will therefore be to quantify these additional professionals involved in the care of patients with RMDs across countries in order to also consider them in workforce analyses.

Although countries with higher GNI generally reported greater capacity and access, economic status alone did not fully account for the extent and heterogeneity of the disparities observed, as considerable disparities persisted within income groups. The differences observed across countries are likely to reflect a complex interplay of upstream determinants, including demographic structure, population ageing, gender distribution within the medical workforce, training capacity, health system organisation, financing mechanisms, and the broader socioeconomic context. However, this first edition of RheumaFacts was not designed to identify the causal drivers of between-country differences. The analyses were based on country-level aggregated indicators and should therefore be interpreted as descriptive and hypothesis-generating. Future editions, once repeated measurements are available, will provide an opportunity to examine temporal trends and to explore, in dedicated ancillary analyses, how demographic, socioeconomic, and health system determinants may contribute to inequalities in RMD care across Europe.

Also, not all differences documented in RheumaFacts should be interpreted as indicators of suboptimal care. Some between-country variation may reflect legitimate differences in health system organisation, geography, care pathways, professional roles, academic structures, and national policy choices. For example, there is no universal benchmark for the optimal number of rheumatology departments or patient organisations, and the absence of formal rheumatology certification for health professionals does not necessarily imply poor quality of care if alternative training and care models

are in place. In this first edition, RheumaFacts was not intended to define normative thresholds or to rank countries, but rather to provide a harmonised descriptive benchmark. Observed differences should therefore be interpreted as signals that may require further contextualisation. They may become particularly relevant when they concern indicators likely to influence access, quality of care or patient outcomes; when they are large, persistent or unexplained; when they cluster with other markers of limited capacity; or when they are identified by national societies, HPR or patient representatives as barriers to care.

Before RheumaFacts, no comparable dataset existed focusing specifically on RMDs across the EULAR region. Earlier initiatives, such as EuMusc.net [24], had a similar aim but lacked longitudinal structure. Other international databases, including Eurostat, OECD, and WHO, provide information on health system capacity and activity, but do not include RMD-specific indicators. Similarly, platforms such as the WHO Health Systems and Policy Observatory offer policy-level data, yet without any dedicated focus on RMDs.

RheumaFacts addresses this gap by collecting primary data through EULAR's national scientific societies and its constituent pillars—HPR and PARE.

The dataset consolidates comprehensive information on RMD service provision, along with country-level demographic and macroeconomic indicators obtained from validated international sources.

The global indicators incorporated—sourced from the WHO and the World Bank—constitute the most authoritative estimates accessible. Their credibility is founded on stringent methodological standards; however, as is customary with such data, adjustments have been undertaken by the source institutions to compensate for missing data and reporting heterogeneity, leading to variable precision across countries [9].

To ensure the reliability of the data on national RMD indicators collected, an expert group developed the list of indicators and the associated reporting form, which were then validated through 2 structured workshops involving the national rheumatology societies. The template incorporated internationally harmonised definitions, and each country's data were reviewed and formally approved by the respective national society. All sources were documented to ensure traceability and transparency.

An important limitation was the lack of data on within-country inequalities, but also that comparisons between high- and middle-income countries, as classified by the World Bank, were based on national averages, which naturally mask within-group differences. As a result, the substantial heterogeneity observed within each income category could not be formally explored in this first descriptive edition.

All country and aggregated data have been shared with the EULAR Council and national rheumatology societies, with plans for wider dissemination through interactive digital tools on the EULAR website. Controlled access via a dedicated scientific committee is also planned for academic institutions, public health authorities, and government agencies wishing to carry out advanced analyses of the dataset, such as identifying systemic trends, gaps, and disparities in RMD care delivery.

Furthermore, data from RheumaFacts could be linked to the EULAR RMD Impact Survey [25] to investigate how system-level characteristics affect patient burden and disease impact. This integrated approach will provide a valuable foundation for comparative health system research.

This unique dataset is expected to serve as a cornerstone in advancing EULAR's mission in both research and advocacy. As a provider of capacity in the field of RMDs, RheumaFacts enables the generation of robust, harmonised data that may support epidemiological surveillance, comparative health systems research, and health services analysis across Europe. More importantly, it establishes a credible, evidence-driven platform for advocacy, empowering EULAR and its member societies to engage effectively with national and European-level decision-makers. By documenting inequalities and potential inequities, healthcare gaps, and system inefficiencies in RMD care, RheumaFacts strengthened EULAR's capacity to influence health policy, secure appropriate resource allocation, and elevate the profile of RMDs within broader public health agendas.

Through this initiative, EULAR signalled its strategic intent to play a leading role in health policies and healthcare organisation in the field of RMDs. This objective was supported by a deliberate investment in internal expertise, data infrastructure, and research capacity, complemented by the development of strategic partnerships.

Until now, no single dataset had brought together economic indicators, healthcare system variables, and RMD-specific metrics. The launch of RheumaFacts created, for the first time, an integrated platform for monitoring, benchmarking, and informing policy in rheumatology. This represents a major step forward in EULAR's ability to support high-quality, data-driven decision-making aimed at reducing inequities and improving care delivery for patients with RMDs across Europe.

Competing interests

All authors declare they have no competing interests.

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