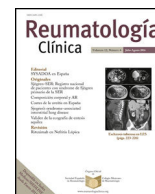




Sociedad Española
de Reumatología -
Colegio Mexicano
de Reumatología

Reumatología Clínica

www.reumatologiaclinica.org



Brief Report

The reality of Rheumatology in Spain and its autonomous communities before the pandemic[☆]



Carlos Sánchez-Piedra,^a José María Álvaro-Gracia,^b Sagrario Bustabad-Reyes,^c
Federico Díaz-González^{c,d,*}

^a Unidad de Investigación, Sociedad Española de Reumatología, Madrid, Spain

^b Hospital General Universitario Gregorio Marañón, IISGM, Madrid, Spain

^c Hospital Universitario de Canarias, San Cristóbal de la Laguna, Spain

^d Departamento de Medicina, Dermatología y Psiquiatría, Universidad de La Laguna, San Cristóbal de La Laguna, Spain

ARTICLE INFO

Article history:

Received 12 May 2021

Accepted 21 July 2021

Available online 30 April 2022

Keywords:

Rheumatologists

Spain

Rheumatology

Human resources

Workload

Demography

ABSTRACT

Objectives: To determine the number of rheumatologists per 100,000 inhabitants working in public or private centres in Spain as a whole, and by Autonomous Community and their distribution by age and sex.

Material and method: Cross-sectional study based on the information contained in the database of the Spanish Society of Rheumatology. Quality control was performed by contact (e-mail and telephone call) with the heads of the clinical services of each of the hospitals (public and private). The information analysed was the age, sex and place of work of active rheumatologists in February 2020. The rates of rheumatologists per 100,000 inhabitants were calculated from population data from the National Institute of Statistics.

Results: The rate of rheumatology specialists per 100,000 inhabitants in Spain was estimated at 2.17. The percentage of women was 59.7%, with a higher female/male ratio at younger ages. The lowest proportion of specialists per 100,000 inhabitants was in the community of Valencia (1.6), and the highest in Cantabria (3.2).

Conclusions: Variations were found in the rate of rheumatologists per 100,000 inhabitants among the Autonomous Communities. The distribution by age and sex showed a tendency towards female rheumatologists, especially in the younger age strata.

© 2021 Elsevier España, S.L.U. and Sociedad Española de Reumatología y Colegio Mexicano de Reumatología. All rights reserved.

Realidad de la Reumatología en España y sus comunidades autónomas antes de la pandemia

RESUMEN

Objetivos: Determinar el número de reumatólogos por 100.000 habitantes en activo en centros públicos o privados en el conjunto de España, por comunidades autónomas y su distribución por edad y sexo.

Material y método: Estudio transversal utilizando la información contenida en la base de datos de la Sociedad Española de Reumatología, con datos confirmados por los responsables de los servicios clínicos de cada uno de los hospitales (públicos y privados) disponibles en la base de datos. Se analizó edad, sexo y lugar de trabajo de los reumatólogos en activo en febrero de 2020. Se calcularon tasas de reumatólogos por 100.000 habitantes a partir de datos de población del Instituto Nacional de Estadística.

Palabras clave:

Reumatólogos

España

Reumatología

Recursos humanos

Carga de trabajo

Demografía

[☆] Please cite this article as: Sánchez-Piedra C, Álvaro-Gracia JM, Bustabad-Reyes S, Díaz-González F. Realidad de la Reumatología en España y sus comunidades autónomas antes de la pandemia. Reumatol Clin. 2022;18:486–489.

* Corresponding author.

E-mail address: federico.diaz.gonzalez@gmail.com (F. Díaz-González).

Resultados: Se estimó una tasa de especialistas en reumatología por 100.000 habitantes en España de 2,17. El porcentaje de mujeres fue del 59,7%, siendo superior la proporción mujer/hombre en edades más jóvenes. La menor relación de especialistas por 100.000 habitantes se registró en la Comunidad Valenciana (1,6), y la mayor en Cantabria (3,2).

Conclusiones: Se encontraron variaciones en la tasa de reumatólogos por 100.000 habitantes entre comunidades autónomas. La distribución por sexo mostró una tendencia a un incremento de mujeres reumatólogas.

© 2021 Elsevier España, S.L.U.

y Sociedad Española de Reumatología y Colegio Mexicano de Reumatología. Todos los derechos reservados.

Introduction

For any medical speciality it is important to know the supply of available professionals in relation to the population served. The number of specialists available per 100,000 inhabitants is an indicator of health resources used for the organisation and evaluation of health systems.^{1,2}

Different working groups in scientific societies in the Americas have studied the current situation and future projections for the speciality of rheumatology, taking into account possible scenarios of change in both supply and demand.^{2,3} In this sense, the European League Against Rheumatism promoted this type of analysis in Europe and established methodological recommendations for its correct performance⁴. In Spain, similar work has been carried out at a regional level.^{5,6}

This study is an update of the one undertaken in 2017,⁷ and is based on data collected up to February 2020, so it can be considered an indicator of the situation of the speciality prior to the COVID-19 pandemic. The aim of this analysis was to determine the number of rheumatologists per 100,000 inhabitants in Spain and by autonomous community, active in public or private centres. The distribution of rheumatologists by age and sex in Spain and by autonomous community was also evaluated.

Methods

A cross-sectional study using the database of members of the Spanish Society of Rheumatology (SER for its initials in Spanish) as a source of information. Full members were selected (members with the title of specialist in rheumatology), active (non-retired members), with professional practice in public or private centres throughout Spain as of February 2020. As no information was available on time commitment, full time was assumed.

The selection of specialist doctors for this analysis started in April 2019. The initial data were corroborated by e-mail with the

heads (service, section or unit chiefs) of the clinical services of each of the hospitals (public and private) available in the SER membership database. If no response was received, telephone contacts were made with those responsible to request that the available information be corroborated and updated in terms of the number, age and sex of rheumatologists at each centre. This work to review the number of specialists was completed in February 2020.

The rate of active rheumatologists per 100,000 inhabitants was calculated assuming that 95% of rheumatologists in Spain are members of the SER and using as a denominator the data from the National Institute of Statistics, corresponding to the information available in January 2020 for the population in Spain globally and by autonomous region.⁸

Results

The rate of rheumatology specialists per 100,000 inhabitants in Spain is 2.17 (Table 1). The lowest ratios of specialists per 100,000 inhabitants are recorded in the Autonomous Community of Valencia (1.6), and the Basque Country, Andalusia and the Balearic Islands (1.7), and the highest in Cantabria (3.6) and La Rioja (3.2). The absolute number of practising professionals by Autonomous Community varies, ranging from 197 in the Community of Madrid to 10 in La Rioja (Table 1).

For Spain as a whole, the distribution by sex and age of rheumatology specialists is shown in Fig. 1. Percentage-wise, only in La Rioja (40%), Galicia (46.6%), Murcia (47.2%) and Extremadura (47.6%) do more male rheumatologists practice than female rheumatologists, while at the other extreme, in Navarre (71.4%) and the Balearic Islands (70%), more than 70% of rheumatologists are women. In terms of average age, Galicia (54.8 years) and Castilla-León (50.9 years) are the regions with the oldest specialists, while La Rioja (44.5 years), the Canary Islands (44.8 years) and Cantabria (44.9 years) have the youngest rheumatologists.

Table 1
Rheumatology professionals by Autonomous Community. Distribution according to sex and estimate per 100,000 inhabitants. Year 2020.

	Total	Men	Women	% Women	Mean age	n × 100 thousand
Andalucía	143	51	92	64.3%	47.8	1.7
Aragón	25	12	13	52.0%	49.3	1.9
Asturias	26	8	18	69.2%	48.3	2.6
Baleares	20	6	14	70.0%	46.8	1.7
Canarias	54	22	32	59.3%	44.8	2.4
Cantabria	21	9	12	57.1%	44.9	3.6
Castilla-León	43	16	27	62.8%	50.9	1.8
Castilla-La Mancha	40	19	21	52.5%	47.0	2.0
Cataluña	189	72	117	61.9%	47.6	2.5
C. of Valencia	81	39	42	51.9%	47.9	1.6
Extremadura	21	11	10	47.6%	50.0	2.0
Galicia	65	36	29	44.6%	54.8	2.4
Madrid	197	65	132	67.0%	47.9	2.9
Murcia	36	19	17	47.2%	47.9	2.4
Navarra	14	4	10	71.4%	46.4	2.1
Basque country	37	17	20	54.1%	47.0	1.7
Rioja	10	6	4	40.0%	44.5	3.2
Spain	1.022	412	610	59.7%	47.8	2.17

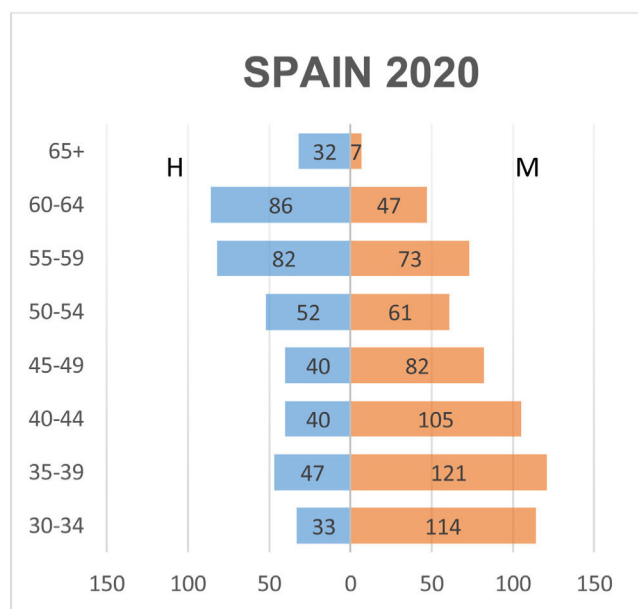


Fig. 1. Gender and age distribution of rheumatology specialists in Spain in 2020. The data within the bars represent the absolute number of rheumatologists by sex and age stratum. M: men; W: women.

The findings from this analysis show that, in contrast to previous decades, rheumatology is currently a speciality with a greater presence of women (59.7%) than men. However, over the age of 50, men still outnumber women. The progressive retirement of the more mature generations and the entry of new generations of residents with a preponderance of women has been changing the distribution by sex, with a predominance of women in all age strata in the rheumatology speciality in the 10-year future.

Discussion

The main findings of this analysis are that: (1) the rate of rheumatologists in Spain remains above 2.0 per 100,000 inhabitants, with significant variations between autonomous communities; (2) among younger specialists, women predominate; and (3) the distribution of rheumatologists according to age and sex is uneven between autonomous communities.

Our results are in line with the predictions made by the Health Economics Research Group of the University of Las Palmas on the different medical specialities with data from 2006 and 2009.^{9,10} A paper by this group updated to January 2019 observed a proportion of women in rheumatology of 55.9%, a figure very similar to that presented in this analysis.¹¹ This paper also estimated that 16.6% of rheumatologists were aged 60 years or older at the time of the analysis. Finally, this paper estimated a ratio of rheumatology specialists per 100,000 population of 2.0, a figure slightly lower than that found in this study.

In Catalonia, Dolors Grados Canovas et al. published an analysis of the situation of the speciality in Catalan public centres with data from 2017.⁶ In this study, they estimated a total of 141 rheumatologists working in public centres in this autonomous community. This figure is lower than that found in our analysis (189 rheumatologists), although in our case both public and private health centres were taken into account.

Internationally, the 2015 American College of Rheumatology Workforce Study found rates of rheumatology specialists per 100,000 population in the United States below 2.0 in virtually all states.² This work identified significant variations between regions in the number of rheumatologists per 100,000 active population in

2015. A more recent analysis, with data from the Ontario region (Canada), shows significantly lower rates of rheumatologists (1.15 per 100,000 population) than those found in Spain.¹² Precisely, researchers in Canada have found a female/male ratio of more than 1 among rheumatology specialists, a finding that coincides with the results obtained in our analysis.¹³ Fernández-Ávila et al. have carried out an analysis of the current situation and future projection of the speciality in different Latin American countries, finding a significant variability in the availability of rheumatologists per 100,000 inhabitants between countries, ranging from 3.6 in Uruguay to 0.16 in Nicaragua.³

No consensus has been established on the optimal ratio of rheumatologists per 100,000 population. In Europe, Austrian researchers evaluated the ratio of specialists per population needed to meet the demands derived from the care of health problems related to diseases treated in rheumatology services and established that 4.29 rheumatologists per 100,000 inhabitants were required,¹⁴ a figure much higher than the current figure in Spain.

This study has some limitations. A number of rheumatologists may not have been considered in the study as only rheumatologists who are members of the SER were included. The proportion of this group not included was estimated to be less than 5%. Centres in Melilla and Ceuta were not considered in the analysis for the calculation of the rate of specialists per 100,000 population. Furthermore, in this study no distinction was made between healthcare activity in public or private centres, nor the time of dedication, assuming a full-time activity, which may entail limitations when planning resources based on these characteristics. With respect to the work carried out in 2017, data collection and quality control have been improved, with the participation of heads of services, units and sections from centres throughout Spain. Finally, it should be borne in mind that this indicator is just one more to be considered for the evaluation of health services, but its interpretation is still subject to controversy.¹⁵

Conclusion

Our data show significant differences in the rates of rheumatologists per 100,000 inhabitants between the different autonomous communities in Spain, with a majority of women under the age of 54. These findings show a snapshot of the current situation of the speciality and provide a glimpse of how rheumatology is facing the healthcare challenges it is currently facing, as well as the imminent challenges that lie ahead in the coming years.

Conflict of interests

The authors have no conflict of interests to declare.

Acknowledgements

Thanks to Ricard Génova, demographer of the Public Health Service of Madrid for his scientific and technical advice.

To Susana Hernando and Marta de Viñals, staff of the Spanish Society of Rheumatology, for their support in the collection of information.

To Raúl Frutos for his help in managing and updating the SER data.

References

- Bernal-Delgado E, García-Armesto S, Oliva J, Sanchez Martínez F, Repullo J, Pena-Longobardo L, et al. Spain: health system review. *Health Syst Transit*. 2018;20:1–179.
- Battafarano DF, Ditmyer M, Bolster MB, Fitzgerald J, Deal C, Bass A, et al. 2015 American College of Rheumatology workforce study: supply and demand

- projections of adult rheumatology workforce, 2015–2030. *Arthritis Care Res (Hoboken)*. 2018;70:617–26.
3. Fernández-Ávila DG, Patino-Hernandez D, Kowalskii S, Vargas-Caselles A, Sapag A, Cachafeiro-Vilar A, et al. Current status of the rheumatologists' workforce in Latin America: a PANLAR collaborative study. *Clin Rheumatol*. 2021;40:2913–20.
 4. DeJaco C, Putrik P, Unger J, Aletaha D, Bianchi G, Bijlsma J, et al. EULAR 'points to consider' for the conduction of workforce requirement studies in rheumatology. *RMD Open*. 2018;4:e000780.
 5. Nolla J. Estado de la reumatología asistencial en Cataluña. *Rev Esp Reumatol*. 1990;17:144–6.
 6. Grados Canovas D, Martínez-Morillo M, Olive Marques A, Retamero A, Nolla JM, Guanyabens N. Rheumatology manpower in the public system in Catalonia (Spain). *Reumatol Clin (Engl Ed)*. 2021. S1699–258X, 30165–0.
 7. Sanchez-Piedra C, Yoldi B, Valero M, Andreu JL. Estado de la reumatología en España en 2017: 2, 0 reumatólogos por 100.000 habitantes. *Reumatol Clin*. 2018;14:311–2.
 8. (INE) INDe. Cifras de población. Datos a 1 de enero de 2020. Instituto Nacional de Estadística, 2020.
 9. Pérez PB, López-Valcárcel BG. Oferta y necesidad de especialistas médicos en España (2008–2025). Canarias: Universidad de las Palmas de Gran Canaria; 2009.
 10. López-Valcárcel BG, Pérez PB. Oferta y necesidad de médicos especialistas en España (2006–2030). Gran Canaria: Grupo de Investigación en Economía de la Salud Las Palmas de Gran Canaria: Universidad de Las Palmas de Gran Canaria; 2007.
 11. Barber Pérez PL, González Lopez-Valcarcel B, Available from: <https://www.mscbs.gob.es/profesionales/formacion/necesidadEspecialistas/doc/20182030EstimacionOfertaDemandaMedicosEspecialistasV2.pdf>, 2019.
 12. Widdifield J, Bernatsky S, Pope JE, Kuriya K, Barber C, Eder L, et al. Evaluation of rheumatology workforce supply changes in Ontario, Canada, from 2000 to 2030. *Healthcare Policy*. 2021;16:119.
 13. Widdifield J, Gatley JM, Pope JE, Barber C, Kuriya B, Eder L, et al. Feminization of the rheumatology workforce: a longitudinal evaluation of patient volumes, practice sizes and physician remuneration. *J Rheumatol*. 2020;48:1090–7.
 14. Puchner R, Vavrovsky A, Pieringer H, Hochreiter R, Machold KP. The supply of rheumatology specialist care in real life. Results of a nationwide survey and analysis of supply and needs. *Front Med (Lausanne)*. 2020;7:16.
 15. González López-Valcárcel B, Barber Pérez P. Dificultades, trampas y tópicos en la planificación del personal médico. *Gac Sanit*. 2008;22:393–5.