

Plain Language Summary of [Characteristics associated with Covid-19 in patients with Rheumatic Disease in Latin America: data from the Covid-19 Global Rheumatology Alliance physician-reported registry](#). Published on September 15, 2020.

Authors: Manuel F. Ugarte-Gil, Claudia DL Marques, Deshire Alpizar-Rodriguez, Guillermo J. Pons-Estel, Daniel Xibille-Friedmann, Eduardo Paiva, Erick A. Zamora-Tehozol, Rocío V. Gamboa-Cárdenas, Rosana Quintana, Tatiana S. Rodriguez-Reyna, Ana Maria Sepúlveda, Milena Gianfrancesco, Michael Evans, Zachary Wallace, Emily Sirotych, Evelyn Omedo, Jonathan S. Hausmann, Graciela S. Alarcón, Philip C. Robinson, Jinoos Yazdany

Lay Summary Contributors: Anees Laher, Maha Ikram, Tarin Moni, and Richard Howard on behalf of the lay summaries sub-group

LAY SUMMARY

Preamble:

The coronavirus disease 2019 (COVID-19) is caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The pandemic started in Wuhan, China, in late 2019, and then moved to Europe, then the USA, and by the middle of 2020, the pandemic reached Latin America. By June 17, 2020, Brazil was the most affected country within Latin America; followed by Peru, Chile and Mexico.

The COVID-19 Global Rheumatology Alliance was created to determine the impacts of SARS-CoV-2 infection on patients with rheumatic diseases and to evaluate the impacts of immunosuppressive drugs on outcomes. This study compares the early pandemic outcomes of Latin American patients to the rest of the world, using the COVID-19 Global Rheumatology Alliance physician registry.

What was done?

The COVID-19 Global Rheumatology Alliance physician registry collected data from healthcare providers regarding patients with rheumatic diseases and COVID-19 infections. This database has been reviewed by ethics boards in many countries. The following variables are collected on the database:

- How the diagnosis of COVID-19 was made
- Sociodemographic information, including age, gender, race / ethnicity
- Smoking status
- Rheumatic disease diagnosis
- Disease activity (as physician global assessment)
- Comorbidities
- Chronic medication prior to COVID-19 diagnosis
- Medication to treat COVID-19
- Status of COVID-19 infection
- Need for ventilator support
- Health outcome

Patients from Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Honduras, Mexico and Peru were included. Characteristics of Latin American patients entered in the registry were analyzed and compared to patients from other countries. Data analysis was performed to describe hospitalization, death, and need for ventilator support among patients from Latin America.

What was found?

After analyzing data from the variables mentioned above, it was found that COVID-19 cases for rheumatic patients in Latin America were associated with a high need for non-invasive¹ and invasive ventilator support. These severe outcomes were similar to those reported from other countries early in the pandemic. Data from 74 Latin American patients were described in this study along with 583 patients from other areas of the world. Rheumatoid arthritis and systemic lupus erythematosus (SLE) were the 2 most common diagnoses in both groups.

Latin American patients used conventional DMARDs², antimalarials and glucocorticoids more frequently than patients from other countries, whereas biological agents³ were used less frequently in Latin American patients. Pharmacological treatment for COVID-19 and for Acute Respiratory Distress Syndrome (ARDS) was more commonly used in Latin American patients, as compared to the rest of the world. Hospitalization was more commonly reported in Latin American patients that were entered in the registry compared to data available from other countries, although this analysis is limited by the small number of patients included in this study.

Please see [Table 1](#) below for a summary of what was found.

What does this mean?

This study offered an early glimpse at how patients with rheumatic diseases in Latin America fared in the early days of the pandemic. The results suggest some patients had a severe outcome, similar to the pattern seen in other countries around the world. ARDS was more frequent in Latin American patients. It is difficult to state if the higher frequency of this COVID-19 complication is due to sociodemographic characteristics, healthcare systems or other factors.

Limitations to this study include:

- The registry is voluntary so does not capture all cases.
- There were relatively few cases reported in Latin America.
- Lack of testing in Latin America means some cases would not be identified.

One of the strengths of this study is that it includes the largest registry of patients with rheumatic disease and COVID-19. The COVID-19 Global Rheumatology Alliance physician registry includes cases from all around the world. This study reinforces the importance of reporting COVID-19 cases in people with rheumatic diseases in Latin America and around the world, in order to compile evidence which hopefully will translate into better recommendations, treatment and outcomes for people living with rheumatic diseases.

Table 1: Breakdown of Database Variables

	Latin America	Other Countries
Number of Countries Included	74	583
Probability of Hospitalization	61%	45%
Probability of Death	12%	11%
Probability of Non-invasive Ventilator Support (face mask)	11%	5%
Probability of Invasive Ventilator Support (intubation)	20%	8%
Medications		
Conventional DMARDs	81%	66%
Antimalarials	38%	21%
Glucocorticoids	51%	31%
Biologics	16%	35%
Diagnosis		
RA (rheumatoid arthritis)	35%	39%
SLE (lupus)	22%	14%
PsA (psoriatic arthritis)	3%	13%
SpA (spondyloarthritis, ankylosing spondylitis)	9%	8%

¹ Non-invasive refers to air delivered through a sealed mask that is placed over the mouth, nose, or face. Invasive uses an inserted air tube.

² DMARDs (disease-modifying antirheumatic drugs) include: methotrexate, sulfasalazine.

³ Biological agents or biologics include: TNF inhibitors such as etanercept (Enbrel), adalimumab (Humira), infliximab (Remicade), golimumab (Simponi). IL17 inhibitors such as secukinumab (Cosentyx), ixekizumab (Taltz).