

## **Concerns, Healthcare Use, and Treatment Interruptions in Patients with Common Autoimmune Rheumatic Diseases during the COVID-19 Pandemic**

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My name is Michael George and I'm glad to be able to share some of the results from our study examining the impact of the COVID-19 pandemic on patients with common autoimmune rheumatic conditions.

This was a project of the autoimmune research collaborative, which surveyed patients from the ArthritisPower patient powered research network and CreakyJoints online patient community, with surveys completed between March 29<sup>th</sup> and May 26<sup>th</sup> of 2020. We evaluated COVID-19 concerns, health-related behaviors, and medication interruptions. We examined differences by urban residence, income, and education.

There were 1517 participants in the study. The most common condition was rheumatoid arthritis followed by psoriatic arthritis, ankylosing spondylitis, and lupus. Mean age was 55, 88% of the group was female, 90% were Caucasian, 62% were receiving a biologic or JAK inhibitor, and about ¼ were receiving glucocorticoids.

This map shows the number of participants in each state and the shading shows the median level of concern about COVID-19 on a 5-point scale with 5 representing extreme concern about COVID-19. As you can see from the shading, in states with at least 5 participants, the median concern was a 4 or 5 in all states represented with very similar levels of concern across the United States.

We found high rates of disruptions in health care for patients, with 57% of patients avoiding a doctor's office visit, 42% avoiding laboratory tests, 36% avoiding other tests such as X-rays, and 30% reporting a telehealth visit even early in the pandemic. We did find greater avoidance of office visits and tests and greater use of telehealth in urban compared to rural areas.

Medication interruptions were of particular interest. Among patients who reported no respiratory illness and no diagnosis of COVID-19, still 15% of patients reported stopping one of their disease-modifying drugs and the majority of the time, 79% of the time, shown here in orange, this was without the recommendation of a physician. There were more frequent interruptions in patients receiving a biologic or JAK inhibitor, those with lower education, and those with lower or higher median household income based on zip code. There was a higher rate of medication interruptions among patients with respiratory illness or COVID-19 diagnosis as expected, with more of these recommended by a physician.

We found that avoiding office visits or having telehealth available had an important impact on medication interruptions. Compared to patients who did not an office visit, those who did avoid an office visit were substantially more likely to have stopped one of their medications, 17% versus 12%. And the highest rates of medication interruption were among patients who reported that telehealth was not available, with 25% of these patients stopping a medication compared to 13% who said that telehealth was available.

In conclusion, patients with common autoimmune rheumatic conditions frequently avoided office visits and laboratory testing. Medication interruptions occurred commonly, usually without the advice of a physician and were more common in patients with lower socioeconomic status. Patients who avoided office visits or did not have access to telehealth were more likely to stop medications. These results show how critical it is to ensure adequate healthcare access, with a focus on vulnerable populations, throughout this pandemic.

The full article is available on *The Journal of Rheumatology* website: <https://www.jrheum.org>.

