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Going viral: misinformation in the time of COVID-19

False information and fake news have become increasingly prevalent during the COVID-19 pandemic, spreading rapidly through social media and other outlets, creating confusion and distrust. For patients managing chronic conditions, such as rheumatic and musculoskeletal diseases, finding accurate health information during the pandemic has serious implications for their health and quality of life.

During the COVID-19 pandemic, guidelines and standard of care have changed rapidly alongside new knowledge about virus biology, mechanisms of transmission, patient risk factors, and disease-modifying treatments. This information glut has been difficult enough for scientists and clinicians to keep pace with, much less the general public. What's more, propagation of medical myths, often based on preliminary and non-peer reviewed data (and frequently fuelled by personal opinions of those in the public eye), have engendered substantial excitement among the public about potential cures or preventive measures, as well as substantial fears about risk. Many of the highly publicised drugs have been among those commonly used by patients with rheumatic diseases, creating alarming drug shortages and generating confusion and anxiety among patients. Hydroxychloroquine is a prime example, and social media is still rife with unfounded claims of hydroxychloroquine's benefits in COVID-19, despite definitive evidence to the contrary.

Media attention surrounding non-steroidal anti-inflammatory drugs (NSAIDs) also provoked substantial anxiety early in the pandemic. Claims emerged that NSAIDs might increase the severity of COVID-19, leading to urgent calls from the US Food and Drug Administration and European Medicines Agency for further investigation. Most studies exonerated NSAIDs with regard to COVID-19, including a recent observational study of more than 72 000 people in the UK showing that taking NSAIDs does not lead to higher rates of death or severe disease in patients who are hospitalised with COVID-19. NSAIDs were also at the centre of controversy during the 1918–19 influenza pandemic, when the US Surgeon General recommended that aspirin be used to treat the infection, at a dose now known to be toxic—likely contributing to increased lung damage and death in many.

Although the scientific community rapidly gained knowledge about individual risk factors linked to poor

outcomes in COVID-19, this was another area in which confusion abounded for patients, particularly in the context of interrupted routine clinical care. For patients with rheumatic and musculoskeletal diseases, patient-centred organisations and charities have been crucial in filling gaps in the provision of information; for example, the UK charity Versus Arthritis developed the COVID-19 Virtual Assistant, a chatbot designed to help people with arthritis get relevant health information relating to COVID-19. Others have turned to SMS (text)-based information provision, such as a 4-step COVID-19 risk assessment tool that was developed in the UK using national guidance from physicians and disseminated to patients via SMS, resulting in more than 95% being able to accurately assess their own COVID-19 risk.

COVID-19 vaccination programmes are now underway in many countries. Not surprisingly, misinformation about COVID-19 vaccines is rife, and anti-vaccination sentiment is prominent, particularly on social media. Specialist advice and vaccine education has been shown to increase uptake of COVID-19 vaccines. Indeed, patients with rheumatic diseases in the UK who received an SMS-based COVID-19 vaccine educational video reported feeling better informed and more confident about the available COVID-19 vaccines, with more than 90% reporting having an understanding that the vaccines are safe and recommended for them, compared with only 47% before watching the video.

Rheumatologists urgently need to develop systems to help guide patients through the tidal wave of COVID-19 information and misinformation, including providing tips on how to spot credible and trustworthy sources, as a recent study highlighted. We wholeheartedly agree that such guidance is crucial for patients to make informed health-related decisions. Medical misinformation poses real risks to patients with rheumatic and musculoskeletal diseases and to the public in general, but research shows that patients still trust their physicians and specialists and follow their recommendations. Counteracting the confusion and mistrust that follows misinformation is an ongoing challenge that requires creative, multifaceted solutions. With an end to the COVID-19 pandemic nowhere in sight and vaccine uncertainty prevalent, ongoing vigilance is essential. ■ *The Lancet Rheumatology*



For the study on NSAIDs in COVID-19 see [Articles](#) *Lancet Rheumatol* 2021; published online May 7. [https://doi.org/10.1016/S2665-9913\(21\)00104-1](https://doi.org/10.1016/S2665-9913(21)00104-1)

For the Versus Arthritis COVID-19 Virtual Assistant see <https://www.versusarthritis.org/get-help/cova/>

For more on the 4-step COVID-19 risk assessment tool see [Comment](#) *Lancet Rheumatol* 2020; 2: e315–16

For more on COVID-19 vaccination in patients with autoimmune diseases see [Comment](#) *Lancet Rheumatol* 2021; 3: e241–43

For more on the COVID-19 vaccine educational video see [Comment](#) page e399

For guidance on credible sources for patients and clinicians see *Curr Opin Rheumatol* 2020; 32: 441–48