Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Without protection from their own governments and international agencies, these patients are at risk of losing access to their medication. There is a risk that people in LMICs with existing autoimmune conditions will be neglected. These people are dependent on this inexpensive medication. Socioeconomic deprivation is already associated with unfavourable disease outcomes in diseases such as systemic lupus erythematosus.[3]

A surge in demand, price competition, and foreign diplomacy could concentrate hydroxychloroquine in the hands of a few select high-income countries.[4] There is already a shortage of hydroxychloroquine in both high-income countries and LMICs, and prices of raw materials for manufacturing hydroxychloroquine are also increasing.[4] This situation could also lead to a shortage in chloroquine, which is an inexpensive medication for malaria, putting millions of people in malaria endemic regions at risk. However, a chloroquine shortage might be mitigated by the fact that many LMICs are adopting artemisinin-based therapies for treatment of malaria.

If hydroxychloroquine is successful in clinical trials against SARS-CoV-2, it could be used for large-scale prophylaxis for COVID-19.[5] However, this potential use should be balanced with the need to meet the demands of existing patients who depend on hydroxychloroquine in all countries, regardless of income. Supply chains might not be able to meet the shock of increased demands of raw materials needed to produce the drug.

Stocks of this inexpensive medication should be earmarked for patients with autoimmune diseases living in LMICs, and adequate supplies of raw materials for producing hydroxychloroquine should also be provided to pharmaceutical plants. This will require a coordinated response from international organisations such as WHO and other nations. A balanced and staged approach that considers the needs of both high-income countries and LMICs is required towards hydroxychloroquine during the COVID-19 crisis.

I declare no competing interests.

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Self-risk assessment for patients with rheumatic disease during the COVID-19 pandemic

The COVID-19 pandemic is the biggest challenge faced by health services worldwide for over a century. As the deadly capability of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) became known, the UK Government and England's National Health Service (NHS) announced the need to identify individuals thought to be at a increased risk of developing severe manifestations of COVID-19, including patients receiving immunosuppressant therapies.[1] The key aim was to advise susceptible individuals of the need to minimise their infection risk by following strict physical distancing or so-called shielding guidance. As a result, clinicians across the UK were challenged to identify and disseminate urgent information almost overnight to a targeted group of patients within the constraints of current NHS systems. Like our colleagues in Wolverhampton,[2] we were acutely aware of the challenge created by the lack of accurate coding of rheumatological diagnosis and current medication within the Leeds Teaching Hospitals NHS Trust, prompting us to develop a multilayered strategy to communicate with our patients asking them to self-assess their COVID-19 risk.

After collating the information cascaded by regulatory authorities, the British Society for Rheumatology, and other medical societies, we created a series of guidance materials related to COVID-19 for rheumatology patients. We developed a patient-friendly self-risk assessment algorithm and presented it in an animated, home-recorded video using PowerPoint (Microsoft, Redmond, WA, USA),[3-5] with all materials then uploaded onto the hospital website. Patients in the rheumatology department's outpatient waiting list were directed to this website via an SMS (text) message, which was sent to 10 612 patients, followed by a dispatch of 948 letters to those who could not access the message via SMS. Consent to be approached via SMS is recorded and renewed during routine outpatient reviews in our NHS trust. The video was uploaded onto YouTube.com[3-5] and shared via Twitter. As of May 7, 2020, 6 weeks into the UK lockdown, the Leeds risk stratification video had been viewed 5442 times, and 1568 patients have identified themselves as high risk by filling in a dedicated e-form on our website. Furthermore, the locally produced algorithm and video have been adopted or modified by rheumatology colleagues in other centres and patient charities in the UK and abroad.

We believe that self-stratification has other benefits for rheumatology patients, particularly when treatment might have changed since their last hospital visit. Our tool emphasises that patients should be aware of the importance of glucocorticoids as an

infection risk, with 5 mg or more of prednisolone increasing the risk stratification at each line of therapy, and that patients should be particularly scrupulous in their implementation of physical distancing.[6] This therapy is often erroneously considered to be safer than disease-modifying anti-rheumatic drugs by both patients and non-specialist doctors. Conversely, both patients and physicians often misunderstand that reducing all immunosuppressant therapies would reduce infection risk, so we felt it was important to emphasis that reducing therapy might be counter-productive since untreated disease, or the treatments needed to control flares, could be more deleterious than stable non-glucocorticoid immunosuppressants. These considerations exemplify how guided self-management can lead to constructive patient education. The main limitation of this approach is the fact that susceptible patients, including older individuals, might have no access to modern technologies including the internet and smartphones, and might find themselves overwhelmed by the amount of information provided in paper form. Evaluation of the effect of the tool is difficult at present because we cannot assess what proportion of patients correctly identified themselves as high risk or whether this self-identification led to behavioural change; however, analysis to answer these questions is now underway.

This is the first time in its 70-year history that the capacity of response of the NHS has been tested to such a scale. We have been positively surprised by the flexibility and agility of the system to introduce drastic change rapidly. Additionally, in our experience, patient engagement was encouraging and prompt, with 1307 unique views of the video within the first 48 h of publishing. As the country enters the next phase of response, new ways of working should consider direct patient empowerment as a major catalyst for delivering safe and effective care.

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