

How preprints accelerated science communication during the pandemic

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During the early phase of the pandemic, approximately 40% of the COVID-19 literature was shared as preprints—freely available manuscripts that are shared prior to peer-review. In a new study publishing in the open access journal *PLOS Biology*, researchers led by Dr. Jonathon Coates (Queen Mary University of London), Dr. Nicholas

Fraser (Leibniz Information Centre for Economics, Germany) and Dr. Liam Brierley (University of Liverpool) explore the crucial role of preprint servers in hosting COVID-19 related science and how these preprints have been used to disseminate knowledge of COVID-19, leading to cultural shifts in journalistic and policy practices.

There has been a rapid and incredible scientific response to the COVID-19 [pandemic](#), with research being shared less than a month after the first reported case, and vaccines being developed in less than a year. The researchers find that this has been matched by a striking change in the way in which research is accessed and communicated; preprints describing COVID-19 research are downloaded and accessed at unprecedented levels (up to 10-fold more than research unrelated to the pandemic) and are being heavily used by reporters and [policy](#) makers for the first time.

According to the study's lead author, Dr. Jonathon Coates, "The pandemic has shone a light on the benefits of preprints over more traditional publishing and it was clear early in the pandemic that something was happening with [preprint](#) usage."

When the researchers explored how preprints were being shared, they found that COVID-19 preprints were being shared across online platforms such as Twitter at a rate of over 7 times that of non-COVID-19 preprints. Although traditionally rarely referenced by official policy documents or reported on by journalists, preprints describing COVID-19 research are frequently being cited in policy and reported in news media, bringing active research closer to policymakers as well as the general public than ever before.

"Prominent public officials, such as Dr. Fauci, have stated that preprints have been important in accelerating our understanding of COVID-19. Our data provides evidence to support these statements and reveals a

clear cultural shift in the use of preprints by scientists, the [general public](#), journalists and [policy makers](#)," says Dr. Coates, "What we hope is that the cultural shifts reported in this paper will remain after the pandemic and the biomedical community will continue to turn to preprint servers for disseminating new studies."

More information: Nicholas Fraser et al, The evolving role of preprints in the dissemination of COVID-19 research and their impact on the science communication landscape, *PLOS Biology* (2021). [DOI: 10.1371/journal.pbio.3000959](https://doi.org/10.1371/journal.pbio.3000959)

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