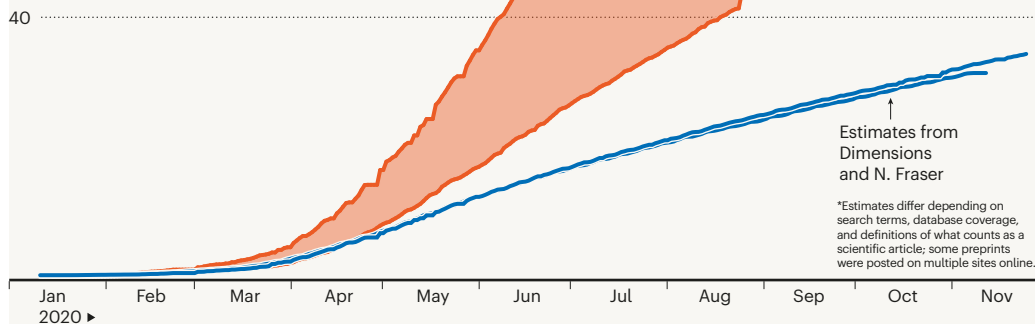


# COVID IN PAPERS: A TORRENT OF SCIENCE

An unprecedented flood of research on the coronavirus swept websites and journals this year.

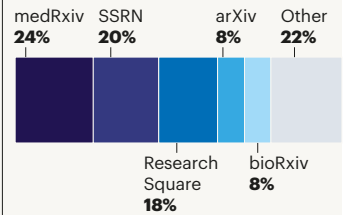
By Holly Else



Scientists raced to share their work on COVID-19 and the SARS-CoV-2 virus, often through preprints — articles posted online before peer review. They published well over 100,000 articles about the topic, and might even have passed 200,000 in December. There was a sharp increase in articles on all subjects submitted to scientific journals this year. Submissions to publisher Elsevier’s journals alone were up by around 270,000 — or 58% — between February and May compared with 2019, for instance. Even so, around 4% of the world’s research output was devoted to the coronavirus, according to the Dimensions database.

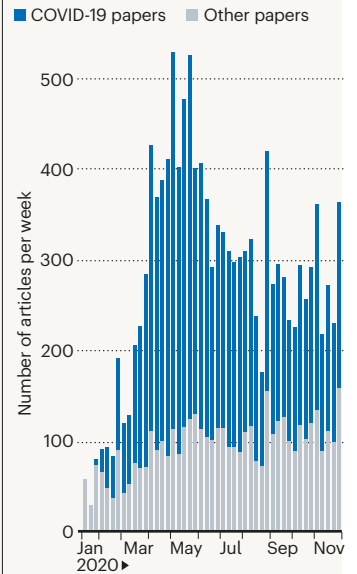
## PREPRINT RUSH

More than 30,000 COVID-19 articles were preprints; according to Dimensions, one-tenth of all preprints this year were about COVID-19. More than half of the preprints appeared on medRxiv, SSRN or Research Square.



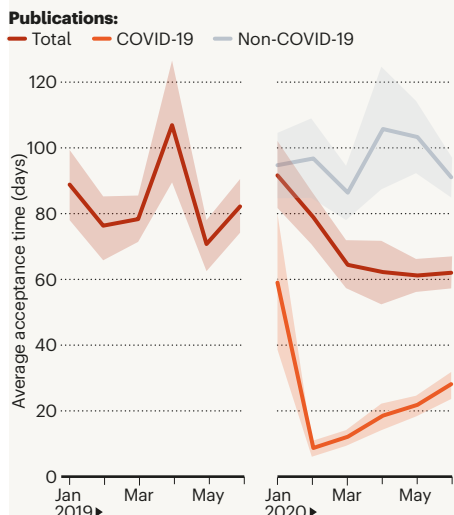
More than two-thirds of all the preprints posted on medRxiv, which only launched in June 2019, were about COVID-19.

### medRxiv submissions



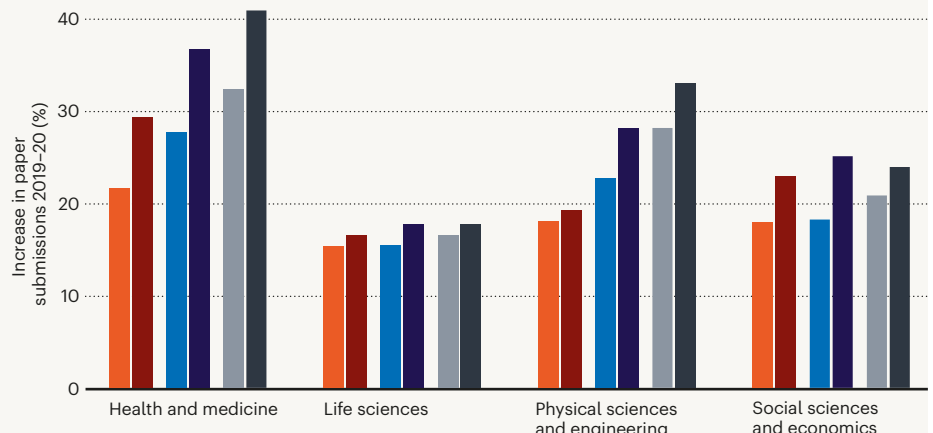
## SPEEDY REVIEW

Journals rushed to get COVID-19 articles through peer review. A study of 11 medical journals in the first half of the year found that they had published coronavirus papers much faster than normal, but at the expense of publishing other research more slowly.



## UNEQUAL BURDEN

Growth in submissions from female authors trailed behind growth from male authors across all subject areas, according to an analysis of hundreds of thousands of papers sent to Elsevier journals between February and May. This is probably because women shouldered the burden of childcare and home-schooling during lockdowns, says Flaminio Squazzoni, a social scientist at the University of Milan, Italy, who co-authored the preprint analysis. “We need to make sure these things are taken into account when promoting and hiring in the years ahead,” he says.



SOURCES: MAIN GRAPHIC: JOURNAL PAPERS, DIMENSIONS & NATURE TABULATIONS/PRIMER (FOR PUBMED ESTIMATE); PREPRINTS, DIMENSIONS/N. FRASER & B. KRAMER. FIGSHARE HTTPS://DOI.ORG/FNKM (2020). PREPRINT RUSH: DIMENSIONS, MEDRXIV, GROWTH; J. INGLIS, MEDRXIV, SPEEDY REVIEW: S. AVIV-REUVEN & A. ROSENFELD. PREPRINT AT HTTPS://ARXIV.ORG/ABS/2010.02394 (2020). UNEQUAL BURDEN: F. SQUAZZONI ET AL. PREPRINT AT SSRN HTTPS://DOI.ORG/FNDQ (2020).