

## JOURNAL OF MEDICAL ETHICS

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### COVID-19 pandemic has created flood of potentially substandard research

- *Rush to publish is testing research integrity process*
- *33 papers retracted, withdrawn, or had serious doubts raised as of end of July*
- *Thousands of COVID papers on pre-print servers where fewer quality checks made*

The COVID-19 pandemic has created a flood of potentially substandard research amid the rush to publish, with a string of papers retracted or under a cloud and a surge in submissions to pre-print servers where fewer quality checks are made, a leading ethicist has warned in the *Journal of Medical Ethics*.

This has implications for patients, clinicians, and potentially government policy, says Adjunct Professor Katrina Bramstedt, Bond University, Queensland, Australia and Secretary General at Luxembourg Agency for Research Integrity.

The rapid spread of COVID-19 and its transition into a global pandemic propelled researchers to begin the search for treatments and vaccines in earnest.

Scientific and medical Journals have since been flooded with submissions, while thousands of papers, which have not undergone thorough quality checks, have been posted on preprint servers.

As of 7 May 2020, 1221 studies on COVID-19 were registered on the international clinical trial registry site, ClinicalTrials.gov.

And as of 31 July 2020, 19 published articles and 14 preprints about COVID-19 have been retracted, withdrawn, or had serious doubts raised about the integrity of their data, formally known as an expression of concern.

Most of these papers came from Asia (n=19; 57.5%), with over half coming from China (n=11; 58%).

But as the author points out: “No research team is exempt from the pressures and speed at which COVID-19 research is occurring. And this can increase the risk of honest error as well as deliberate misconduct.”

The reason for the removal of the 33 papers isn't known in 3 cases, but data falsification, methodological issues, and concerns about interpretation of data and conclusions, as well as authorship and participant privacy issues were among the reasons in the other papers.

Two preprints (SSRN preprint server) and two research papers in *The Lancet* and *New England Journal of Medicine* were retracted because of unverifiable data common to all four.

And a preprint from the USA about COVID-19 antibody seroprevalence has come under scrutiny for an undisclosed conflict of interest.

There are obvious implications for the journal and the researchers involved, even if they are innocent of any research misconduct, points out the author. The evidence suggests that in such cases, the citations of prior collaborators can take a hit and fall by 8–9%.

But there are also implications for patients. “Patient harm that is significant, permanent and irreversible could result from using faulty research results from preprints as well as published papers,” she says.

The rush to publish means there is less time for quality checks by researchers and their supervisors and for thorough reviews of study applications by research ethics committees, says Professor Bramstedt.

Added to which, these committees can’t be expected to routinely include the key experts needed for COVID-19 research, such as immunologists, microbiologists and lung disease specialists.

Journals, too, rely on a fleet of peer reviewers, all of whom work on a voluntary basis and have competing demands on their time.

To counter these issues, the author suggests that the efficiency of the submission process is tightened up and that research ethics and integrity training be mandated for all researchers.

They should also have timely access to ethical advice on research dilemmas involving topics such as authorship disputes, image manipulation, citations and referencing, informed consent, ethical participant recruitment, etc.

Any infractions of policies and standards should have meaningful consequences to ward off repeat offences, she suggests, adding that it’s important to publicise the results of any investigations, whatever the outcome.

In a personal comment, not found in the text, Professor Bramstedt emphasizes: “Research has the potential to enter the public domain and be used by many stakeholders, including governments and policy makers, so the data must be robust.”

***Journal of Medical Ethics*** editor, Professor John McMillan, adds: “Researchers face powerful headwinds against their efforts to further knowledge about COVID-19. The urgency for evidence, the rewards from finding a successful therapy or vaccine, and the prevalence of disinformation mean scientific integrity is critically important.

“Professor Bramstedt’s report is an early warning for journals and preprint servers to be proactive and maintain rigour when assessing research.”