As COVID-19 spread across Australia, our research team undertook a rapid research project to capture the experiences of nurses working in primary healthcare during the pandemic. We were hearing stories of nurses losing their jobs, not having enough personal protective equipment, and concerns for patient care. We wanted to provide a voice for nurses working in primary healthcare who were otherwise invisible in the policy decision making and rapid changes occurring in health services. This research sought to quantify and document the workforce, professional and personal issues facing primary healthcare nurses to
inform government, policy makers, and local managers during the time of crisis and in the longer term.

A range of strategies to disseminate study findings were discussed, including various styles of reporting and infographics, as well as peer-reviewed publications. Our primary concern was to make certain the study findings were rapidly available in a format that engaged key stakeholders and ensured the voices of our participants were considered during the rapid decision making that was occurring. At the same time we wanted to safeguard that the intellectual property and source of the study findings was able to be clearly attributed. We were initially concerned that peer reviewed publication would not allow us to achieve rapid dissemination given the time traditionally required for peer review and article processing. After speaking to several journal editors, the rapid reviews that were occurring in medical journals in response to COVID-19 were not available for papers submitted to nursing journals. This led us to consider the option of publishing via preprint simultaneously with submission to a peer-reviewed journal.

**DISSEMINATION VIA PREPRINTS**

Preprints have been used in some areas of academia for many years\(^1\) but have only started receiving attention in nursing more recently. As we investigated the preprint option it became clear that many nursing publishers are increasingly encouraging authors to consider preprints and provide scope for this to be undertaken within the publishing process. Preprints can be disseminated in several ways. They can be hosted on institutional or personal repositories and websites. This has the advantage of keeping all of the work undertaken by a particular researcher or research team in a single location. However, sometimes these sources are not as visible to Internet search engines and so may not be seen unless someone specifically searches a particular repository.
The other key approach is to disseminate via preprint servers. Preprint servers have the advantage of bringing together international research findings across discipline areas and may be more visible broadly. In other disciplines, some journals offer preprints within the journal or publisher to which the paper has been submitted (for example *Medical Journal of Australia*)—in some cases this even occurs as part of the submission process for peer review. We found this linkage between preprint servers and journals less common in the nursing literature. When considering which server might be appropriate to use we reviewed the author guidelines for several nursing journals to ensure that what we were doing was going to be compliant if we were to also seek to publish the manuscript as a peer reviewed paper. The SHERPA/Romeo online resource ([https://v2.sherpa.ac.uk/romeo/](https://v2.sherpa.ac.uk/romeo/)) was very helpful to facilitate comparison of journal access policies. Most journals allow authors to post a submitted version of a manuscript on a preprint server, although many request that any preprints be updated with the details of subsequent peer reviewed publications. This is important as a different digital object identifiers (DOI) are allocated to the preprint and the traditional journal article. Linking the two versions of a paper can assist in guiding readers to the final peer reviewed version and ensuring that maximum citations to the peer reviewed version are achieved. Failure to link preprints to peer reviewed papers can lead to a “split” citation count, where citations are divided between the two versions.

Another consideration has to do with licensing and copyright assignment. It is suggested by several journals that authors should retain copyright of any work submitted to a preprint server and, if possible, only grant a “no re-use” license. It would be advisable for authors to carefully check individual publisher/journal requirements before submitting a preprint to ensure that there is no impediment to subsequent peer reviewed publication in a journal.

**OUR EXPERIENCE**
Within the course of our project we have published preprints in both Authorea\cite{authorea} and medRxiv.\cite{medrxiv} The experience of publishing in these two servers provided an opportunity to understand some of the differences and considerations about making a decision regarding the choice of preprint servers for dissemination of research findings.

Our initial choice of a preprint server was driven by the affiliation between the server and the publisher of the journal to which the paper was being submitted. As we were looking to submit the paper to the *Journal of Nursing Scholarship* (Wiley)\cite{journal} we used the Wiley owned Authorea to host our preprint paper. As this was the first preprint we had published this was free to post, however, costs are payable for researchers (other than students) for subsequent preprints and access to additional features. The webpage was fairly easy to navigate to upload our paper as a Word document, although author templates are available for those who wish to use the site as a platform to develop their publication. Given the differences in time zone, the paper was approved and made available online as a preprint within 48 hours of submission. Although there was an option to directly submit the paper to a journal, this was limited to a small number of fairly specialized journals, most of which were outside of health sciences and nursing.

A consideration we discovered after uploading was that the first table/figure included in the paper became the graphic that appeared with the title and opening lines on the thumbnail for the paper. To enhance interest in the paper and improve branding, attention could be given to strategically placing a graphic that attracts and engages potential readers. This was a “lesson learned” and consideration for the future.

The major disappointment to us was the lack of visibility of the preprint. While both searching directly in Authorea and using the DOI link (which we circulated via social media) did take people to the paper, it was not clearly visible on general
Internet browsing. Even typing the title directly into a search engine or Google scholar did not take people to the preprint. Additionally, Authorea does not provide any usage data on page views, tweets, or downloads. These limitations led us to investigate other preprint servers for a subsequent publication.

After reviewing the options we decided to use medRxiv (pronounced “med-archive”) to publish a second preprint from the study given its greater visibility in search engines and Google scholar. Unlike Authorea, medRxiv is specifically focused on health sciences research and includes a nursing section. Additionally, this server offers direct transfer to a number of medical and health science journals (including BMJ and PLoS series), although none are specifically nursing journals. Uploading a document to medRxiv was user-friendly and straightforward. Compared to Authorea, there were more fields requiring manuscript information to be entered to complete the submission. According to Oermann and Nicoll, articles are vetted in a two-stage process than can take four to five days to complete. However, in our experience the article was posted in 48 hours. We were not asked any questions and did not need to make any changes to the manuscript.

There were two major benefits we found with providing this preprint via medRxiv compared to Authorea. First, the paper was easily located by searching keywords in an Internet search engine in addition to having a DOI which could be shared. This allowed readers outside our social media circle to readily connect with the work if they were searching for resources online. Second, although basic, medRxiv provides article metrics, including article usage, Altmetrics scores, and twitter data. This was helpful in allowing us to follow the reach of this preprint.

**CONCLUSION**
This overview has provided an insight into our first experiences in engaging with preprint publication. Overall publishing in preprint allowed us to rapidly disseminate our research, while minimising our workload by producing tone output that could be both disseminated in preprint form and then submitted for peer-reviewed publication. How you apply this experience to your research will be dependent upon what you are seeking to achieve with your publications. Being able to provide rapid access to preprint papers internationally represents an important opportunity for speedy dissemination of ideas and research data to inform policy, practice, and education. The advent of COVID-19 has highlighted the importance of sharing research findings in effecting rapid healthcare system change. As nursing scholars increasingly engage in this approach to share their data, increased functionality in measuring article metrics and broader acceptance of this modality as a key component of the grey literature are likely. It is important that nurses and nursing journals seize preprint opportunities, as do other disciplines, to ensure that the nursing voice is heard.

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