

# Deciding to Post a Manuscript Preprint

## **Deciding to Post a Manuscript Preprint**

Jessica Castner, Taryn Amberson, Gordon Lee Gillespie,  
and Matthew Douma

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The National Institutes of Health (NIH) encourages researchers to post, or deposit, preprints to increase how rapidly the work is shared with the scientific community, clinicians, and the public. The NIH defines a preprint as “a complete and public draft of a scientific document.”<sup>1</sup> For the most part, preprints put the dissemination of scientific articles under the control of the authors before entering, or even bypassing, the gatekeepers inherent to process of editorial triage, peer review, and editorial selection.<sup>2</sup> After a preprint is posted, public comments, which are also called “tags” might be included from public and peer review readers. The purpose of this paper is to relay our experiences and guidance with preprints as authors, researchers, editors, and reviewers. Oermann and

Nicoll<sup>3</sup> have already provided readers with “A Primer on Preprints” in a previous issue of *Nurse Author & Editor*. Here, we build on that work to share our experiences and decision-making on posting preprints.

Basic screening procedures are employed by preprint servers to check for manuscript completeness and plagiarism. In light of the pandemic-related preprint surge,<sup>4</sup> some servers have augmented their typical vetting process. For preprint servers such as bioRxiv and medRxiv, this controversial decision was intended to prevent articles with questionable scientific methods from being disseminated prior to peer review; preventing the potentially harmful and immediate effects of “poor science.”<sup>5</sup> Although this claim to prevent poor science is circumstantial and may not affect all nursing preprints, it may be comforting for wary nurse authors and editors to know that servers have an awareness of and attempt to mitigate the potential harms of scientific misinformation.

## **BENEFITS AND DRAWBACKS**

The benefits and drawbacks of preprints are informed by our experiences as authors, researchers, editors, and reviewers. As authors, we value the peer review process as an opportunity for feedback and improvement. We rarely have a manuscript accepted without revisions, and authentically found that our articles are improved with peer review. An academic journal editor’s network expands our own professional circles, and an editor’s invitation to reviewers enables us to access expertise we might not have otherwise for feedback on our work.

A drawback to posting a preprint is that some journals will not consider the posted paper for publication or have not developed a preprint policy. This means nurse authors may limit their journal publishing options when posting a preprint. We have made errors caught by peer reviewers and were relieved that this information was not posted publicly in a preprint before we could correct the error

or make major improvements to our manuscripts. There is no guarantee a preprint will undergo any rigorous review or tagging. Tagged articles appear to be in the minority on many preprint servers, and the preprint is not peer reviewed before it is posted. Thus, it is generally given the same level of credence as presentations of initial findings at conferences and workshops, acting as a vehicle to begin the dissemination process. Further, if feedback is received on a preprint, the tags might be from readers who have little expertise in the contents or methods of the study reported. Thus, preprint feedback is not yet an equivalent process to curated peer review in a traditional journal.

Alternatively, there are two key advantages to preprints in our experience. We have had frustrating delays with traditional journal timelines, which are entirely out of our control as authors, and do not match grant review cycles. For example, we submitted a final manuscript revision well before a study section's meeting date, but did not have an "accept" decision to offer the program officer with our post-submission materials until after the deadline—only to receive negative feedback from grant reviewers that we had not yet published our results from a previous project! This missed opportunity was a major motivator to post preprints in the future that directly relate to grant applications. Second, we found it important and timely that the information in our articles reach policymakers and other readers who did not have access to traditional, academic subscription journals or libraries.<sup>6,7</sup>

## **PREPRINTS HAVE OUR SUPPORT**

As editors, we support preprint manuscripts. At the *Journal of Emergency Nursing*, we adopted a policy and revised our author guidelines in 2019 to publicly indicate the journal accepts manuscripts that have been deposited in a preprint server. As a society journal (Emergency Nurses Association; ENA), we encourage society member/authors to take advantage of this opportunity. Our rationale for

encouraging this is that the article is often posted on the ENA webpage for rapid dissemination. Depositing it as a preprint can enable those who cite the article on the website to include digital object identifier (DOI) which comes from the preprint on many servers. As a result, the authors receive broader acknowledgement for the influence and reach of their work.

These citation metrics are especially important for society authors who also work in academia. While we have not observed editorial or reviewer bias in relation to which papers are posted as preprints, the potential for bias remains a concern that must be monitored and managed if found. In our informal mentorship of potential authors and colleagues, we offer the following general guidance when considering posting a preprint (see Table 1).

Table 1. General Guidance When Considering Posting A Preprint

Question	Answer Leads to Advise Preprint	Answer Leads to Advise Caution or Against Preprint
Has the proposed work already undergone substantial, high level peer review (such as federal grantmaking agency review)?	Yes	No
Is the author or senior author well experienced in scientific publications (e.g. 10+ peer-reviewed publications, h-index of 10+)?	Yes	No
Is there a clearly justified need for rapid dissemination?	Yes	No
If you have a list of target journal(s), do they have a publicly accessible policy or statement that manuscripts deposited in a preprint server will be considered?	Yes	No

Does the author have any concerns there are areas of controversy, novel methods, or statements that may trigger major revisions or peer review requests that may change the meaning of the findings, discussion, or implications?

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No

Yes

Our time as peer reviewers is voluntary and our attention is a valuable, yet scarce resource. While we have had limited experience in reviewing preprints brought to our attention through social media, browsing in select preprint servers, or by the reference of colleagues, we have not found the process of “tagging” or offering preprint peer review to be equivalent to a journal’s peer review process. At present, the preprint comment process feels similar to providing brief comments on blogs or social media, or public comments on a government document. It is unclear if authors are obligated to incorporate the comments to improve their work. Conversely, the professional commitment to offer structured peer review in the traditional model establishes collaborative relationships with the editorial team of the journal, and comes with an inherent commitment to incorporate the review comments into editorial decisions and/or author revision. Thus, for nurse authors, preprint tagging may be a substantial drawback in the meaningful use of reviewers’ time compared to traditional peer review.

## PERSONAL EXAMPLES

As an example of the decision-making process, we’ll share our experience depositing a recent article as a preprint.<sup>6,7</sup> In this paper, we examined the relationship of nurse-initiated protocols in emergency nursing triage associated with differences in state scope of practice and regulatory environments. Because New York State has the most prohibitive language for nurse-initiated protocols, we analyzed New York responses separately. In a traditional academic journal, the editorial and author teams are both pressured to minimize delays from initial

submission to decision and final publication. This manuscript had already undergone peer review and substantial revisions when it was rejected by an academic journal, with an invitation to resubmit. In the rejection letter, the editor relayed the decision was due to how they expected the revisions would take a substantial amount of time for us, the authors, to complete. The rejection decision also meant that we were under no obligation to resubmit to that journal and could revise and submit elsewhere at will. Due to other projects and priorities for both of us, the work no longer seemed timely and other work took precedence.

Then COVID-19 spread across the globe. State of emergency executive orders from the New York governor expanded scope of practice and licensing requirements for clinicians in order to facilitate rapid pandemic response. Unlike any other time in our careers, emergency nursing triage was crucial to the disaster response on a state, national, and global level. Suddenly, the pandemic surge pressures specifically to emergency departments in New York State made it critical to disseminate the work immediately and in a format where elected policymakers had ready access to it, a recognized and vital aspect of preprint publications.<sup>4,5</sup> We decided to prioritize revising the work, depositing the paper in a preprint server, and subsequently submitting the work to an academic journal within days of depositing the preprint. Considering the advice in Table 1, the manuscript had already undergone substantial peer review and revision at an academic journal and immediate dissemination was vital. The target journal did not have a clear policy on preprint acceptance. We submitted the manuscript and explained the situation in our cover letter, anticipating the worst-case scenario of having to select a different journal—but ultimately, that did not happen.

We chose the medRxiv preprint server. While there are dozens of preprint servers to choose from, Watson<sup>8</sup> provided an overview of three preprint server options for nurse authors: medRxiv, Authorea, and WikiJournal of Medicine. While our first

choice was the Social Science Research Network (SSRN) server, we realized that the way the nursing subjects and topics were categorized among eJournals and “First Look” options would make it difficult for readers to browse and find our manuscript. SSRN is a platform that has supported eJournals and various forms of online publishing for over 25 years. The drawback to this level of maturity is a complexity that is not intuitive to navigate. MedRxiv, on the other hand, was launched in 2019 and has a face page that requires only a single click to navigate to the nursing content. The platform includes links to automatically download the citation into a reference manager and the preprint is assigned a DOI. We posted the preprint in the “Nursing” folder but the work also was relevant to “Emergency Medicine” content. It was disappointing that an emergency nursing article would be segregated away from the work of our interdisciplinary colleagues.

To upload the manuscript, the corresponding author had to register at the site. With a few minor file uploads and seven screening questions, the process was rapid and user friendly. The preprint was publicly available in less than a week. While the preprint received over 1,000 abstract views and nearly 300 full text downloads/views in the first four months since posting, there was no feedback or tags from readers. We looked for tags or feedback before we finalized the last revision of our manuscript and had anticipated notifying the editor of tags and planned to incorporate this feedback into the “response to reviewers” file. It is noteworthy that there may be major differences between the preprint and the final, published paper after journal revisions. This is an expected part of the preprint process. Within six months of posting the preprint, the accepted manuscript was available as an e-publication ahead of print in the journal *Politics, Policy, and Nursing Practice*.<sup>6</sup> MedRxiv automatically updated the preprint to denote the work was now published and linked to the journal’s DOI.

Duoma et al<sup>9,10</sup> had a similarly positive experience posting a scoping review on medRxiv; this manuscript received media attention after the preprint posting. The manuscript was accepted for final publication in *Resuscitation* eight weeks later with minor revisions from the preprint. Alternately, Kolbuk et al.<sup>11</sup> piloted depositing a professional society committee position paper in SSRN and directed members to the platform to provide feedback. Kolbuk et al.<sup>11</sup> did not use medRxiv because the preprint server author guidelines did not specifically welcome position papers.

## CONCLUSION

Overall, our preprint experiences have led us to enthusiastically recommend preprint consideration to our colleagues. We advocate for preprint servers to desegregate medical and nursing papers, and group preprints within an interdisciplinary specialty, instead of discipline, to foster ongoing publication innovation.

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## ABOUT THE AUTHORS

Jessica Castner, PhD, RN-BC, FAEN, FAAN, is the Editor in Chief of the *Journal of Emergency Nursing*, President and Principal Investigator/Consultant at Castner Incorporated. Dr. Castner earned her PhD in Nursing from the University of

Wisconsin-Milwaukee, Master's in Public Health Nursing from the University of Missouri-Columbia, and Bachelor's in Nursing from Marquette University. Dr. Castner's research focuses on generating new knowledge and data-driven approaches for where people live, work, play, and learn. Dr. Castner's ORCID is 0000-0001-9889-3844, email is jcastner@castnerincorp.com, and Twitter handle is @DrCastner.

Taryn Amberson, MPH, RN, CEN, has been an emergency nurse for 7 years and is an Editor Fellow with the *Journal of Emergency Nursing*. She has practiced emergency nursing in Arizona, Washington, and California. She earned both her Bachelors of Science in Nursing and Master of Public Health from Grand Canyon University in Arizona. Taryn Amberson's ORCID is 0000-0001-7088-2545, and email is amberson.taryn@gmail.com and Twitter handle is @AmbersonTaryn.

Gordon Lee Gillespie, PhD, DNP, FAEN, FAAN is Professor and Associate Dean for Research at the University of Cincinnati College of Nursing. Dr. Gillespie earned his PhD from the University of Cincinnati and DNP from Vanderbilt University. Dr. Gillespie's research focused on workplace violence against healthcare workers enacted by patients, visitors, and coworkers. His ORCID is 0000-0002-0231-1123, email is gordon.gillespie@uc.edu, and Twitter handle is @glgillespie2.

Matthew John Douma, MN, BScN, is Adjunct Assistant Professor of Critical Care Medicine at the University of Alberta. Mr Douma is also a Clinical Nurse Educator at the Royal Alexandra Hospital in Edmonton, Alberta, Canada. Mr. Douma is a resuscitation scientist focused on improving outcomes from sudden cardiac arrest, for patients and their families. His ORCID is 0000-0002-8737-6478, email is douma@ualberta.ca, and Twitter handle is @matthewjdouma.

## **CONFLICT OF INTEREST**

Jessica Castner is the sole owner and principal of Castner Incorporated. The remaining authors report no conflicts of interest.

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