



Preprints and Peer Review

Feedback from the US International Society of Medical
Publication Professionals (ISMPP) meeting 2018

Presented at a MedComms Networking
event

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<http://www.medcommsnetworking.com>



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Peer review



- Academics working in similar fields independently assess articles and provide constructive feedback.
- Crucial to ensure that academic research published in journals is accurate, balanced and complete.
- Academics give their time to peer review papers because they have an interest in the field and wish to ensure that accurate information is published.
- Finding reviewers able to provide good reviews in a timely manner is increasingly difficult.
- Incentives, reviewer credit and reviewer training can all help the process.

Models of peer review



- Double blind peer review

Pros: unbiased, reviewers can speak freely, reviewer and author protected from criticism

Cons: no accountability, anonymity is not guaranteed, authors identity may help inform decision

- Single blind peer review

Pros: reviewer can use knowledge of authors previous work to inform decision

Cons: knowledge of author may reduce scrutiny, discrimination more likely, potentially unfair



- Open peer review

Pros: encourages accountability, civility and quality, increases transparency and encourages constructive reviews; reviewers given clear credit for their part in improving papers

Cons: reviewers may feel that they cannot speak freely, harder to get reviewers to agree to review, reviewers may take longer to submit

- Collaborative peer review

Pros: reviewers must reach a consensus reducing the occurrence of conflicting comments; encourages scholarly debate

Cons: time-consuming and difficult to manage, lose benefit of independent evaluations, group think



- Post-publication peer review

Pros: encourages open discussion and debate, allows experts to comment even when not invited to peer review, opportunity for papers to be corrected or improved

Cons: risk of publishing inaccurate information, reviewers may feel that they cannot speak openly, requires curation

- Patient involvement in peer review

Pros: ensures research is acceptable and relevant to patients

Cons: time consuming, hard to source reviewers, not well tested



- Results-free peer review

Pros: reduces selection bias towards publishing positive results

Cons: time consuming, only relevant to sound science journals

- Transferable peer review

Pros: provides an alternative journal option, speeds up process, keeps research with the publisher, reduces work for reviewers

Cons: can be frustrating for author if paper is rejected again after transfer, reviewer cannot comment on suitability for new journal

Pre-prints



“In academic publishing, a preprint is a version of a scholarly or scientific paper that precedes publication in a peer-reviewed scholarly or scientific journal”

bioRxiv

- Established in November 2013, hosted by the Cold Spring Harbor (CSH) Laboratory
- Papers are not peer-reviewed, but readers may offer comments on the preprint
- Papers given a DOI, hosted on google scholar and can be cited
- Papers can be revised after submission: 29% are revised, 60% are published in journals after 2 years

medRxiv- coming soon

- Founders Harlan Krunholz and Joe Ross (Yale) and John Inglis and Richard Sver (CSH Laboratory)
- Advisory board of clinicians, editors and others





Benefits of medical pre-prints

- Acceleration of research
- Can be posted ahead of meetings so speakers have something to refer back to
- Encourage and improve collaboration
- Increased transparency
- Make less publishable outputs available
- Increase availability of clinical trials



Concerns raised at ISMPP

- Risk of harm to the public by distributing information that has not been peer reviewed and could be incorrect
- Manipulation of servers for commercial interest
- Undermining clinicaltrials.gov
- Journals potentially not considering articles hosted on preprint servers
- Flooding of literature with incorrect or biased information
- Limited curation
- Concerns that MedRxiv have not consulted pharma
- Potentially a compliance problem, risk of off-label promotion

MedRxiv response



- Disclaimers present on server emphasising the lack of peer review
- Screening of all content by qualified professionals
- Screening criteria will include:
 - Authors must have academic/professional affiliations
 - Authors must have ORCIDs
 - Manuscripts must include conflicts of interest statements
 - Clinical trial registration needed
 - No reports that put the health of the public at risk
 - No opinion pieces, editorials, hypotheses or reviews
 - 'An information hub that co-exists with and complements journals'



Conclusions

- Peer review is still viewed as the gold standard of accuracy but new models are emerging and becoming more popular
- Pre-prints for medical publications are coming- opinion is split on whether this will be a positive or a negative for medical research
- Further reading:

<http://ismpp-newsletter.com/2018/03/14/whats-new-in-peer-review/>

<https://authorservices.taylorandfrancis.com/what-to-expect-during-peer-review/>

<https://www.biorxiv.org/about-biorxiv>





Thank you

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Feel free to contact me with any queries.