Preprints and Peer Review
Feedback from the US International Society of Medical Publication Professionals (ISMPP) meeting 2018

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http://www.medcommsnetworking.com
Mary Yianni
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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 Krnholz 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:
  o Authors must have academic/professional affiliations
  o Authors must have ORCIDs
  o Manuscripts must include conflicts of interest statements
  o Clinical trial registration needed
  o No reports that put the health of the public at risk
  o No opinion pieces, editorials, hypotheses or reviews
  o ‘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://authorervices.taylorandfrancis.com/what-to-expect-during-peer-review/
  https://www.biorxiv.org/about-biorxiv
Thank you

Mary Yianni
Mary.Yianni@informa.com

+44 (0) 20 701 77783

Feel free to contact me with any queries.