Objectives of peer review

- To provide advice to journal editors on the quality, relevance, and originality of papers being considered for publication
- To improve the quality of published papers

3 types of journals

- Journals with full-time in-house editors and paid associate editors
- Journals with part-time editor(s) and a strong board of associate editors (non-paid)
- Journals with part-time editor only

3 key judgments about a paper

- Is it valid?
- Is it important?
- Is it new?
4 characteristics of peer reviewers

- Thorough
- Knowledgeable
- Timely
- Curteous

2 things to remember when preparing a review

- It is not your paper
- It is not your journal

Preparing a thorough review (I) – Be systematic

- Follow the journal instructions
- Use a standard checklist
  - CONSORT – Randomized clinical trial
  - STROBE – Observational studies
  - QUOROM – Meta-analysis of clinical trials
  - MOOSE – Meta-analysis of observational studies
  - STARD – Report of a diagnostic test
- Review the contents of all the sections of the manuscript

Preparing a thorough review (II) – Contents of a manuscript

- Title page
- Abstract
- Introduction
- Methods
- Results
- Discussion
- Acknowledgements
- References
- Tables
- Figures
- Appendices

Preparing a thorough review (III) – Conclusions

- Always check the conclusions at the end of the Abstract and the Discussion to check that they are supported by the data presented

Preparing a thorough review (IV) – Some tips

- Divide your comments into general and specific comments
  - Number and label your comments
- Start with a paragraph summarizing the study and the conclusions
- Describe the problems of the manuscript but do not give specific instructions to the authors (e.g., rewrite their text or tell the authors what statistical technique to use)
- Do not write more than 2 pages (aim for 1 page)
Preparing a knowledgeable review

- Decline reviewing papers that are too far away from your expertise
- Perform a search to check the originality and novelty of the study
- If you are preparing a methodological review, make sure that you are familiar with the field

Preparing a timely review

- Protect enough time to do a good job
  - At least 4 h, but be prepared to devote 8 – 12 h
- Meet the deadlines
- Organize the work to minimize your time burden

Preparing a courteous review

- Be as objective as possible
  - Review the work, not the person
- Do not use offensive or demeaning language
- Maintain high ethical standards
  - Report your conflicts of interest to the editors
  - Do not take advantage of privileged information
  - Maintain the confidentiality of all editorial correspondence
  - Do not contact the authors
- Admit your limitations

In case of doubt ...

- Contact the editor

Open vs. closed peer review

Arguments for open reviewing:
- Open reviewing helps the reviewers maintain an appropriate balance between their judgemental role and their role in helping the authors
- The credentials of the reviewers will add credibility to their comments
- Open reviewing makes the reviewers more accountable
- Open reviewing should eliminate the intolerable abuses of the system
- Open reviewing may help resolve problems in confidential areas of research
- In a respectable scientific community there seems to be little justification for secrecy
- Open reviewing will render the reviewing process less disagreeable and more profitable
- New technology may render open reviewing a necessity

Arguments against open reviewing:
- Junior reviewers’ fear of rejection by established authors
- Creation of an “old boy” network favouring established scientists
- Creation of resentment and annoyance
- Open reviewing will cause a higher acceptance rate
- Open reviewing would cause more work and problems for the editors
- One should not change a system that generally works

The future of peer review

RICHARD SMITH

Currently peer review is thought to be slow, expensive, profitless of academic esteem, highly unpredictable, causing much anxiety among junior scientists, often unnecessary, grossly defective, and almost useless for deflecting fraud. One cannot predict the future but at present there do not seem to be serious alternatives to peer review. Peer review has been structurally static since the nineteenth century mainly through lack of competition. However, advances such as electronic publishing and continuous quality improvement may help to improve the quality of peer review and evolve new systems.