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Peer reviewing quantitative manuscripts

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Objectives of Workshop

- ▶ Overview of peer-review process at CJPH
 - ▶ Elements of a good peer review for quantitative manuscripts
 - ▶ Group discussion of a real peer-review
 - ▶ Groups present primary issues identified from their peer review
 - ▶ Wrap-up
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Article in the Guardian May 29, 2017: A monument was constructed in England to Commemorate Peer Review



Why should you do peer review for journals?

- ▶ Helps to ensure quality research is published!
 - ▶ Allows you to see new research before it is published....
Although it is confidential
 - ▶ Prestige: you are being asked because you are considered an expert in the field
 - ▶ Responsibility: reciprocation for the fact that others are reviewing your papers
 - ▶ Career advancement: expectation in academia, and seen as a contribution
 - ▶ Contribution to science: the problem of predatory journals
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What happens when an article is submitted to CJPH?

- ▶ The Editor-in-Chief reviews the abstract (and other parts of the manuscript if necessary) and decides whether it should be sent for peer review or not
 - About 25% of papers are sent for peer review
 - ▶ Manuscript is assigned to Senior Editor
 - ▶ Senior editor reviews manuscript and selects potential reviewers
 - Potential reviewers are selected based on their expertise and the manuscript topic
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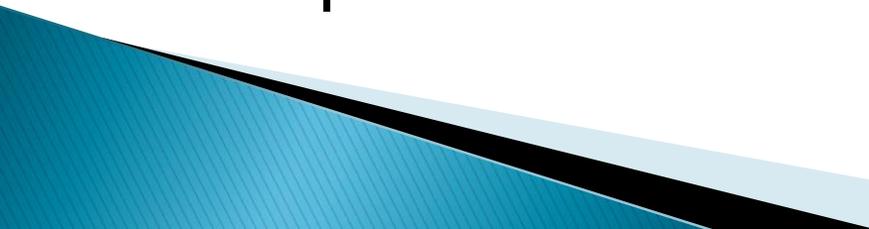
Selecting Reviewers

- ▶ Potential reviewers are selected from:
 - Database of reviewers with research interests/expertise noted
 - Colleagues with expertise in area
 - PubMed– to see who is publishing in the area
 - ▶ Two reviewers required for every manuscript
 - On average, about 5 review requests sent for every reviewer who agrees to review
 - ▶ Double-blind review:
 - Reviewer does not know who the author is
 - Author does not know who the reviewer is
- 

When the reviews come in

- ▶ Based on the peer reviews, the senior editor decides whether to recommend:
 - Accept manuscript (rarely the case without revisions)
 - Revise manuscript
 - Decline submission
- ▶ Revise Manuscript:
 - Reviews go to authors (along with any comments from editor)
 - Authors respond to reviewer comments and revised manuscript gets resubmitted, and process is repeated

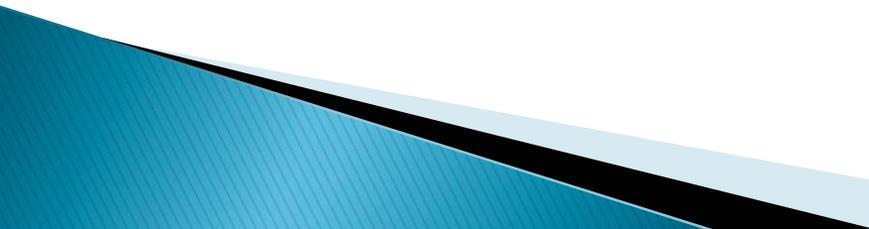
When you are asked to review an article, you need to ask yourself...

- ▶ Do you have the necessary expertise?
 - ▶ Do you have a potential conflict of interest?
 - Usually you will not if double-blind review is used
 - ▶ Can you submit the review within the requested deadline?
 - If not, requests for extensions are generally granted
 - ▶ Respond to invitation (accept or decline)
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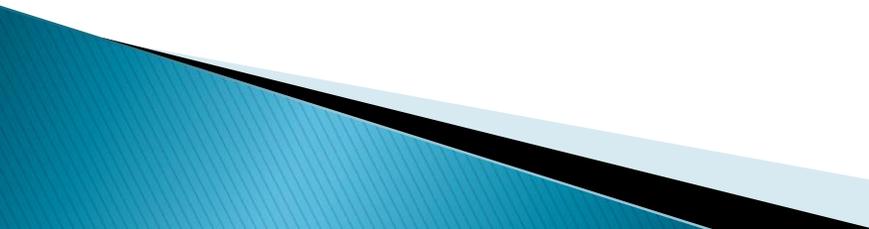
CJPH review form

- ▶ Questions pertain to all aspects of the manuscript (e.g., “Is the research question or hypothesis clearly stated?”)
 - ▶ For each question, you are asked to check:
 - Yes
 - Improvements required
 - No
 - ▶ Reviewers are then asked to provide detailed comments on the paper to support the answers to questions
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Peer Review: General comments

- ▶ Provide a short summary of the manuscript
 - ▶ Include comments about strengths and weaknesses
 - ▶ Does the question have merit? Will it add important information to what is already known on the topic?
 - ▶ Determine whether revisions (within reason) can improve the manuscript and make it worthy of publication. If not, it probably is not ready for publication at this time.
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A good review should be:

- ▶ Focused:
 - Key questions should be asked in every review (e.g., Are the results novel? Are the findings scientifically valid? Is the paper written in a way that is easy to follow?)
 - ▶ Constructive:
 - Identify problems, with clear indication of what the problem is, and possible solution
 - ▶ Structured:
 - Major/minor points, list point by point so it is easy for authors to respond
 - ▶ Precise
 - Helpful to use line and page numbers to give specific instances of where there are errors or where improvements are needed
 - ▶ Polite and Professional
 - OK to be critical, but do so in a balanced and polite way
- 

Peer Review: Specific questions to think about

▶ Title and Abstract:

- Does the title accurately reflect the manuscript?
- Does the abstract reflect the major findings of the manuscript?
- Can the abstract stand alone? (Many readers will only look at an abstract)
- Is the conclusion supported by the data presented? Is the conclusion overstated?

▶ Introduction

- Does the introduction provide a brief background of the recent literature on the topic?
 - Does the introduction highlight the gaps/conflicts in what is known about the topic... and demonstrate the need for the research under review?
 - Does the introduction end with a statement of the research objective/aim?
- 

Peer Review: Specific questions to think about

▶ Methods

- Are the methods appropriate for the question and are important details provided?
- Can the data that were collected answer the question?
- Are the exposure measures and outcomes adequately defined?
- Are the statistical analyses appropriate for the data/study design?
- Could the research be replicated by other researchers (e.g., is enough detail provided)?

▶ Ethical considerations

- Did the researchers receive REB approval? If not necessary, did researchers state this?
- Was consent obtained (if required)?
- Are research participants possibly identifiable?

Peer Review: Specific questions to think about

▶ Results

- Are the numbers of research participants clearly presented?
- Do the results stated in the text match what is in the Tables/Figures?
- Do the authors report on missing data and how it was handled?

▶ Discussion and Conclusions

- Are the results compared with previous research?
 - Are the public health/clinical implications noted?
 - Are limitations noted?
 - Are the conclusions supported by the data?
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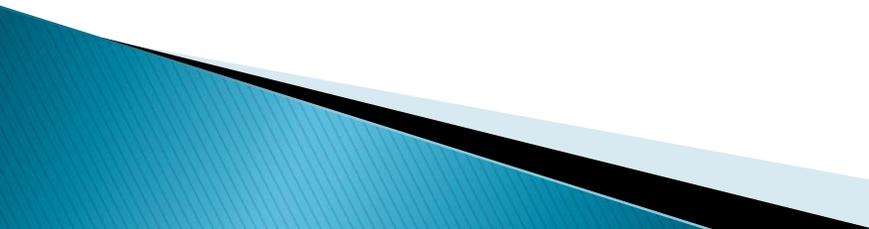
Common problem with peer review is lack of precision

Constructive comment:

“The authors stated that the dropout rate was 5%. However, the Figure shows 145 people started the smoking cessation program, but 104 completed it, suggesting that the dropout rate was actually 28%.”

Weak comment:

“The results are poorly presented.”



Evaluating the manuscript readability

- ▶ Is the manuscript readable?
- ▶ Do sentences make sense, and are they easy to follow?
- ▶ Spelling/grammar problems?

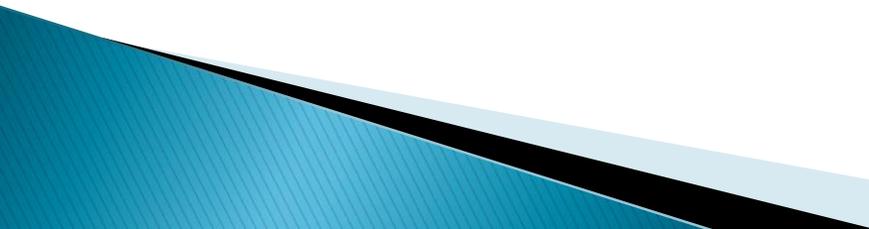


The reviewer does not need to fix everything, but can note that attention needs to be paid to these issues.

Peer Review: What to do when the manuscript is excellent

- ▶ It is often more difficult to review an excellent paper than it is to review a weak paper
 - ▶ Even though you don't have major criticisms, it is important to say what makes the manuscript strong
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Peer Review: General Tips

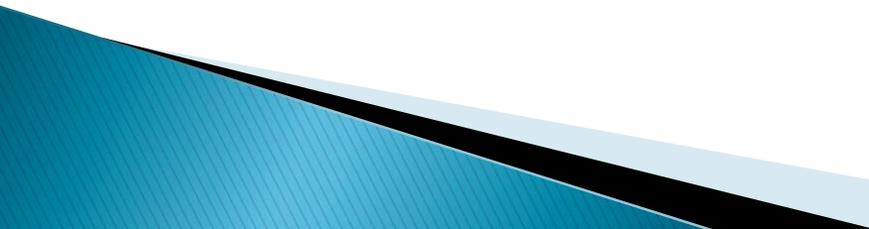
- ▶ Do not include comments to the author about whether the manuscript should be published
 - ▶ What you read is confidential until it is published
 - ▶ Your comments are being sent to your peers—you want to help them improve their manuscript, so comments should be constructive (and polite and professional)
 - ▶ Give reasons to support your comments
- 

Peer Review:

Confidential note to editor

- ▶ You can let the editor know if you have serious concerns about some aspect of the manuscript
 - Fatal flaw
 - Issue with ethics
 - Suspected plagiarism

Your task

- ▶ You have been invited to review a manuscript submitted to CJPH: “Correlates of accelerometer-assessed physical activity and sedentary time among adults with type 2 diabetes”
 - You will be given a copy of this manuscript
 - The authors have agreed that we can use it for demonstration purposes (revised manuscript has been published)
 - We will collect the manuscript at the end of the workshop
 - ▶ Assume you have the appropriate expertise and have accepted the assignment
 - ▶ Groups will discuss the review based on sections
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20 Minutes: Read the whole paper paying closer attention to the section your group is responsible for.

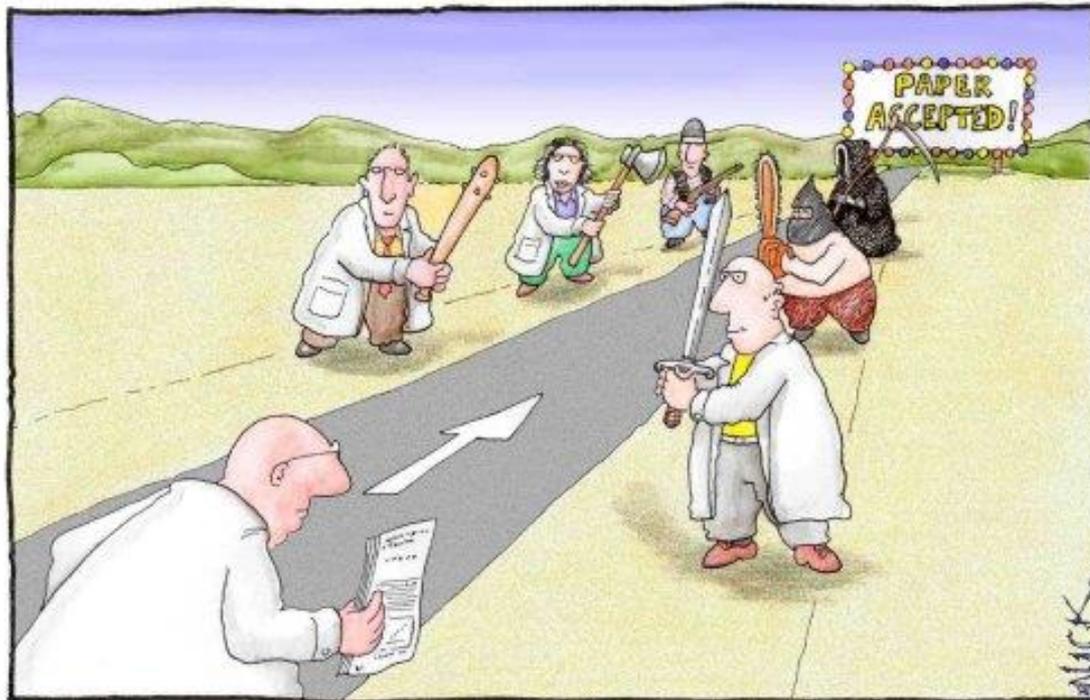
20 Minutes: Group discussion

- Strengths and weaknesses of the review (with regard to your section)?
- What did the reviewer miss?

20 Minutes: Plenary

- Questions and remarks
- 

Questions?



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'