What is BioMed Central doing to improve published research?

Daniel Shanahan and Stephanie Harriman
Monday 1 June 2015
Declaration of interests

Daniel Shanahan and Stephanie Harriman are both employees of BioMed Central Ltd.

Stephanie Harriman is co-Editor-in-Chief of Research Integrity and Peer Review.

Daniel Shanahan receives a bonus based partly on the financial performance of BioMed Central. All BioMed Central journals publish all articles open access, supported by article-processing charges.

The opinions expressed in this presentation and on the following slides are solely those of the presenters and not necessarily those of their BioMed Central.
A “crisis” of reproducibility?

• The current over-emphasis on results has led to many problems in the literature:
  • Publication bias
  • Selective reporting of outcomes and analyses
  • Significance chasing
  • HARKing (Hypothesising After the Results and Known)
  • Lack of data sharing and replication
  • Low statistical power
To be sure of hitting the target...
Changing our viewpoint

• In order to improve on this, we need to change our viewpoint:

• The value in science is in the QUESTION it asks and the PROCESSES it uses, not in the OUTCOME observed.

• A research article only has value if:
  • the hypothesis is relevant
  • the methods are valid
  • the findings are published in a usable form
The correct focus

• We are moving towards prospectively evaluating research:
  • Trial registration
  • Study protocols (and in-principle acceptance)
    Full detail methodology, published prospectively for both randomized controlled trials, and systematic reviews (before recruitment completes for RCTs; before data extraction for systematic reviews).
  • Updates
    The ability to update protocol articles to reflect any changes that occur before unblinding of outcome data.
  • Statistical analysis plans
The QUESTION and PROCESSES

- Ensuring a complete and transparent report of what was done and how:
- Implementation of (EQUATOR) reporting guidelines:
  - Both on submission/publication
  - As a part of the peer review process
- Involved in the development of reporting guidelines
  - EQUATOR ones (CONSORT etc)
  - In-house guidelines
- Peer review
  - Reviewer reports and identities published on acceptance of the article
  - Involving all relevant stakeholders in the review process, including patients
The OUTCOME

• Ensuring that all valid data is published regardless of the outcome or significance of findings
• Acceptance of null and non-confirmatory results in all journals
• Also encourage submission of important article types that are often not published, such as pilot and feasibility studies
Bringing it all together

• Readers need access to all the information if they are to reliably evaluate bias and selective reporting in a research study

• Threaded Publications
Our responsibility to the literature doesn’t end with publication
Publication ethics

• Vital to maintain integrity of the scientific record
• Readers must be able to trust journal content

• Authors
• Reviewers
• Editors
• Publishers
• Institutions

• Pre- and post-publication
Committee on Publication Ethics

- All BioMed Central journals members
- Code of conduct
- Resources
- Cases
- Forums, seminars
Improving the published research

**Post-publication**

- Responsibility to correct the literature
  - Retractions
  - Corrections
  - Expressions of concern

- Retractions: transparent mechanism to correct the literature and ensure integrity
  - Not punish authors
  - Clearly and permanently linked to original article
  - COPE retraction guidelines
Improving the published research

Working together

COPE statement on inappropriate manipulation of peer review processes

The Committee on Publication Ethics (COPE) has become aware of systematic, inappropriate attempts to manipulate the peer review processes of several journals across different publishers. These manipulations appear to have been orchestrated by a number of third party agencies offering services to authors. This statement is issued on behalf of COPE after consultation with a variety of publishers to underscore the seriousness with which we take these issues and our determination to address them.

While there are a number of well-established reputable agencies offering manuscript-preparation services to authors, investigations at several journals suggest that some agencies are selling services, ranging from authorship of pre-written manuscripts to providing fabricated contact details for peer reviewers during the submission process and then supplying reviews from these fabricated addresses. Some of these peer reviewer accounts have the names of seemingly real researchers but with email addresses that differ from those from their institutions or associated with their previous publications, others appear to be completely fictitious.

We are unclear how far authors of the submitted manuscripts are aware that the reviewer names and email addresses provided by these agencies are fraudulent. However, given the seriousness and potential scale of the investigation findings, we believe that the scientific integrity of manuscripts submitted via these agencies is significantly undermined. Publishers who already know they are affected will be publishing statements on their own websites and will be taking the following immediate actions.

- Articles that have been published solely on the basis of reviews from fabricated contacts will be retracted in line with COPE guidance and authors and institutions involved will be contacted.
- Publishers are examining their own databases for the presence of fabricated reviewer accounts and contact details and will be contacting the authors of papers for which those reviewers were suggested as well as the relevant institutions, even if the papers were not accepted.

Authors with any concerns about inappropriate agency involvement in suggesting peer reviewers or any other aspect of the manuscript preparation and submission process should contact the relevant journal.
Support and training - editors
Support and training - reviewers

A beginner’s guide to peer review: Part One

How do you make decisions about whether or not to peer review an article? And where do you start? We discuss the ins and outs in the first of a series of step-by-step guides for the novice peer reviewer.

Jigisha Patel  13 May 2015

Jigisha Patel  
Associate Editorial Director (Research Integrity) at BioMed Central

Jigisha earned her first degree in Medicine and her PhD on postprandial physiology from Queen Mary, University of London. As well as spending several years in hospital clinical practice and a year at the National Institutes of Health for her PhD, Jigisha has taught on the Professional Development course for medical students at University College London Medical School and human biology at the Open University.

Jigisha joined BioMed Central in 2007 and had editorial responsibility for over 30 medical journals in the BMC Series. Jigisha leads the Research Integrity Group, with overall responsibility for BioMed Central’s strategy, standards and expertise in publication ethics and in high-quality, rigorous peer review.
Summary

- We need to move away from considering serendipitous ‘good’ results to be synonymous with quality
- Full information on the hypothesis and methods for research needs to be evaluated prospectively, separate from questions of impact
- Our responsibility to the literature doesn’t end with publication
- Publication ethics is relevant to all – ensures integrity of literature
- Responsibility to literature continues after publication
- Training and resources vital


Research Integrity and Peer Review

Research Integrity and Peer Review encompasses all aspects of integrity in research publication, including peer review, study reporting, and research and publication ethics. Particular consideration is given to submissions that address current controversies and limitations in the field and offer potential solutions.

- Peer review: Elizabeth (Liz) Wager
- Research reporting: Iveta Simera
- Research and publication ethics: Stephanie Harriman and Maria Kowalczuk

www.researchintegrityjournal.com