Journal Watch

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Data sharing is encouraged by institutions and journals: Authorship of "shared" papers should be clear

When researchers share data, the teams analysing them want to publish their results. How should authorship of publications be defined? Who are the authors – the researchers who collected and then shared the data and/or those who analysed the data? Conflicts among researchers are frequent when it comes to listing authors. The issue is important to researchers as they seek advancement, apply for grants, etc.

In the *New England Journal of Medicine,* Bierer et al propose that the persons who contributed to the generation of data should be named "data authors," with their names added to the byline. Data authors are responsible for the integrity of the data set but not responsible for the scientific or clinical conclusions. A manuscript could have distinct data authors and authors whose primary contribution has been to perform data analysis of an existing data set. Five situations have been identified to allocate credit for data sharing and tracing the date set; many questions are not yet answered. Authors and journal editors should try to implement these suggestions and then work to improve the classification.

Reference

Bierer BE, Crosas M, Pierce HH. Data authorship as an incentive to data sharing. N Engl J Med 2017; 376:1684–7.

The CLUE recommendations: Cooperation and Liaison between Universities and Editors: a preprint submitted for discussion

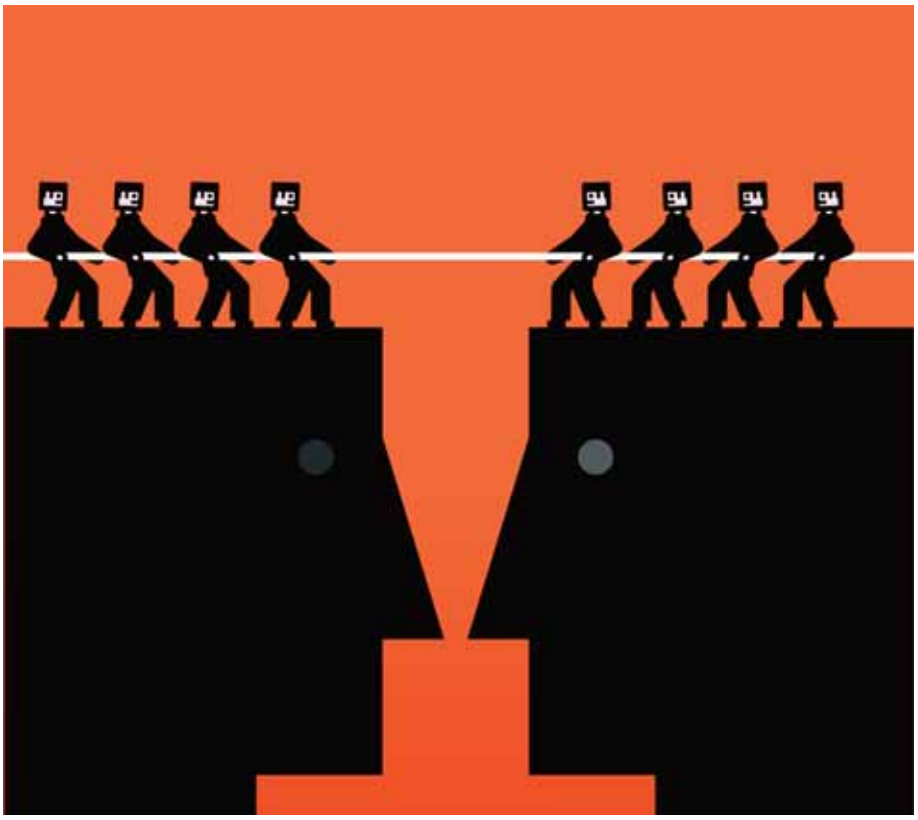
There is a need for guidelines proposing how to improve collaboration between universities and journal editors. A preprint with recommendations by 14 internationally prestigious authors was posted on May 19, 2017; it is open for comments from researchers, editors, and other interested parties. We should all consider participating in this open peer review. The guidelines were discussed at a workshop held at the World Conference on Research Integrity at the end of May 2017 in Amsterdam, but the allotted time did not permit all ideas to be discussed.

The authors of the preprint recommend the following:

- National registers of individuals or departments responsible for research integrity at institutions should be created;
- Institutions should develop mechanisms for assessing the validity of research reports that are independent from processes to determine whether individual researchers have committed misconduct;
- Essential research data and peer review records should be retained for at least 10 years;
- While journals should normally raise concerns with authors in the first instance, they also need criteria to determine when to contact the institution before, or at the same time as, alerting the authors in cases of suspected data fabrication or falsification to prevent the destruction of evidence;
- Anonymous or pseudonymous allegations made to journals or institutions should be judged on their merit and not dismissed automatically;
- Institutions should release relevant sections of reports of research trustworthiness or misconduct investigations to all journals that have published research that was the subject of the investigation.

Reference

Wager E, Kleinert S, Garfinkel M et al. Cooperation and liaison between universities and editors (CLUE): recommendations on best practice. BioRxiv May 2017 https://doi.org/10.1101/139170.



Conflict of interest and all aspect of medical sciences

A recent theme issue of *JAMA* is dedicated to the topic of conflicts of interest (COI) and includes 23 scholarly viewpoints, and two research reports.[1] I suggest consulting the table of contents and reading the three editorials, titled "The complex and multifaceted aspects of conflicts of interest", "Conflict of interest and medical journals", and "Reconsidering physician-pharmaceutical industry relationships". This issue covers COIs from numerous perspectives: academic medical centres, health care professionals, industries, journal editors and reviewers, patients, and public. Disclosing COI is critical if physicians are to retain the trusts that patients have placed in the profession. Many institutions and universities have established policies to report COIs. All COI aspects are presented: opinion leaders, medical school, industry, continuing medical education, and guidelines development.

The issue has two interesting original contributions with the following conclusions:

- *According to data from 2015 Open Payments reports, 48% of US physicians were reported to have received a total of $2.4 billion in industry-related payments, primarily general payments, with a higher likelihood and higher value of payments to physicians in surgical vs primary care specialties and to male vs female physicians.*[2]
- *Implementation of policies at US academic medical centres that restricted pharmaceutical representative sales visits to physicians ("detailing") between 2006 and 2012 was associated with modest but significant reductions in prescribing of detailed drugs across 6 of 8 major drug classes; however, changes were not seen in all academic medical centres that enacted policies.*[3]

You can listen to an audio summary of the issue by *JAMA* Editor-in-Chief Howard Bauchner, MD, at http://jamanetwork.com/learning/audio-player/14374325.

References

1. Conflict of interest [theme issue]. JAMA 2017;317.
2. Tringale KR, Marshall D, Mackey TK et al. Types and distribution of payments from industry to physicians in 2015. JAMA. 2017;317(17):1774–1784.
3. Larkin I, Ang D, Steinhart J et al. Association between academic medical center pharmaceutical detailing policies and physician prescribing. JAMA. 2017;317:1785–95.

Communicating science effectively to the public is a complex task in a competitive environment

The Academy of Medical Sciences (UK) published a report[1] that confirmed a problem as stated by Freer and Godlee: "Only one in three members of the public trusts the results of research… More than four-fifths of general practitioners and two-thirds of British adults disbelieved the results of trials funded by the drug industry".[2] Is it limited to the UK? I think that we can generalise this observation. Could it be worse in other countries? The report has 12 recommendations that are reprinted in a *BMJ* editorial:

1. Involve patients, carers, and the public in research.
2. Address gaps in training in research methods and statistics.
3. Enhance the recognition of robust research findings.
4. Ensure best use is made of new sources of evidence.
5. Publish research findings.
6. Develop frameworks for declaring and managing interests.
7. Develop best practice guidelines for academia-industry relationships.
8. Improve the content of patient information leaflets.
9. NHS Choices should be a central repository of information on the benefits and harms of medicines.
10. Improve the reporting of scientific evidence in the media.
11. Support joint decision making between healthcare professionals and patients.
12. Continue dialogue and engagement with patients and the public.

The recommendations are detailed in 7 pages of the 116-page report. The media debates about the use of statins to prevent cardiovascular disease, Tamiflu to treat flu, and the HPV vaccine to prevent cervical cancer are used as case reports illustrating the need to better communicate science to the public. Recommendation 10 confirms that we must better understand the reporting of the scientific process.

These observations are probably similar for most of the scientific debates such as climate, food, genetically modified organisms, etc. Communicating science effectively is a complex task and is not obvious in a competitive environment. A report from the National Academies of Sciences, Engineering, and Medicine (USA) showed that we need more research to understand how to better communicate science to the public.[3] The scientists tend to deliver evidence when the public has personal values and beliefs. Scientific findings and evidence can conflict with core human values, religious beliefs, interests, and long-held views. Emerging science raises ethical or political questions that science itself cannot resolve.

References

1. Academy of Medical Sciences. Enhancing the use of scientific evidence to judge the potential benefits and harms of medicines. 2017. https://acmedsci.ac.uk/file-download/44970096.
2. Freer J, Godlee F. Judging the benefits and harms of medicine. Only thrustworthy evidence will earn the public's trust. BMJ 2017;357:j3129.
3. National Academies of Sciences, Engineering, and Medicine. Communicating science fffectively: A research agenda. Washington, DC: The National Academies Press. 2017. doi: 10.17226/23674.

Transparency in authors' contributions and responsibilities

The president of the National Academy of Sciences, Marcia McNutt (former editor of *Science* journals) convened a group from leading journals and scientific organisations at a retreat in February 2017. The objective was to discuss how to promote standards that would increase transparency in author contributions to research papers. The outcome was a preprint that was posted online on May 20, 2017; commentaries are welcome.

They proposed to adapt the International Committee of Medical Journal Editors (ICMJE) statement as follows:

> *Each author is expected to have made substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data; or the creation of new software used in the work; or have drafted the work or substantively revised it; AND has approved the submitted version (and any substantially modified version that involves the author's contribution to the study); AND agrees to be personally accountable for the author's own contributions and for ensuring that questions related to the accuracy or integrity of any part of the work, even ones in which the author was not personally involved, are appropriately investigated, resolved, and documented in the literature.*

There are numerous proposals that merit attention. They recommended that journals adopt common and transparent standards for authorship (see above), outline responsibilities for corresponding authors, adopt the CRediT (Contributor Roles Taxonomy) methodology for attributing contributions, include this information in article metadata, and encourage authors to use the digital persistent identifier ORCID. Research institutions should have regular open conversations on authorship criteria and ethics. Funding agencies should adopt ORCID and accept CRediT. Scientific societies should further promote authorship transparency by implementing these recommendations through their meetings and publications programs.

CRediT (http://docs.casrai.org/CRediT) has been implemented by a few journals; it defines the following contribution roles performed in the work leading to a published research article: conceptualisation, methodology, software, validation, formal analysis, investigation, resources, data curation, writing/original draft preparation, writing/review and editing, visualisation, supervision, project administration, and funding acquisition.

Reference

McNutt M, Bradford M, Drazen J et al. Transparency in authors' contribution and responsibilities to promote integrity in scientific publication. BioRxiv, May 20, 2017 doi: http://dx.doi.org/10.1101/140228.