



Revista Colombiana de Anestesiología

Colombian Journal of Anesthesiology

www.revcolanest.com.co



Editorial

Conflicts of interest in medical journals

Conflictos de Interés en Revistas Médicas

Ravi P. Mahajan*

Professor of Anaesthesia and Intensive Care, University of Nottingham, UK

Medical journals are extremely important source of information for medical professionals, patients and policy makers. It is, therefore, crucial that any information, and publications, in these journals are reliable and trustworthy. It is now well understood that conflicts of interest (COI) can damage the credibility of a publication and/or a journal, and have far reaching consequences of undermining the trust of the readers in medical publications. In this editorial, I will aim to address some important issues related to the COI of medical journals. In particular, I will deal with the definition and types of COI, and the recommended practices of how these should be managed.

In medical publishing, all the parties concerned with the publication of a particular article can have COI. These include researchers, authors, reviewers, members of editorial board, editorial staff and editors. In addition, the journal, the sources of funding for the journal, and the professional society or organization to which the journal belongs may all have COI. The Institute of Medicine has defined COI as “a set of circumstances that creates a risk that professional judgement or actions regarding a primary interest will be unduly influenced by a secondary interest”.¹ For a typical medical journal, the primary interest would be “promoting and protecting the integrity of research, the welfare of patients, and the quality of medical education”. However, the secondary interests which could conflict with, and/or corrupt, the primary interest may be financial or non-financial. The financial COI have received attention in the recent years. These are relatively easy to trace and quantify. On the hand, the non-financial COI have received relatively lesser attention; compared with financial

COI, the non-financial COI are more ambiguous, and difficult to pin point and quantify.

Financial COI

The authors may have financial arrangements or ties with commercial companies (drug manufacturers, equipment manufacturers). These companies may also be the funders of the research. The financial COI may present in many different forms at many different levels. The examples of such ties include the commercial company sponsoring and funding research, the authors holding shares or stocks in the patent rights and/or profits of the company, being paid for consultancies, or being employed, directly or indirectly, by the company. The authors may be employed by the institutions or organizations which rely heavily on the funding from the company.

The other source of financial COI can be when the author is likely to be financially benefited from the effect which the publication may have on his/her professional practice.

The source of funding of the journal is also important in this regard as it may have direct or indirect influence on the editorial strategy or the policies of the journal.

Non-financial COI

The non-financial COI could be equally corrupting as the financial COI. Some example of the sources of non-financial COI are given below.

* Corresponding author at: University Division of Anaesthesia and Intensive Care, Queen's Medical Centre, Nottingham NG7 2UH, UK. Tel.: +44 7713323535.

E-mail address: ravi.mahajan@nottingham.ac.uk

Academic bias/competition

Academic bias or competition may affect the behaviour of the reviewers, members of editorial board and/or editors. The bias could be related to a particular technique (invasive vs non-invasive monitoring), research methodology (qualitative vs quantitative research) or research outcome (positive vs negative study). Also, there may exist competition among individuals for academic promotion or academic esteem.

Personal relationships

The examples for this kind of COI include an author's spouse or relative being employed by a commercial company likely to be benefited from the publication, and/or a member of family holding patent rights or shares in the company.

Political or religious beliefs

The authors, reviewers or editors could have their behaviour and attitude to a particular subject and/or outcome of research influenced by the beliefs that they hold. The examples where these conflicts can arise include research or publication in the subject area of abortion, immunization, end-of-life management, and public funding for treatment of smoking or obesity related disorders.

Institutional affiliations

The strategies of the organizations or institutions which award research grants can have a strong influence on the type of research which the authors may pursue. The employers of the authors may hold the patent rights of the product on which particular research is being considered or published. The employers of the authors, or journals themselves, may have strategies and preferences for a particular research type or topic (liaisons or negative attitude towards tobacco companies). Also, the drug manufacturers and/or the journals may stand to benefit from the revenue generated from publication of a particular article. As for example, a publication on effectiveness of a particular drug could financially benefit the pharmaceutical manufacturer, and may also lead to more reprint requests generating funds for the journal.

Consequences of COI

There have been a number of examples where the authors, who had financial association with a company, reported 'no' or fewer side effects of the product of that company.² Research has also shown a strong association between the authors' published position on the safety of a particular drug (calcium channel blockers) and their financial relationship with the drug manufacturers.³ It has been shown that the authors of review articles on the effects of passive smoking were likely to reach different conclusions depending upon whether or not they had financial ties with the tobacco companies.⁴

There is growing literature which shows that different types of COI, financial or non-financial, can introduce bias in collection, analysis or reporting of data. The COI may hide or

distort truth. The corruption of the primary interest of medical publishing with the secondary interests (COI), therefore, can lead to public harm by manipulation of the truth. As for example, public harm may result if the authors chose not to publish the side effects of a particular drug, or if the positive effects of that particular drug are exaggerated in the publication.

Managing COI

In modern times, when the funding and resources for medical research are limited, partnership with industry is a reality. In some countries and organizations, this partnership is an active ingredient of their strategy to increase research output. Also, the journals require funding streams to sustain their quality and output; often these funding streams come from commercial companies in the form of revenues generated by advertising, reprint orders, sponsored issues, special themed issues, etc. With these realities which we face, one can choose to either ignore COI or manage them. Ignoring COI would be detrimental to public trust and damaging to the whole area of medical publishing. Hence, managing COI at all levels – funders, commercial companies, journals, editors and researchers – is the only sensible option.

In managing COI, disclosure is the first step. Most journals now have policies on how the authors must disclose their COI. Disclosure of interests of all concerned parties allows openness, and helps policy makers, medical professional and general public to evaluate any research process or publication in the light of these interests of the parties involved. However, disclosure alone does not eliminate bias of COI. In addition, it may have some unintended consequences. It is known that the readers tend underestimate the research findings in a paper which is authored by individuals who have declared financial ties with commercial companies. Also, the authors themselves may not be strong enough in drawing conclusions of their research findings. Despite these limitations, it is widely agreed that a full and open disclosure of interests at all levels is fundamental to managing COI.

Proactive management of COI is the next step. Before establishing a relationship where secondary interest may influence the primary objective of meaningful honest research or publishing, it is important that the organizations and individuals undergo a formal process of evaluating the risks related to the COI, and develop a strategy and/or a policy to mitigate these risks. The risks could be reputational or governance. As for example, for the journals it would be of paramount importance to have a clear policy of maintaining a firewall between the financial arrangements of the journal and the editorial process.

The International Committee of Medical Journal Editors (ICMJE; www.icmje.org) has published recommended practices, based on ethical principles, to set standards and inform all concerned with medical science publications. According to these recommendations, the authors must disclose their financial and non-financial COI. When the authors are unsure of whether or not a particular interest of theirs is in conflict with their intended publication, they should err on the side of caution. If the study has been funded or sponsored by industry, the authors should be explicit about the role of the industry

in areas such as collection, ownership, access, handling and analysis of the data, and contribution to the paper.

Like the authors, the reviewers must also declare all interests. In particular, they should be explicit about any competing interests with the authors or their institution. The reviewers should decline to review the papers from their own institution or from academic competitors.

Editors and other members of editorial board and staff must declare their financial and non-financial interests which should be available publically. The role of the editors is to ensure that all submissions receive objective and unbiased evaluation. They must take all precautions to avoid sending papers to the reviewers who have obvious COI. All editorial decisions must be independent of any commercial or financial arrangements of the journal. To achieve this objective, a journal must have clear, transparent and published policies on manuscript handling, COI disclosure, editorial decision making, role of the editorial board and staff, sources of funding, management of funding streams and editorial independence.

In the recent years, medical journals have progressed in having clearer guidelines on COI. The ICMJE recommendations are now central to most medical journals. However, some areas of ambiguity still remain. As for example, many trade associations, social advocacy groups and non-profit organizations are unclear about the sources of their funding. For the individuals, the threshold for declaring the level or the timing of their financial ties remains unclear. As for example, should one declare if they received honoraria of 100 USD from a drug company ten years ago for lecturing, or should the limit be 1000 USD and the time limit of 5 years? Also, there are no clear ways of extracting or declaring non-financial COI. Until clearer

guideline emerge on these issues authors, reviewers, editors, and the organizations which fund and govern their activities, will be required to use their own sound judgement and ethical paradigms to ensure that all possible and existing conflict of interests are effectively managed at all levels, and the trustworthiness of medical journals is retained all the time at its peak.

Funding

None.

Conflicts of interests

Editor-in-Chief of *British Journal of Anaesthesia* and Council Member of the Royal College of Anaesthetists, UK.

REFERENCES

1. Lo B, Field MJ, editors. *Conflicts of interest in medical research, education and practice*. Washington, DC: National Academic Press; 2009. p. 46–7.
2. Steinbrook R, Lo B. Medical journals and conflicts of interest. *J Law Med Ethics*. 2012;40:488–98.
3. Stelfox HT, Chua G, O'Rourke K, Detsky AS. Conflict of interest in the debate over calcium-channel antagonists. *N Engl J Med*. 1998;338:101–6.
4. Barnes DE, Bero LA. Why review articles on the health effects of passive smoking reach different conclusions. *J Am Med Assoc*. 1998;279:1566–70.