

## Disclosure of conflict of interest in scientific publications

Impartiality and transparency are the important hallmarks of ethical research. Taking appropriate measures to avoid bias and maintain transparency in the execution, reporting, and publication process improves scientific objectivity, integrity, and credibility of research findings. This is especially important in biomedical research wherein the results of research influence clinical decision-making, and have a direct impact on the life and health of individuals.

In research, the primary interest of any researcher should be to investigate claims/possibilities, and find truthful answers to scientific inquiries. However, sometimes, this might be overshadowed by secondary interests such as financial or nonfinancial considerations. The impartiality of research may be compromised when the researcher stands to gain in some way from the conclusions drawn. Such conflict of interest (COI) may involve receiving research or educational grants, payments for services such as speakership, stock options, board membership, consultancy, employment, travel/accommodation/meeting expenses, etc. Nonfinancial considerations may include advancement of professional career or personal relationships. Many instances of bias in medical research associated with financial COIs have been documented, particularly in the pharmaceutical and medical device industries. One of the landmark studies on financial COIs in randomized clinical trials reported in the *BMJ* from 1997 to 2001 (159 papers from 12 specialties) revealed that the authors' conclusions were statistically significantly more positive toward pharmacological or nonpharmacological interventions in trials funded by for-profit organizations than in those without any such conflict ( $P = 0.014$ ).<sup>[1]</sup>

Bearing in mind that research may be associated with bias brought in by COI, many ethical guidelines have been laid down by international scientific bodies to maintain transparency in research process. COI on the part of research investigators, institutions, as well as ethics committees during approval and conduct of research studies has been well recognized and addressed in various good clinical practice guidelines. Appropriate disclosure policies have to be laid down and strictly followed by research institutions to ensure transparency and ethical conduct of research.<sup>[2-4]</sup>

That such COI could exist during the publication process has only been recognized and addressed in the last

decade or so. Among the most common measures to ensure transparency in research-based publications is the requirement of “disclosure,” wherein the researchers/authors have to disclose any financial or nonfinancial COI in publications. Such disclosure is intended to help readers critically evaluate whether any conflicting interests exist, and are unduly influencing conclusions drawn and recommendations made. A full disclosure of COI on the part of authors is required by most of the high-quality bio-medical journals as per the guidelines of standard-setting organizations such as the International Committee of Medical Journal Editors (ICMJE), the World Association of Medical Editors, and the Committee on Publication Ethics. ICMJE guidelines cover not only authors but also peer reviewers, editors, and editorial board members of journals involved in the process of article review and publication, who must disclose all relationships that could be viewed as potential COI.<sup>[5]</sup> The Indian Council of Medical Research Ethical Guidelines for Biomedical and Health Research involving Human Participants (2017) mentions COI in research and publication.<sup>[6]</sup>

In addition to authors, the other important stakeholders in the publication process are the reviewers and journal editors. COI may apply to reviewers of research papers and editors of the journals, though most of the discussions in literature on COI and “disclosure” have been focused on the impact of authors' COI on research integrity. Reviewers of research papers may have competing affiliations, conflicting academic interests, or financial relationships with sponsors of research, which may compromise their judgment and objectivity of their review. Having personal relationships with authors/researchers may result in mutually favorable reviews. Similarly, publishers and editors, in order to improve the rank, prestige, and citation profile of their journal may push publication of potentially “citable” papers involving industry-funded studies reporting largely positive findings or clinical opinions favoring specific “intervention/s,” circumventing the normal peer-review process. Similarly, editors having decision-making positions in publications may push for publication of “friendly” articles.<sup>[7]</sup>

Hence, it is important that scientific journals adopt a strict “disclosure” policy for all stakeholders in the publication process to maintain scientific integrity of research publications.

Internationally, most scientific journals (over 90%) have adopted policies that mandate “disclosure of COI for authors,” though relatively fewer journals (30%–40%) have adopted similar policies for reviewers and editors.<sup>[8]</sup> Looking at the paucity and quality of scientific publishing in India, these figures are likely to be much lower. A study in the current issue of PICR evaluating COI policies among Indian biomedical journals reports that while most Indian journals (87.7%) had COI policies for authors, very few (<10%) had COI policies for reviewers and editors. The observation on policies for reviewers and editors is limited by the fact that only home pages and author instructions of the journals were reviewed for disclosure policies and not their internal policies and systems. The study also found that journals indexed in PubMed were more likely to have COI policies. Nearly a fifth of the journals published from India did not follow any guideline for disclosing COI, and that most journals surveyed did not provide adequate explanation of COI, which could impact understanding what needs to be disclosed.<sup>[9]</sup>

In conclusion, COI can occur at any stage in research – its conduct, while reporting or during the publication process. Hence, in order to preserve research integrity and credibility of its findings, it is necessary to follow appropriate guidelines for disclosure, and maintain adequate transparency by declaring COI for all parties involved in the process –researchers/authors, reviewers, and editors. Moreover, all stakeholders should be aware and familiar with the disclosure requirements and relevant ethical guidelines for reporting and publication. Information on funding, sources of drug supply, and involvement of sponsors should be routinely checked and displayed by all scientific publications. Journals as well as research institutions, and professional associations for researchers, should make all efforts to increase the awareness of this aspect of publishing, and make researchers, reviewers, and editors familiar with COI and disclosure requirements.

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