

# Conflict of interest

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Conflict of interest has been an inherent problem in research. Only recently have matters of conflicts of interest become a regular priority for medical journal editors. This could be due to the emerging public interest in these issues and increased awareness of how economic decisions in the healthcare sector may be influenced by biased scientific reports.

Conflicts of interest exist in dermatology when “professional judgment concerning a primary interest such as patients’ welfare or the validity of research, may be influenced by a secondary interest such as financial gain, or personal rivalry.”<sup>[1]</sup> It is a set of circumstances, interests or conditions that place the affected individual in a position of potentially being influenced by such circumstances.

## FINANCIAL CONFLICTS OF INTEREST

Financial interests are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, even science itself. They can be of various forms such as employment, research funding, consultancies, stock ownership, honoraria, paid expert testimony, lectures, travel, speaker’s fees and gifts.

## NONFINANCIAL CONFLICTS OF INTEREST

Publications in reputable journals are associated with enhanced reputation and media attention. Conflicts of interest may arise for the sake of peer acclaim, personal career advancement, promotion in administrative positions and eventually financial gains.

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## BENEFITS AND RISKS OF ACADEMIA-INDUSTRY RELATIONSHIPS

Often, it is difficult for researchers to obtain funds for their research as it may not directly impact patient care and are considered a waste of resources. Most of the research support is now shifting from independent sources to that provided by the pharmaceutical industry. Funds are provided by the industry for laboratory support, salaries for staff, academic pursuits and access to new drugs or devices.

However, the development of such close financial ties between industry sponsors and clinical investigators may influence the quality and outcome of clinical studies. One study showed that industry sponsorship was significantly associated with higher likelihood of reporting positive results, higher methodological quality and larger clinical trial.<sup>[2]</sup>

A large trial published in a well-known journal receives extensive media coverage. For a drug company, such a trial is a huge financial gain. Systematic reviews have shown that published studies financially sponsored by pharmaceutical companies are more likely to show results favorable to the company than studies funded from other sources.<sup>[3,4]</sup> Such studies may selectively withhold important data on results and adverse effects or minimize the shortcomings of the research. New drugs are being registered despite a lack of firm evidence of their role in the disease for which they are developed. In many papers, both industry researchers and academic investigators have made significant contributions to study design, analysis, interpretation of results and manuscript writing. There are concerns that industry researchers have an increased risk of introducing bias because of financial interests in the drug studied. A conventional way to mask or undermine conflicts of interest is the “non-writing author/non-author writing syndrome.”<sup>[5]</sup> In this syndrome, a professional medical writer writes the manuscript of a scientific publication

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based on material provided by the company but does not appear as a named author. The non-writing author, who is usually a well-known expert in that field, is offered authorship of the manuscript to lend scientific credibility to the work.<sup>[6]</sup>

These industries have also developed financial connections with the physicians in the form of gift giving, consultancy arrangements, support of continuing medical education (CME) and guidelines development. This creates conflicts of interest that may bias the clinician away from patients and toward the interests of industry.<sup>[7]</sup> This is the cause of concern as such arrangements have the potential to produce biased information on guidelines, review articles and influence the prescribing habits of physicians that would result in inappropriate prescribing practices and increase the cost of care. Wazana's systematic review shows evidence that even trivial conflicts, such as receiving gifts, affect prescribing behavior.<sup>[8]</sup>

The pharmaceutical industry spends a large amount of money on advertising, most of which is directed at doctors through medical representatives, journal advertisements and industry-paid speakers. Companies recruit speakers to promote their products through educational conferences and may involve them in clinical research projects centered on a specific therapy. Such arrangements are marketing mechanisms designed to promote the latest and most expensive product. Physicians may be shareholders in the pharmaceutical industry and some may own healthcare services such as medical laboratory services. In such cases, sometimes treatment is not based on clinical indication but with the aim of increasing the health center's income. In physician-owned practices, it may be difficult to avoid over-treatment of patients.<sup>[9]</sup> Physicians may also have the urge to reciprocate for the incentives they receive from the pharmaceutical industry. This may involve over-prescription, prescription of costly medicines in order to gain more profit and performance of procedures on patients that do not significantly alter the disease or contribute to treatment. These practices increase the cost of care.<sup>[10]</sup>

### **EFFECT OF DECLARED CONFLICTS OF INTEREST ON READERS**

The readers of the journal should be aware that conflict of interest may involve the authors, institution,

industry, reviewers and editorial board including the editor. A randomized controlled trial was conducted by a leading medical journal that involved sending a manuscript to a random sample of journal readers and asking them to rate the study in terms of interest, importance, relevance, validity and believability.<sup>[11]</sup> Readers to whom the conflicts of interest were declared thought that the study was significantly less interesting, important, relevant, valid, and believable than readers in the non-declared group. The declaration of financial conflict of interest can have a significant effect on readers' perceptions of the scientific credibility of published research.

### **AVOIDANCE AND DISCLOSURE POLICY**

The most ethical approach in clinical medicine is to avoid conflicts of interest, but as this is difficult, disclosure has been promoted as a remedy.<sup>[12]</sup> Patients should be informed of circumstances creating conflicts of interest for clinicians. During lecture presentation, the presenter must disclose to the audience any significant conflicts of interests including financial or any other relationships with manufacturers of commercial products (including drugs, equipment, etc.) or services discussed in their presentations. The disclosure is not to prevent a speaker with a significant relationship with the product from speaking about the product, but rather to provide information to the audience to make their own judgments. It is entirely up to the audience to decide whether the speaker's interests and relationships have influenced the presentation. If there are no interests to declare, then a "nothing to disclose" declaration should be made.

### **DECLARATION OF CONFLICTS OF INTEREST FOR PUBLICATIONS**

The Committee on Publication Ethics (COPE) guidelines state that such interests, where relevant, must be declared to editors by researchers, authors and reviewers.<sup>[13]</sup>

The International Committee of Medical Journal Editors (ICJME)<sup>[14]</sup> have stated that conflicts, or their absence, should be stated in writing by all authors at the time of submission of the article. Sources of full or partial funding or other support for the research must be declared. This should be highlighted under a separate heading, or under Acknowledgement. Authors should acknowledge individuals who provide

writing or other assistance and disclose the funding source for this assistance. Investigators must disclose potential conflicts to study participants and should state in the manuscript whether they have done so. Data selection for manuscript preparation may be prone to bias, especially when the results do not meet expectations.

Scientific publications reporting the results of clinical trials of drugs or medical equipment may result in judgment bias. This requires strict guidelines on the design of the study, how to document the results and how to disclose any spurious impact of conflicts of interest in the authors' interpretation of the results. More subtle conflicts, such as a tendency of many investigators to report positive instead of negative findings, is more difficult for journals to control, and must rely on the author's scientific integrity and ongoing ethical discussion at various academic research institutions.

Researchers should not enter into agreements with sponsors who interfere with their access to data but should have faith in their ability to analyze them independently, and to prepare and publish manuscripts. Authors should describe the role of the study sponsor, if any, in study design; collection, analysis, and interpretation of data; writing the report; and the decision to submit the report for publication.

Editors should avoid selecting reviewers with potential conflicts of interest such as those working in the same department or institution as any of the authors. Reviewers should disclose to editors any conflicts of interest that could bias their opinions of the manuscript. Reviewers must not use knowledge of the work, before its publication, to further their own interests. Editors who make final decisions about manuscripts should have no personal, professional or financial involvement in any of the issues they might judge.

The presence of a potential conflict of interest does not imply that the research is of lower quality but should be declared as they are a set of conditions that are known to affect human behavior.<sup>[8,15-16]</sup> The readers should be given an opportunity to make their own judgments on the relevance of such a potential conflict of interest. If revealed later, it would make a reasonable reader feel misled or deceived.

Conflicts of interest statement includes questions regarding equipment, materials or medications loaned or given for the study, sources of funds to support the research, provision with honoraria, payment or other compensation for work, receipt of stock options, stock ownership, financial support for travel or lectures to present the information covered in the study, financial relationships with any entity, which would closely compete with the medications, materials or instruments covered by the study, patent applications in conjunction with the instruments, medications or materials used in the study, and whether any part of the submission was written by someone other than the named authors (ghost writing).

### **STEPS TO BE TAKEN TO REDUCE THE IMPACT OF CONFLICTS OF INTEREST<sup>[6,17-20]</sup>**

Clear and consistent dermatology journal and conference policies should be developed for dealing with and declaring conflicts of interest.

Various steps that can be taken by the academic community are as listed below:

- Registration of all clinical trials and protocol submission declaring the primary outcome measure and analysis plan before publication, with a commitment to publish study results.
- Better reporting of clinical trials within journals to ensure that all essential trial data, such as how randomization or blinding was done, how many patients were enrolled in the study and how many were analyzed, are included so that readers can quickly assess the validity of that published study.
- Setting up an independent data monitoring board for multicentre studies.
- Definition of authorship based on actual contribution to study design, reporting and manuscript writing,
- Full disclosure and discussion of conflicts of interest (financial and academic) for authors and reviewers.
- Creation of international guidelines for systematic evaluation on how study results are reported in manuscripts to help reviewers.
- Systematic reviews, such as those produced by the Cochrane Collaboration, that attempt to produce unbiased summaries of trial evidence.
- Elimination or modification of common practices related to small gifts, sponsored dinners,

pharmaceutical samples, funds for physician travel or speakers, ghostwriting and research contracts.

- Exclusion of conflicted physicians as decision-makers in expert policy panels but they should be allowed to give their opinion regarding the use of a drug, performance of a study or approvability of a drug or device.

## CONCLUSION

Failing to reveal any conflicts of interest is an act of research misconduct. Disclosure of conflicts of interest is essential for a medical journal, and awareness of this should influence all aspects of the review process. The reputation of a journal can be damaged if a published study is later questioned regarding undeclared financial conflicts of interest, especially if the intervention has implications for the well-being of patients and for the cost of health services. A balance should be maintained between physicians and the pharmaceutical industries, and the aim should be for advancement of scientific knowledge and provision of proper healthcare rather than commercial interests.

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