

Good Scientific Practice

Part VI. Conflict of interest¹

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“Contemporary usage of the phrase “conflict of interest” has emerged from its beginnings... to apply to anyone who holds a public trust. Biomedical researchers and health professionals enjoy a significant public trust, although such confidence is in jeopardy”

Anette Flanagan [1]

All medical investigators have dual motives to publish results of their work. The primary motive is academic - the desire to advance human knowledge (altruistic). The secondary motive is to advance their own careers (egoistic). It is important to stress out that both motives are perfectly ethical and legitimate [2].

Both motives are realized through scientific publication, which is the main forum for the communication of research. In biomedical literature, published results of clinical research influence clinical practice greatly, since they are the basis for both diagnostic and treatment decisions [3]. This is why medical journals try to select, through peer review, the highest quality science. Their reputation and influence depend exclusively on the confidence their readers,

patients, funding organizations and public have for all parties in the publication process - authors, reviewers, and editors [4]. All these actors in the publishing arena may *share* common interests in the research results - but their interests may be, and often are, *in conflict*.

Definition

The Committee on Publication Ethics (COPE) Guidelines on Good Publication Practice [5] defined conflicts of interest (COI) as “those which may not be fully apparent and which may influence the judgement of an author, reviewer, and editors”. The decision-makers are not allowed to favor the self-interested goals over altruistic, professional, and societal trusts [1].

In science, COI may occur in situations where financial or other personal considerations may bias the professional judgement of an investigator in proposing, conducting or reporting research [6,7]. When revealed later, undisclosed COI would make readers feel misled or deceived. That is why editors take dealing with COI with much concern.

Conflicting interests are real or perceived, harmful or insignificant [1]. They may be *personal, academic or financial*.

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Financial conflicts of interest

From the end of the Second World War onwards, the relationships between research and industry have been deepening steadily. There is nothing wrong in it: modern science is multidisciplinary, multiprofessional, sophisticated and expensive, and it is practically impossible to do clinical and basic research

without the financial support of the pharmaceutical industry. Wrongdoing is to hide the relationships with industry, which can be multifaced and includes employment, research funding, stock or share ownership, honoraria, payment for lecturer's travel, consultancies etc.

Several reports revealed that the results of clinical trials sponsored by pharmaceutical firms often report only favorably on the treatment being tested, while negative results are either underpublished or underreported. Underpublishing denotes failure to report the research results. Underreporting denotes failure to report negative results. Both are influenced by censorship of sponsoring companies, which is decidedly criticized and opposed by ICMJE [7]. An investigation showed that 96% of authors of supportive reports have had financial relationships with industry, while authors of neutral or critical reports were in such relationships in 60% and 37% of cases, respectively [8]. Research sponsored by pharmaceutical companies was more likely to have outcomes favouring the sponsor compared with research funded by other sources [9,10]. Bekelman et al. [11] found that studies financed by industry have always outcomes favourable to the sponsoring company. Even worse, industry, sometimes, attempts to prevent studies which are unfavourable to their products from being published [12].

These findings enhanced the discussion about the journals' policies of handling the COI: "The current efforts to manage the relationships between academic institutions and industry are focused on the management and regulation of the conflicts of interest that these relationships commonly create" [13].

Some editors consider that one reason authors may be wary of reporting COI is they think that it implies potential wrongdoing. "There is nothing wrong with researchers receiving funding or fees from commercial organizations. The problem arises when those interests are not disclosed" [14]. That is why the term *conflicts of interest* is replaced by the term *competing interests*, with emphasis on that financial interests are not prohibited, and not all of them cause conflicts of interests or harm to human participants [15].

Non-financial conflict of interest

The non-financial COI arises out of personal relationships, academic competition and intellectual passion. These "private interests", apart from financial, can be professional, academic, ethical, and political. They also may bias judgments and interfere

with dissemination of scientific information. They can be identified more easily than financial COI but, being unquantifiable and impossible to grade, they remain in the "grey zone" of misconduct [2].

The strong personal motive of a scientist to publish his research may be greatly potentiated by the pressure his affiliated institution may exert over him. These personal and institutional pressures may result in the so-called "Publish-or-Perish syndrome", a term which denotes the cause of deviant behaviour resulting in violations of ethical principles of science. These breaches of science ethics range from undeserved authorship (grey zone of misconduct) to the most serious issue - the scientific fraud [16]. Non-responding adequately to plagiarism is the breach of publication ethics, and journals that failed to handle non-financial COI properly are severely criticized [17].

The non-financial COI are inevitable in research and, since they cannot be eliminated, they must be regulated [2]. Although COI may represent the potential for bias the medical literature in many ways, it does not necessarily indicate the likelihood that such bias will occur. However, since almost every aspect of the process of publication involves important ethical principles, the violation of which is often caused by either financial or non-financial COI, an important part of editors' work is how to deal with COI.

The journals' policies with conflicts of interest

Good editorial practice comprises that editors of both large and small journals insist on strict adherence to internationally accepted scientific standards [18]. Disclosure of COI should be an important part of the journal's special policy regarding good scientific practice. As clearly stated in the Vancouver rules "Public trust in the peer review process and the credibility of published articles depend in part on how well conflict of interest is handled during writing, peer review, and editorial decision making" [19]. The World Association of Medical Editors (WAME), in its recommendation on publication ethics policies for medical journals, also states that "all such interests (or their absence) must be declared in writing by authors upon submission of the manuscript" [20].

Recently, the history of medical journals and COI was described as "lots of rhetoric but not much actions". However, the most prestigious journals, such as *BMJ* [21], the *Nature* journals [22], and many others [6] have set policies to ensure that COI are disclosed and that financial associations of authors do not influence research results. Many think that de-

clarifying competing interests must be made mandatory by all medical journals, since this creates transparency, which is the best way to maintain public trust in published research. "Transparency, by means of disclosure of potential conflicts, could foster public trust. That is why editors should pay more attention to this important issue" [23].

However, even in the journals that pioneered this movement, the low rate of reporting competing interests still exists [23-25], which practice is severely criticized. A national (USA) survey of the policies of medical schools and other research institutions, and also of scientific journals, revealed that these institutions vary substantially in regard of their policies on COI, while only a small percentage of scientific journals require disclosure of COI [26].

Although there is awareness that COI is not the only bias factor [17], the journals are urged to adopt, enforce and strengthen their policies on its disclosure [8]. They are expected to do so voluntarily rather than to face strict governmental regulation. But proponents of the regulation think that this is the best way to ensure public trust in science rather than voluntary compliance.

Some editors require the disclosure of COI from reviewers, since they experienced that evaluations of articles are much less rigorous when reviewers had financial interests with drug manufacturers whose products are reported [8]. Recently, disclosure of conflicting interests is required from individuals who conduct peer review for grant applications [27].

The *Nature* journals ask referees to exclude themselves as reviewers when there is a significant COI. However, this does not disqualify such persons for evaluating the manuscript. It is the editor who decides whether or not this COI is serious as much to influence the reviewer's judgement [22], and this decision must be sound and balanced.

Concluding remarks

Although editors consider COI as the most difficult matter to deal with [28], they definitely must address the issue of scientific integrity. This can be achieved by several approaches. For example, a position of Scientific Integrity Advisor, who is the person in charge to handle misconduct and breaches of publication ethics, was recently created by *Neurology* [29]. In this part of Europe, the *Croatian Medical Journal* was the first to establish its own body - Committee for Research Integrity - to which editors forward any case of suspected scientific dishonesty [18], while in Ser-

bia this job is done by the journal's ombudsman [30].

Since research dishonesty is increasing within the scientific community, thorough discussions on these issues, and also consequent actions, are urgently needed [28,31]. Many institutions of science have already done so [26,32,33]. Editors of the *Lancet* think that all editors should, in addition to other actions, "advocate integrity by writing editorials, commissioning review articles, giving lectures, and raising awareness" [28] - and this is just what the editors of the *Journal of the Balkan Union of Oncology* are doing since 2003 [3,16,34-36].

Ultimately, there is no doubt that everything relies on the ethical attitudes of the individual scientist, whose professional commitment to truth and honesty ensure that scientific fraud does not occur. It is true that efforts to verify must be made, but in the end some amount of trust is required.

In accordance to this, although the *Journal of Balkan Union of Oncology* does not require from its authors to disclose any competing interest, the authoress of this article declares:

The author of this article is member of the Editorial Board of J BUON. She is unpaid for this, and will not be affected financially by publishing this article in this journal. Her article was peer reviewed in the normal way, and she played no part in this process.

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