

Media Portrayal of Conflicts of Interest in Biomedical Research

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Due to the growing industry support of biomedical research, studies are increasingly scrutinized because of conflicts of interest of investigators and concerns about inaccurate reporting of study results by the popular media.

The Association of American Medical Colleges has defined conflict of interest in science as “situations in which financial or other personal considerations may compromise, or have the appearance of compromising, an investigator’s professional judgment in conducting or reporting research.”¹

For the purpose of our study, conflict of interest referred to both “research conflicts”, the primary example of which is industry funding of research, and “researcher conflicts” which occur when the researchers themselves have financial ties to industry, and in some cases could potentially benefit from a particular study outcome. Researchers who are employed by or invest in the manufacturer of a study compound or its competitors would fall into this category.

This issue is important in a media context as the general public gets much of its information about science and technology from the popular media. For this reason, media reporting has the capacity to shape public perceptions of safety and efficacy of a particular treatment, thereby influencing patterns of use².

Our study compared newspaper coverage of biomedical research to the reporting of the same studies in the medical literature. To do this, we first examined 109 clinical trials

of both herbal remedies (n=58) and conventional pharmaceuticals (n=51), as reported in the medical literature. We then compared them to 598 newspaper articles that reported the results of these trials. We primarily assessed the disclosure of funding information and competing interests, as well as claims of efficacy, and reporting of risk and overall tone.

One dominant trend was the relatively infrequent reporting of conflict of interest. Only 9% of newspaper articles disclosed a conflict of interest in the reported trial. In comparison, 22% of the trial reports in the medical literature reported a conflict. In light of evidence that approximately 50% of articles in major medical journals are industry funded, these results suggest that conflict of interest is under-reported in both the scientific literature and the popular media.

We also noted that funding information was disclosed in 77% of medical journal articles, while only 13% of newspaper articles reported such information. Even fewer articles (14% of medical journal articles and 2% of newspaper articles) noted the role the funding agency. This is significant, as information pertaining to funding arrangements, particularly the role of the funding body, can reveal conflicts of interest indirectly. For example, a report that the company funding a particular trial also had a role in the development of study methodology and data analysis not only reveals a conflict of interest, but also suggests that we should be concerned about bias arising from such a problematic arrangement. It is important to note that such bias can arise despite the good intentions of all parties involved.



Interesting trends also became evident when we examined the reporting of benefits and risks. Articles that disclosed a conflict of interest were more likely to report a high likelihood of benefit in the study. This trend was evident in both the medical literature and popular media reporting. Conversely, articles disclosing a conflict of interest were generally less likely to report a high likelihood of risk.

Regarding the overall tone of reporting, newspaper articles tend to be significantly more negative than the reports of the same trials in the medical literature. This was true regardless of whether the article discussed trials of herbal remedies or conventional pharmaceuticals. In addition, popular media reporting is significantly more polarized than the reporting in scientific journals, while reports in the medical literature tend to be more neutral overall. In both cases, scientific literature uses a more positive tone when competing interests are disclosed.

The issue of conflict of interest has implications on the perceived credibility of both study results and the researchers themselves. One survey showed that both university scientists funded by biotech corporations and scientists employed by these corporations are perceived as being far less credible than university scientists who are government funded.³ The fact that this distinction exists in the public consciousness may also indicate that the public is unaware of how blurred these boundaries has truly become.

Our results suggest that conflict of interest is generally under-reported both by the popular media and in the medical literature. The disclosure of a conflict of interest tends to coincide with the more frequent reporting of benefits and

less frequent reporting of risks. It also coincides with more polarized reporting. Taken together, our results suggest that the reader is generally not provided with adequate information to make an informed decision, neither regarding the efficacy of a given herbal remedy nor the likelihood that a disclosed conflict biased the results of a particular study.

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1. Catherine D. DeAngelis, Phil B. Fontanarosa, Annette Flanagan. Reporting Financial Conflicts of Interest and Relationships Between Investigators and Research Sponsors. *JAMA*. 2001; 286:89-91.
2. Adam L. Hersh, Marcia L. Stefanick, Randall S. Stafford. National Use of Postmenopausal Hormone Therapy: Annual Trends and Response to Recent Evidence. *JAMA*. 2004; 291:47-53.
3. Kim Sprecker. How Involvement, Citation Style, and Funding Source Affect the Credibility of University Scientists. *Science Communication*, 2004; 24:72-97.

