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Conflict of interest disclosure and interpretation - rest assured the medical professional in the audience is perceptive, alert and smart

Purvish M. Parikh[1], P. Narayanan[2], A. Vora[3], A. Gulia[4], S. K. Mullapally[5], B. Rangrajan[6], S. Gupta[7], P. Mehta[8], S. Hingmire[9], P. Kulkarni[9], B. Parekh[10], N. Ghadyalpatil[11], G. Babu[12], R. Singh[13]

Departments of [1]Oncology, [10]Medical Oncology, Shalby Cancer and Research Institute, Ahmedabad, Gujarat, [2]Department of Medical Oncology, Cytecare Cancer Hospital, [12]Department of Medical Oncology, HCG Hospital, Bengaluru, Karnataka, [3]Department of Medical Oncology, Hope Cancer Clinic, New Delhi, [4]Department of Surgical Oncology, Tata Memorial Centre, Homi Bhabha National Institute, Mumbai, [9]Department of Medical Oncology, Deenanath Mangeshkar Hospital and Research Centre, Pune, Maharashtra, [5]Department of Medical Oncologist, Aster MIMS, Kannur, Kerala, [6]Department of Medical Oncology, Kovai Medical Center and Hospital, Coimbatore, Tamil Nadu, [7]Department of Medical Oncology, Sarvodaya Hospital Research Center, [8]Department of Medical Oncology/Hematology/BMT, Asian Institute of Medical Sciences, Faridabad, [13]Department of Medical Oncology, Narayan Superspeciality Hospitals, Gurgoan, Haryana, [11]Department of Medical Oncology, Yashoda Hospital, Hyderabad, Telangana, India.

***Corresponding author:**
Dr. Purvish M. Parikh,
Department of Oncology,
Shalby Cancer and Research Institute, Ahmedabad,
Gujarat, India.

purvish1@gmail.com

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ABSTRACT

Introduction: We present data from a systematic survey on conflict of interest (COI) disclosure and its interpretation by the doctors participating in continuing medical education (CME).

Methods: A brief 12 question online Google survey with multiple choice options (read, select, and click) was done among Indian practicing doctors using links shared through WhatsApp through the internet over a 72 h period.

Results: Of the 386 replies, 373 unique replies were eligible for evaluation. The majority found CME activities beneficial. About 73% of participants would watch out for bias, even if the speaker shows COI disclosure slide. The use of brand/trade names was considered as a flag for bias by the majority. About 99% wanted the speaker to show a final take home message slide. Cross verification of the data presented by comparing to published data was done in more than 75% of instances by only 25% of the participating doctors. A significantly higher number of doctors found bias when CME activities were being organized by the health-care industry as compared to programs of medical bodies/societies/organizations.

Discussion: COI considerations are given due to the importance of medical professionals. However, doctors are smart enough to understand the limitations of such disclosures and remain alert to ensure they are not influenced by any bias. Take home message slide gives the presenters opportunity to share their insights and allows the audience to make their own judgment on the impartiality of the data presented. The doctors are aware that bias could be more when CME activities are organized by healthcare industry and take appropriate precautions.

Conclusion: COI is is given due importance by the medical professionals. COI disclosures are often incomplete. Doctors remain alert to ensure they are not influenced by biased presentations. Concluding take home message slide is unanimously recommended. Presentation bias is more when healthcare industry is directly organizing educational and promotional activities.

Keywords: Financial implications, Oral presentation, Inconsistency, Bias, Misinterpretation

INTRODUCTION

Conflict of interest (COI) is an important topic that is ill-understood, often the victim of misguided perceptions and sometimes used to taint everything with the same brush. Recently, there was a spur of discussions on WhatsApp among Indian specialist doctors on conflict of interest disclosure (COID). We also came across an article published in PubMed journals regarding COID slides in conference presentations.[1,2] We, therefore, decided to do a systematic survey and are presenting our data.

MATERIALS AND METHODS

We first reviewed the literature on the subject.[3,4] Based on the key important gray areas, we prepared a short 12 question survey containing multiple choice type options [read, select, and click – no typing; Table 1]. This was uploaded on Google survey and the link shared with Indian doctors. The request was for all interested doctors to take the survey once as well as to forward the message within other WhatsApp groups of doctors. The survey was open for 72 h. Replies that were duplicate (based on disclosed emails), not from doctors and from doctors that had not attended a continuing medical education (CME) program in past 1 year were excluded from the study. The remaining data were analyzed. The results were then interpreted with reference to existing publications on the subject.

RESULTS

A total of 386 responses were received in 72 h. In three cases, we received two responses each from the same email address. The earlier of the two responses received were eliminated from each of them, giving us 383 responses. Of these, four were from those who were not doctors (reply to question 1) and six were from those who had not attended a CME in the past 1 year (reply to question 2). These were also eliminated, giving us a total of 373 eligible survey responses. The data analysis given below is limited to these 373 responses received.

Q3: In how many cases were the CME content useful? Of the 373 valid responses, the majority found CMEs to be useful in 26%–75% of instances [Figure 1]. CMEs were not at all useful for 1% of responders, whereas 15% experiences that CMEs were beneficial in more than 75% of instances.

Q4: If the speaker shows COID slide, would you pay more attention to his talk? The replies to this question showed an

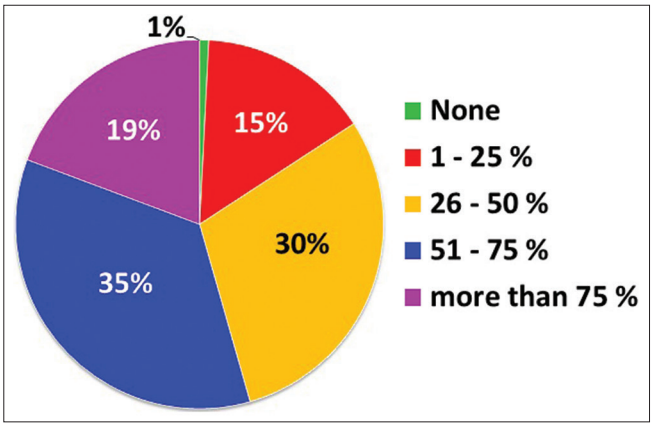

Figure 1: In how many instances was the continuing medical education content educationally useful.

Table 1: Questions used in the online survey.

Q. No.	Question	Multiple choice options
1.	Are you a medical Doctor?	Yes/No
2.	Did you attend a CME program in the past 1 year	Yes/No
3.	In how many cases was the CME content useful?	One of five options*
4.	If the speaker shows conflict of interest disclosure slide, would you pay more attention to his talk?	Yes/No
5.	If the speaker shows conflict of interest disclosure slide, would you conclude that the talk is without bias?	Yes/No
6.	If trade names are used instead of generic names, would you conclude that the speaker is biased? The replies to this question indicated that 58% would consider that the use of brand names is an indication of speaker bias.	Yes/No
7.	If the concluding slide indicates that the results are promising, does it influence your treatment practice?	Yes/No
8.	If the concluding slide indicates that results of new treatment are statistically significantly better, in what % does it influence change in your treatment practice?	One of five options *
9.	Should the speaker show the final slide with take home message	Yes/No
10.	In what percentage of cases do you verify the data presented by comparing to original publication?	One of five options*
11.	In how many instances do you find the CME organized by Medical bodies/societies had a significant bias?	One of five options*
12.	In how many instances do you find the CME organized by Healthcare Industry had a significant bias?	One of five options*

*One of five options – None, 1–25%, 26–50%, 51–75%, more than 75%

equal split among the participants, with 50% selecting each of the Yes, No options.

Q5: If the speaker shows COID slide, would you conclude that the talk is without bias? To this question, 73% still said that they would not discount bias simply because the COI was disclosed.

Q6: If trade names are used instead of generic names, would you conclude that the speaker is biased? The replies to this question indicated that 58% would consider that the use of brand names is an indication of speaker bias.

Q7: If the concluding slide indicates that the results are promising, does it influence your treatment practice? Almost two-thirds of the responders (64%) agreed that their treatment practice would be influenced if the results were promising according to the speaker.

Q8: If the concluding slide indicates that results of the new treatment are statistically significantly better, in what percentage does it influence change in your treatment practice? Two-third (68%) of the responders would change their treatment practice in <50% of such instances [3% none, 32% in 1–25, and 33% in 26–50% of instances; Figure 2].

Q9: Should the speaker show the final slide with take home message. Almost everyone (99%) agreed that this is required.

Q10: In what percentage of cases do you verify the data presented by comparing to original publication? The results are shown in Figure 3. No verification was attempted in 15% of instances. Just under half (47%) would do this cross verification in 1–50% of instances. Verification would be done in more than 75% of instances by 25% of participants.

Q11: In how many instances do you find the CME organized by Medical bodies/societies had a significant bias? More than half (58%) perceived bias in <25% of instances. Bias was felt in more than 51% of instances by only 11% of participants [Figure 4].

Q12: In how many instances do you find the CME organized by health-care industry had significant bias? Only 3% said that they found no bias in such industry CMEs. The remaining answers got almost identical replies 23% to 26%, indicating uniformly varying experience and perception among the survey responders [Figure 4].

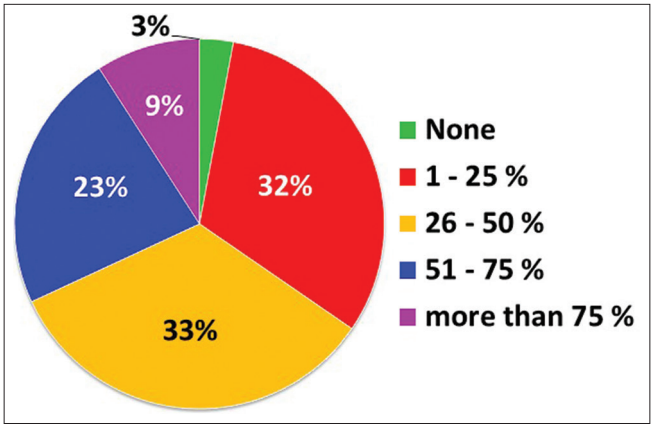

Figure 2: If the concluding slide indicates that results of new Rx are statistically significantly better, in what percentage does it influence change in treatment practice?

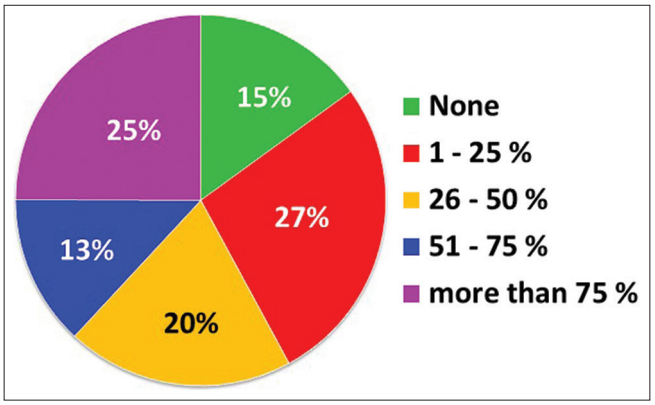

Figure 3: In what percentage of studies is the data presented by audience by comparing to original publication?

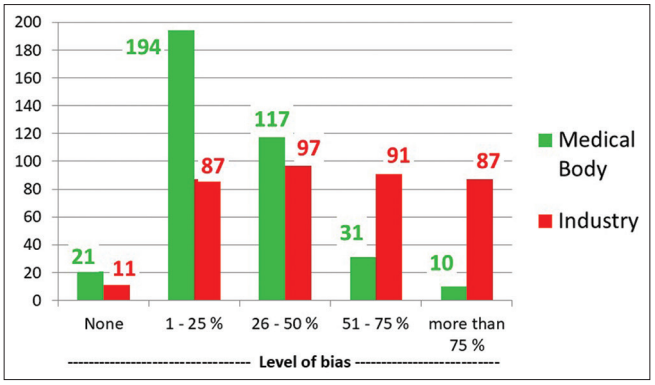

Figure 4: Perceived bias in continuing medical education organized by medical bodies as compared to those organized by the health-care industry.

DISCUSSION

There has been increasing interest and discussion regarding COID over the past decade. A Google search using the words "COID slide" yielded 3,740,000 hits.[3] And a PubMed search on www.nlm.nih.gov using the words "COID" led to 5238 published articles.[4] The matter is taken seriously because of adverse publicity, and several societies, including the Endocrine Society mandates that all their speakers must show a disclosure slide when they begin their presentation.[5] Several other examples of conflict disclosure slides are available online, and listing any financial and commercial aspects.[6] Some feel that even when a speaker has no COI, a slide must be shown specifying this.[5,7]

COI can be real, perceived, imagined, or potential: Real COI is usually obvious for everyone to see because it involves a direct conflict between duty (of being impartial/objective) and a competing interest leading to personal gain (financial or otherwise). A better way of identifying potential COI is to check whether serving one interest could unfairly contribute to or against another. COI should not be mistaken for "interested party" or "inappropriateness." The main purpose is to voluntarily identify potential COI and take steps to neutralize it before corruption has the opportunity to sow its seeds. Thus, experience coupled with objective evidence needs to be evaluated while arriving at the conclusion that a specific decision has the potential to unduly influence secondary interest(s), whether it actually happens or not is entirely a different matter.

While secondary interest may include non-financial gain, in the form of personal professional advancement or granting favors for family and friends, it is the financial relationships that receive the limelight (because it can be identified in an objective and quantifiable method). This is why the COI slide before a presentation focuses on financial support disclosure.

In our survey, as many as 84% indicated that they found CMEs sessions useful in at least 26% of instances [Figure 1]. Hence, how important is the COID slide at the beginning of the presentation? Our survey shows that not all medical doctors give importance to COID slides. There was equal split among the 373 participants between those that would pay more attention (or not) if the COID slide was shown. Even more important, even when a COID slide is shown, the doctors are smart enough to understand that they still need to be alert about bias during the talk – the opinion of 73% of survey replies. There was a similar bias perception when trade/brand names were used instead of generic names (seen in 58% of instances).

This view of the participant doctors is supported by earlier publications that have documented significant discordance between financial transactions accessible on open payments database self-reported COID on slides.[1] This study compared this in clinical literature and dissected it within disclosure levels as well as by medical specialty. They found discrepancy in 65% of instances ($P < 0.001$).

The doctors seemed to be paying more attention to the concluding part of the talk. Almost all (99%) would want to see a slide with take home message. This is very significant data and is a big lesson for those speakers who do not spend time in putting their thoughts together to prepare a take home message. Clearly data presentation without insight or drawing on personal experience is not valuable. A total of 64% of doctors would look forward to their treatment practice being influenced by promising data [Figure 2]. When probed with the specific issue of new treatment showing statistically better results, almost the same number (65%) would not change their treatment in half the instances. Influencing change in treatment practice in more than 51% of instances would happen only with 32% of doctors [Figure 3].

Table 2: Take home messages.

1. COI considerations are given due importance by the medical professionals.
2. Several organizations have laid down specific guidelines to ensure that such COI is disclosed at the time of making the presentations in CMEs and conferences.
3. There have been some instances where COID slides have been found to not have been updated and carry incomplete information.
4. Participating doctors are smart enough to understand the limitations of such disclosures and remain alert to ensure they are not influenced by any bias.
5. Take home message slide is important since it gives the presenters opportunity to share their insights and interpretation of data presented. This in turn allows the audience to make their own judgment on the impartiality of the data presented.
6. The doctors are aware of who is organizing the CME activity and are alert to pick up any bias in presentations, especially when health-care industry is directly organizing the educational activity.

Whether the CME was being conducted by a medical association/body/society versus a health-care industry had important bearing, on how the participating doctors perceived presences or absence of bias [Figure 4].

When medical bodies conducted CMEs, the bias was perceived in <25% of cases by as many as 58% of participating doctors [Figure 4]. Bias in more than 75% of such CMEs was seen by only 3% of participants.

On the other hand, when the health-care industry conducted the CMEs, lack of or minimal bias (<25% instances) was selected by only 26% of participants. Bias in more than 75% of such CMEs was seen by as many as 23% of participants [Figure 4].

CONCLUSION

COI is a factor that is given due importance by the medical professionals. Several organizations have laid down specific guidelines to ensure that such COI is disclosed at the time of making the presentation [Table 2]. However, this does not prevent incomplete or insufficient information being shown on the COID slide.[1] Fortunately, doctors are grounded enough to understand the limitations of such disclosures and are remain alert to ensure they are not influenced by biased presentations. In fact, doctors are almost unanimous in the requirement of take home message slide and would want to see the presenters give their insights and interpretation of

data presented. This would then allow the audience to make their own judgment on whether the data presented is being interpreted impartially or not. The doctors are also cognizant of who is organizing the CME activity and are expecting biased presentations when health-care industry is directly organizing it, as opposed to a medical body.

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Conflicts of interest

There are no conflicts of interest.

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