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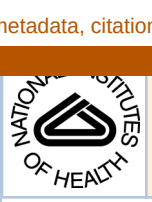

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Disclosures of funding sources and conflicts of interest in published HIV/AIDS research conducted in developing countries

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Abstract

Objectives—Disclosures of funding sources and conflicts of interests (COI) in published peer-reviewed journal articles have recently begun to receive some attention, but many critical questions remain, for example, how often such reporting occurs concerning research conducted in the developing world and what factors may be involved.

Design—Of all articles indexed in Medline reporting on human subject HIV research in 2007 conducted in four countries (India, Thailand, Nigeria and Uganda), this study explored how many disclosed a funding source and COI, and what factors are involved.

Results—Of 221 articles that met the criteria, 67.9% (150) disclosed the presence or absence of a funding source, but only 20% (44) disclosed COI. Studies from Uganda were more likely, and those from Nigeria were less likely to mention a funding source ($p<0.001$). Of articles in journals that had adopted International Committee of Medical Journal Editors (ICMJE) guidelines, 56% did not disclose COI. Disclosure of funding was more likely when: ≥50% of the authors and the corresponding author were from the sponsoring country, the sponsor country was the USA, and the articles were published in journals in which more of the editors were from the sponsoring countries.

Conclusions—Of the published studies examined, over a third did not disclose funding source (ie, whether or not there was a funding source) and 80% did not disclose whether COI existed. Most articles in ICMJE-affiliated journals did not disclose COI. These data suggest the need to consider alteration of policies to require that published articles include funding and COI information, to allow readers to assess articles as fully as possible.

Disclosures of funding sources and conflicts of interests (COI) in published peer-reviewed journal articles have recently begun to receive some attention, but many critical questions about these activities remain. Readers' knowledge of authors' funding and COI are important because these may bias results. Indeed, a number of studies has shown that industry-sponsored studies tend to favour the sponsor.[12] COI can occur in a variety of ways. A researcher may have financial or personal relationships with individuals or organisations

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that can bias his or her actions. Between a quarter and a third of academic investigators have some form of financial interest, such as consultant fees, honoraria and patent royalty payments.[23] Yet documentation of COI often remains poor. For instance, a recent audit conducted by the Office of the Inspector General for the Department of Health and Human Services showed that the National Institutes of Health was unable to provide an accurate account of financial COI reports it had received from its extramural grantees during fiscal years 2004–6.[4]

Concerns about funding and COI have led to calls for authors to disclose funding sources and COI in journal articles. In 2001, the International Committee of Medical Journal Editors (ICMJE), a body of general medical journal editors that establishes guidelines on the format of manuscripts submitted to their journals, revised its guidelines on COI disclosures in manuscripts. Under the guidelines, authors are responsible for disclosing personal and financial relationships that might bias their work, and to 'state explicitly whether potential conflicts do or do not exist'.[5] COI disclosure has also become an important issue with various government agencies, such as the Centers for Disease Control and the Institute of Medicine.[67]

The proportion of peer-reviewed biomedical journals that have a COI disclosure policy has been increasing. While McCrary *et al*[8] in 2000 and Krimsky and Rothenberg[9] in 2001 showed that 43% and 15.8% of journals, respectively, had COI disclosure policies, Cooper *et al*[10] in 2006 and Rowan-Legg *et al*[11] in 2009 showed that the proportion had increased to 93%.

Disclosures of financial interests in a published study can impact readers' perceptions of the study. Declaration of competing interests has been found significantly to lower readers' level of interest, and perceptions of the importance, relevance, validity and believability of a published article.[12] Readers rated an article's importance, validity and believability lower when it had a 'financial interest' compared with a statement that no financial interest was declared.[13]

However, researchers may not self-report COI fully or accurately. Indeed, 'the potential for conflict of interest can exist whether or not an individual believes that the relationship affects his or her scientific judgement'.[5] Individuals may fail to observe the effects of COI on their work. For instance, Chimonas *et al*[14] has shown that physicians understand COI, but rationalise their interactions with pharmaceutical representatives. Physicians are influenced in their prescribing practices by relationships with pharmaceutical companies, while self-reporting that no such influence exists.[15] Therefore, self-reported funding and COI disclosures by authors may not be wholly accurate. Weinfurt *et al*[16] and Okike *et al*[17] have shown inconsistencies in COI reporting practices by authors. For instance, of physicians at a large meeting, over 20% failed to report COI for directly related payments and 50% for indirectly related payments.[17] Authors may also disclose a COI in an oral presentation at a professional meeting, but fail to do so in a journal publication that follows from the presentation, or vice versa. Bhattacharyya and Lin[18] found that of 153 journal publications published 2 years post-presentation, 25.5% contained disclosure discrepancies.

Only a handful of studies have examined the extent of disclosures of COI, and even fewer reports have explored disclosures of sources of funding, and these reports have only looked at a few medical specialities. Of 1534 original oncology articles in eight journals in 2006, only 29% reported COI.[19] Among 12 gastroenterology journals, funding was disclosed in 19–99%, with only one journal having funding source (either the presence or absence of one) disclosed in over 90% of its published articles.[20] Overall, 31% of the articles in this study failed to report funding source and 54% failed to report COI. Of these 12 journals, 11

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had COI policies and 10 had policies requiring authors to disclose funding sources. In the journals that had policies, we calculated, using the authors' published data, that 24% and 52% of the articles failed to disclose funding and COI, respectively. This suggests that while the existence of a policy was significantly associated with higher rates of disclosures of funding ($p<0.001$) and COI ($p<0.001$), a sizeable proportion of authors still failed to disclose in these journals with disclosure policies.

Mention of sources of funding, in addition to COI, is extremely important in articles to enable readers to assess for themselves, as best they can, whether the authors' self-reporting of COI appears correct—that is, whether results reported may be biased in any way because of either funding sources or self-reported COI. Conceivably, an author may report industry funding (eg, honoraria for speaking engagements), but then not mention any COI, nor report that no COI exist.

Moreover, COI are not always wholly objective, but may be complex and involve subjective judgements. For example, definitions of what constitutes a 'related' payment[17] and what is 'relevant' in COI disclosure policies can be open to interpretation.[21] Accurate reporting of funding and COI can thus let readers decide for themselves the appropriate level of trust and suspicion they should have in reading and assessing the article's findings and claims. Currently, this information may be seen by editors, but not readers, who then do not know if any funding or COI exist. Given growing concerns about COI, this dearth of data on the reporting of funding and COI is troubling.

Increasingly, research is being conducted in the developing world, but these issues have not been examined in these contexts. In a Medline search, we found only one paper, which was in Spanish and examined only one Chilean medical journal,[22] but no published studies in English that examined rates of disclosures of funding and COI in articles presenting research conducted in the developing world. These issues are critical in these countries because, arguably, in resource-poor countries, money may have even more of an impact. Key questions thus remain—for example, how often funding sources and COI are disclosed in articles reporting on research conducted in the developing world; when such reporting does or does not occur; whether disclosures of funding and COI differ between countries and types of research, and if so, how; and what other factors, if any, are involved.

Therefore, given the burgeoning research in the developing world, and these critical unanswered questions, we decided to explore these areas—in particular, how often articles reporting on research conducted in four developing world countries disclosed funding sources and COI and what factors are associated with such disclosures. We choose to focus on HIV, because it is a crucial area of medical research in both developed and developing countries, as the pandemic affects approximately 30–36 million people worldwide.[23] We chose India, Thailand, Nigeria and Uganda for this analysis because they have among the highest HIV prevalence in their respective geographical regions and the largest numbers of US-sponsored HIV clinical trials.[24]

METHODS

We conducted a Medline search for all articles published in 2007 that met the following criteria: the research concerned HIV, and the research was sponsored by a developed country, but was carried out in one of the four aforementioned developing countries. We limited the search to papers with human subjects in English. From the search, we included all articles that were available online through our university medical library, which holds 117 264 serials (http://www.columbia.edu/cu/lweb/about/). We included only original research articles of studies involving human subjects, and excluded review articles, meta-

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analyses, letters, communications, brief reports, case reports, retrospective chart reviews, news articles and data obtained from public databases (ie, data collected for purposes other than research, such as state records and national epidemiological surveillance programmes). As this research did not involve human subjects, it was exempt from institutional review board (IRB) review at our institution. According to 45 CFR 46, the established code of human subject research regulation in the USA, the country in which we work, studies only require IRB review if they involve human subject research. These regulations define human subject research as involving a 'living individual about whom an investigator … conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information'. For this study, we did not interact with the authors of the published papers in any way, or collect any private information. Rather, we simply conducted a literature review, relying on publicly available, published articles. Moreover, we did not identify individuals in any way whatsoever.

Two research assistants, closely supervised by the senior author, independently coded the articles meeting the inclusion criteria. First, they each independently coded a sample of 10 articles, consisting of at least two articles from each country. They then developed a coding manual, and subsequently coded 10 more articles independently and compared the results, revising the manual as necessary. They coded additional sets of 10 articles independently, comparing results and discussing any disagreements until they reached complete consensus. All articles were then recoded using the final codebook. The articles were coded for factors in categories related to ethical characteristics (ie, mention of informed consent, financial and non-financial compensation and COI); study characteristics (ie, the type of intervention, the study being a clinical trial or not, and the study involving more than minimal risk or not); study population (ie, the study involving vulnerable populations); funding characteristics (ie, the source of funding being mentioned or not); authorship characteristics (ie, the percentage of sponsor authors is ≥50%, country of corresponding author and name of sponsor country); and journal characteristics (ie, the location of the journal editor and the journal being affiliated with ICMJE or not). To explore potential differences among countries, we assessed rates both between all countries in a four-way analysis and between each country compares with all other countries.

In this analysis, we chose mention of funding source or COI (ie, whether the article mentioned or did not mention the presence or absence of a funding source or a COI, respectively) as the primary outcome variables. We used χ^2 tests to examine the association between mention of funding sources (or COI) with other characteristics of the article. We employed logistic regression analyses to identify further important associations of mention of funding sources. All variables associated with mention of funding source at $p<0.10$ in the χ^2 tests were entered in the logistic regression model.

RESULTS

As shown in table 1, of the 590 articles found on Medline searches, 221 (37.5%) met the inclusion criteria.

As illustrated in table 2, overall, of 221 articles, 150 (67.9%) disclosed the presence or absence of a funding source, but only 44 (20%) disclosed COI. Four-way analysis by country showed that there were significant differences in disclosures of funding source by country ($p<0.001$). Individual country analyses showed that studies from Uganda (vs all other countries) were more likely to mention funding source ($p<0.001$) and that studies from Nigeria (vs all other countries) were less likely to do so ($p<0.001$). There was a trend for studies from Nigeria to be less likely to mention COI.

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Table 3 summarises associations between disclosures of funding or COI versus independent variables that reflect ethical and other characteristics of the published studies. Disclosures of funding and COI were associated with each other as a trend (p=0.010). Disclosure of funding was associated with articles having: 50% or more sponsor authors (83% vs 57.9%, p<0.001), corresponding author from the sponsor country (83% vs 49.5%, p<0.001), USA as the sponsor country of research study (p<0.001), and the journal having editors from sponsor countries (p<0.001). Disclosure of funding sources was correlated as a trend with the published study being a clinical trial (85% vs 33.8%, p=0.085), and the journal being ICMJE-affiliated (80.6% vs 65.4%, p=0.075). COI disclosure was associated with the study being biomedical rather than psychosocial (24.4% vs 12.8%, p=0.034) and the journals being affiliated with ICMJE (44.4% vs 15.1%, p=0.001), and was correlated as a trend with the published research being a clinical trial (35% vs 18.4%, p=0.076).

Given that articles from Nigeria were less likely to disclose, and those from Uganda were more likely to disclose, we analysed these data further, and found that studies conducted in Nigeria, compared with those in other countries, were more likely to be psychosocial (64.7% vs 34.2%, p=0.001) and less likely to be clinical trials (0% vs 10.7%, p=0.046).

We entered the variables that were associated significantly or as a trend with disclosure of funding (country where the research was conducted, mention of COI, study being a clinical trial or not, percentage of sponsor authors, country of corresponding author, sponsor country of research study, journal's compliance with ICMJE guidelines and journal editor's location) into a logistic regression model. As country was a categorical variable, we created an indicator variable using Nigeria as the reference group. As shown in table 4, the country where the study was conducted was shown to be significant, and mention of COI and the USA being the sponsoring country of research showed a trend in significance in predicting disclosure of funding. For COI, as a limited number of variables were significantly associated with disclosure of COI, we did not perform a logistic regression analysis.

DISCUSSION

More than a third of the published studies we examined did not disclose funding source (ie, whether there was a funding source or not) and 80% did not disclose COI (ie, whether or not there was a COI). Disclosure of funding source was associated with the country where the research was conducted. Funding disclosure was also more likely when: 50% or more of the authors were from the sponsoring country; the corresponding author was from the sponsoring country; the sponsor country was the USA and the article was published in a journal in which more of the editors were from sponsored countries. These findings may reflect the possibility that research in which sponsoring countries is involved is more likely to involve funding. However, research without funding should, arguably, also list the fact that no funding was involved, rather than failing to state in any way whether funding was or was not present. Researchers from sponsoring countries may also be more concerned about funding and potential COI, as a result of increased training and sensitisation about these issues.

Disclosure of COI was significantly associated with the type of study intervention (biomedical vs only psychosocial), and the journal listing itself as complying with ICMJE guidelines. Still, importantly, most articles in journals affiliated with ICMJE guidelines did not in fact disclose COI.

The fact that a third of the sampled published articles did not disclose funding and 80% did not disclose COI is of concern. In comparison, Bhargava *et al*[20] found among 12 gastroenterology journals that 33% and 58% of articles did not disclose funding sources and

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COI, respectively, and Weinfurt *et al*[16] found that 71% and 83% of articles on coronary stents did not include statements concerning funding source and COI, respectively. Jagsi *et al*[19] found that 71% of articles in oncology did not report COI. The rates of non-disclosures of COI we found were thus higher than those in studies of articles on gastroenterology and oncology. Rates of non-disclosure of funding sources were comparable to those found in gastroenterology articles, but lower than rates of non-disclosures of actual funding (ie, statements that no funding existed) among articles on stents, as the study by Weinfurt *et al*[16] reported simply whether articles stated that funding existed or not. The study by Weinfurt *et al*[16] did not differentiate between articles that stated that 'no funding was involved' compared with those that made no statement as to whether funding was present or not. However, some of the articles that did not state that funding existed may have in fact had no funding. Therefore, if the articles had stated that fact, the frequency of non-disclosure would have decreased, possibly making it more comparable with the rate in our data. In all, the rates of non-disclosure of COI that we found in articles reporting on research in the developing world were higher than rates found among articles on oncology and gastroenterology—most of which we assume reported on research conducted in the developed world.

It is possible that some of the non-disclosing articles in our sample also did not involve funding. However, given the potential for biased study findings, disclosing that there was in fact no funding or COI, if that is the case, is crucial to assure readers that the study results are indeed impartial. It is also troubling that although ICMJE-affiliated journals have adopted guidelines on disclosing COI,[5] most of the articles we examined, even in these journals, do not mention COI, and almost a fifth do not disclose funding.

Importantly, ICMJE guidelines still do not necessarily provide the reader with these critical pieces of information regarding funding and COI. Rather, access to this information may be limited only to the journal editors. For an article that does not mention funding or COI in any way, the reader still does not know whether no funding or COI exist, or if one or either of these features may exist, but have simply been disclosed to the journal editors and not to the readers. Given the importance of this information for assessing the authors' findings, such ambiguity is very troubling.

Moreover, to date, over 800 journals have signed up to the ICMJE guidelines, but this represents only 6% of all active biomedical journals in the world.[5] Of the articles examined in the present study, only 16% of these articles are in ICMJE-affiliated journals.

The data here thus suggest the importance of giving serious consideration to the possible alteration of journal and ICMJE policies to require that funding and COI information be included in all published articles themselves, to allow readers to assess the article as fully and appropriately as possible. Although one could potentially argue that these suboptimal rates of disclosures concern merely compliance with policies, these data highlight how current policies—at least of ICMJE-affiliated journals—are inherently flawed in that they permit this ambiguity. Therefore, the present study highlights the need for articles reporting on studies that did not receive any funding to state that fact (ie, that no funding was involved), in order to eliminate any ambiguity about whether such funds (and thus of the possibility of COI) were present or absent.

This study has several potential limitations. We examined individual articles rather than journals. However, these data, suggesting relatively low rates of disclosures of funding and COI, are consistent with the handful of earlier studies that have been done—that is, of articles on oncology[19] and gastroenterology.[20] We did not contact each journal individually. However, previous research has shown that 93%[11] of journals have COI policies, but that

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most articles in journals that have COI policies or have adopted ICMJE guidelines do not report COI.[1920] Weinfurt *et al*[16] also found that among articles on coronary stents in ICMJE-affiliated journals, 66% and 75% did not disclose funding source and COI, respectively. Our data, too, show that even among articles in journals that have policies (ie, have officially signed up to the ICMJE guidelines), 19.4% did not disclose funding and 55.6% did not disclose COI. Both our data and past studies thus suggest that current ICMJE guidelines, endorsed by these journals, appear insufficient for providing all readers with this crucial information. One could argue that these authors may have communicated COI and funding to the journal editor and simply not included these important characteristics of the research in the article. However, as above, given rising concerns about funding and COI, our data highlight how this crucial information should also, arguably, be in papers themselves so that readers can readily see this information. Those articles that did not list funding may not have involved any, but given how relatively little is known about these issues -rates of such reporting and factors that may be involved—our goal in the present paper was to explore whether any reporting occurs or not, and if it occurs, what it consists of. We did not contact the authors of these articles themselves directly to assess whether funding or COI were in fact present, because we wanted to examine the information that readers themselves would ordinarily see in reading and evaluating a published article (ie, without themselves having to go to the trouble of contacting the authors for funding and COI information to help gauge whether any bias may be present). Many readers may assume that funding and COI, if not disclosed, are in fact absent, but, as mentioned earlier, that might not in fact be the case. Therefore, the presence or absence of funding and COI information should, we think, be explicitly stated in the articles themselves.

In short, as the first study in English that we know of to explore these issues with regard to research conducted in the developing world, these data, concerning whether and when this information is provided in these articles, shed important light on these corncerns. These findings can help inform future discussions, practice and research, suggesting the need to alter policies to reduce ambiguity and increase rates of such reporting.

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Table 1

Articles sampled meeting inclusion criteria

		Location of research			
		Africa		Asia	
	Total (n=590) % (n)	Nigeria % (n)	Uganda % (n)	India % (n)	Thailand % (n)
Medline search	100.0% (590)	14.6% (86)	24.9% (147)	39.3% (232)	21.2% (125)
Met inclusion criteria	37.5% (221)	15.4% (34)	29.4% (65)	35.7% (79)	19.5% (43)

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Table 2

Disclosures of funding source and COI by country (n=221)

	Funding source disclosure			COI disclosure		
	Mentioned (n)	**Not Mentioned (n)**	**p Value**	**Mentioned (n)**	**Not Mentioned (n)**	**p Value**
All countries (n=221)	67.9% (150)	32.1% (71)	<0.001	20% (44)	80% (177)	NS
India (n=79)	67.1% (53)	32.9% (26)	NS	16.5% (13)	83.6% (66)	NS
Thailand (n=43)	69.8% (30)	30.2% (13)	NS	25.6% (11)	74.4% (32)	NS
Nigeria (n=34)	26.5% (9)	73.5% (25)	<0.001	8.8% (3)	91.2% (31)	0.078
Uganda (n=65)	89.2% (58)	10.7% (7)	<0.001	26.2% (17)	73.8% (48)	NS

p Values represent comparisons between mention and non-mention of funding source and conflict of interest (COI) in a four-way comparison by country in the first row and in two-way comparison by each country (vs all other countries) in the second to fifth rows.

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Table 3

Relationship between disclosure of funding and COI with other characteristics of articles (n=221)

	Funding source disclosure			COI disclosure		
	Mentioned (n)	**Not mentioned (n)**	**p Value**	**Mentioned (n)**	**Not mentioned (n)**	**p Value**
Ethical considerations						
Informed consent						
Yes	68.6% (109)	31.4% (50)	NS	20.1% (32)	79.9% (127)	NS
No	66.1% (21)	33.9% (21)		19.4% (12)	80.6% (50)	
Financial compensation						
Yes	75% (12)	25% (4)	NS	12.5% (2)	87.5% (14)	NS
No	67.3% (138)	32.7% (67)		20.5% (42)	79.5% (163)	
Non-financial benefits						
Yes	100% (5)	0	NS	12.5% (2)	87.5% (14)	NS
No	65.4%(134)	34.6% (71)		20.5% (42)	79.5% (163)	
COI						
Yes	84.1% (37)	15.9% (7)	0.010	–	–	–
No	63.8% (113)	36.2% (64)				
Characteristics of study						
Type of intervention						
Only psychosocial	67.4% (58)	32.6% (28)	NS	12.8% (11)	87.2% (75)	0.034
Biomedical intervention	68.1% (92)	31.9% (43)		24.4% (33)	75.6% (102)	
Clinical trial						
Clinical trial	85% (17)	15% (3)	0.085	35% (7)	65% (13)	0.76
Not a clinical trial	33.8% (68)	66.2% (133)		18.4% (37)	81.6% (164)	
Risk						
More than minimal risk	76% (19)	24% (6)	NS	32% (8)	68% (17)	NS
Not more than minimal risk	66.8% (131)	33.2% (65)		18.4% (36)	81.6% (160)	
Characteristics of participants						
Vulnerable population						
Vulnerable population studied	68.6% (24)	31.4% (11)	NS	17.1 (6)	82.9% (29)	NS
No vulnerable population	67.7% (126)	32.3% (60)		20.4% (38)	79.6% (148)	
Characteristics of funding						

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	Funding source disclosure			COI disclosure		
	Mentioned (n)	**Not mentioned (n)**	**p Value**	**Mentioned (n)**	**Not mentioned (n)**	**p Value**
Source of funding						
Source mentioned	68% (150)			24.7% (37)	75.3% (113)	0.010
Source not mentioned	32% (71)			9.9% (7)	90.1% (64)	
If mentioned (n=146)*: sponsor	85.6% (125)	–	–	24.8% (31)	75.2% (94)	NS
Host	14.4% (21)			9.5% (2)	90.5% (19)	
If sponsor (n=125)†: industry	8% (10)			40% (4)	60% (6)	NS
All other	92% (118)			23.5% (27)	76.5% (88)	
Characteristics of authorship						
% Sponsor authors			<0.001			NS
0% to <50%	57.9% (77)	42.1% (56)		17.3% (23)	82.7% (110)	
50% to 100%	83% (73)	17% (15)		23.9% (21)	76.1% (67)	
Corresponding author‡						
Host	49.5% (51)	50.5% (52)	<0.001	18.4% (19)	81.6% (84)	NS
Sponsor	83.5% (96)	16.5% (19)		21.7% (25)	78.3% (90)	
Name of sponsor country						
Sponsor country is USA	84.6% (88)	15.4% (16)	<0.001	20.2% (21)	79.8% (83)	NS
Any other sponsor country	80.4% (41)	19.6% (10)		23.5% (12)	76.5% (39)	
No sponsor	31.8% (21)	68.2% (45)		16.7% (11)	83.3% (55)	
Characteristics of journal						
Journal editor's locations						
All from sponsor countries	75.6% (99)	24.4% (32)	<0.001	22.9% (30)	77.1% (101)	NS
All from host countries	37.9% (11)	62.1% (18)		13.8% (4)	86.2% (25)	
From both	65.6% (40)	34.4% (21)		16.4% (10)	83.6% (51)	
Journals complying with ICMJE						
Affiliated with ICMJE	80.6% (29)	19.4% (7)	075	44.4% (16)	55.6% (20)	0.001
Not affiliated with ICMJE	65.4% (121)	34.6% (64)		15.1% (28)	84.9% (157)	

*Analysis limited to articles that identified source of funding in article.

†Analysis limited to articles that were sponsored studies.

‡Analysis omitted three journal articles that did not mention corresponding author's country affiliation.

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COI, conflict of interest; ICMJE, International Committee of Medical Journal Editors.

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Table 4

Logistic regression model for associations between article characteristics and mentioning of funding source (n=218)

Variable name	Adjusted OR	95% CI	p Value
Country			
India	.229	0.085 to 0.616	.004
Thailand	.258	0.084 to 0.796	.018
Uganda	.132	0.038 to 0.457	.001
Name of sponsor country is USA	1.922	1.038 to 3.559	.038
Mention of COI	.371	0.134 to 1.024	.056
Journal editors from sponsor countries	1.424	0.889 to 2.280	.142
Corresponding author from sponsoring country	1.911	0.653 to 5.595	.237
Study is a clinical trial	.565	0.134 to 2.370	.435
≥50% Sponsored country authors	1.133	0.400 to 3.209	.814
Journal compliance with ICMJE guidelines	1.127	0.391 to 3.247	.824

COI, conflict of interest; ICMJE, International Committee of Medical Journal Editors.