Published in final edited form as:

AJOB Empir Bioeth. 2018 ; 9(3): 194–205. doi:10.1080/23294515.2018.1510859.

Conflicts of Interest Policies for Authors, Peer Reviewers and Editors of Bioethics Journals

Zubin Master, PhD* [Associate Consultant II],

Biomedical Ethics Research Program, Mayo Clinic, 200 First Street, SW, Rochester, MN 55905,
W: 507-266-1105; Fax: 507-538-0850, Master.Zubin@mayo.edu

Kelly Werner, MD [Resident Physician],

Cohen Children's Medical Center of New York, Northwell Health, 276-01 76th Ave., New Hyde
Park, NY 11040, W: 718-470-3204; Fax: 718-470-3935, kwerner2@northwell.edu

Elise Smith, PhD [Post-Doctoral Fellow],

National Institute of Environmental Health Sciences, National Institutes of Health, Box 12233, Mail
Drop E1 06, Research Triangle Park, NC, USA, 27709, elise.smith@nih.gov

David B. Resnik, PhD, JD [Bioethicist and NIEHS IRB Chair], and

National Institute of Environmental Health Sciences, National Institutes of Health, Box 12233, Mail
Drop E1 06, Research Triangle Park, NC, USA, 27709, W: 919-541-5658; Fax: 919-541-9854,
resnikd@niehs.nih.gov

Bryn Williams-Jones, PhD [Full Professor & Director, Bioethics Program]

Department of Social and Preventive Medicine, School of Public Health, University of Montreal,
Montreal, Canada, bryn.williams-jones@umontreal.ca

Abstract

*Corresponding Author.

AUTHOR CONTRIBUTIONS:

ZM contributed to the conception and design of the study with help from the team, and supervised both coders in data collection. ZM also contributed to selecting bioethics journals, analyzed results and wrote the initial draft of the manuscript. KW contributed to the selection of bioethics journals, collection of COI policies, and was one of two primary coders involved in analyzing COI policies. KW also helped in the analysis of the results and revised the manuscript for important intellectual content. ES contributed to the collection of COI policies, coding of COIs, helped in the analysis of results, and was involved in revising the manuscript for important intellectual content. DBR helped in the conception of the project, collection of data from editors of bioethics journals regarding their COI policies, analysis of results, and revised the manuscript for important intellectual content. BWJ was involved in the conception and design of the project, supervision, analysis of results, and drafting the manuscript for important intellectual content. The authorship order is based on the magnitude and value of individual contributions.

Competing Interests

KW has no editorial affiliations. ES has had an editorial affiliation in the past with *BioéthiqueOnline*. ZM was a former editor of the *Journal of Clinical Research and Bioethics* and is currently an Associate Editor for the *Journal of Bioethical Inquiry*, and on the editorial boards of *Accountability in Research*, *BioéthiqueOnline*, and *World Journal of Stem Cells*. DBR is currently an Associate Editor for *Accountability in Research*, a book review editor for *Monash Bioethics Review*, and sits on the editorial boards of *Journal of Bioscience and Medicine*, *Advances in Medical Ethics*, *The Open Clinical Trials Journal*, *Environmental Health Insights*, *The Open Ethics Journal*, *Developing World Bioethics*, *American Journal of Bioterrorism, Biosecurity and Biodefense*, and *Medicine, Healthcare and Philosophy*. BWJ is the Editor-in-Chief of *BioéthiqueOnline*. Neither *AJOB Empirical Bioethics*, its editorial staff, nor Taylor and Francis had any part in the conduct or reporting of the research outlined in this manuscript.

ETHICAL APPROVAL:

Both institutional review boards (IRB) at Albany Medical College (#3564) and the National Institutes of Health (OHSRP #11391) indicated that asking information from editors did not conform to the definition of human subjects research and thus did not require IRB review.

Background: In biomedical research, there have been numerous scandals highlighting conflicts of interest (COIs) leading to significant bias in judgment and questionable practices. Academic institutions, journals, and funding agencies have developed and enforced policies to mitigate issues related to COI, especially surrounding financial interests. After a case of editorial COI in a prominent bioethics journal, there is concern that the same level of oversight regarding COIs in the biomedical sciences may not apply to the field of bioethics. In this study, we examined the availability and comprehensiveness of COI policies for authors, peer reviewers, and editors of bioethics journals.

Methods: After developing a codebook, we analyzed the content of online COI policies of 63 bioethics journals, along with policy information provided by journal editors that was not publicly available.

Results: Just over half of the bioethics journals had COI policies for authors (57%), and only 25% for peer reviewers and 19% for editors. There was significant variation among policies regarding definitions, the types of COIs described, the management mechanisms, and the consequences for non-compliance. Definitions and descriptions centered on financial COIs, followed by personal and professional relationships. Almost all COI policies required disclosure of interests for authors as the primary management mechanism. Very few journals outlined consequences for non-compliance with COI policies or provided additional resources.

Conclusion: Compared to other studies of biomedical journals, a much lower percentage of bioethics journals have COI policies and these vary substantially in content. The bioethics publishing community needs to develop robust policies for authors, peer reviewers, and editors and these should be made publicly available to enhance academic and public trust in bioethics scholarship.

Keywords

conflicts of interest; bioethics; academic publishing; journal policy

Introduction

In research or clinical practice, conflicts of interest (COI) exists for an individual when they have secondary interests that may compromise judgment or decision-making related to their ethical, legal, or professional obligations. A recent analysis showed that 449,864 U.S. physicians (~48%) reported having received a total of \$2.4 billion in industry payments, mainly to those in surgical specialties (Tringale et al. 2017). Such interests can influence how physicians prescribe, order procedures, refer patients for services, and recruit patients for clinical trials (IOM COI Report 2009). Studies have also shown that commercial sponsorship can produce a significant bias in research (Vartanian, Schwartz, and Brownell 2007; Anglemyer, Krauth, and Bero 2015; Bero et al. 2016; Lundh et al. 2017).

Financial COIs receive the greatest attention because money is a powerful influence on behavior, it is relatively easy to identify, and it is often easier to develop policies addressing financial interests rather than non-financial ones (Rothman 1993; Kempers 2002). Financial interests may come in the form of payment for services rendered (i.e., consultancy or research) including direct payments, grants, honoraria, bursaries, stock options, patents,

licenses, royalties, and gifts (Flanagin 2000). There is, however, growing recognition that non-financial COIs, including professional or personal relationships, and intellectual, ideological, political, or theoretical positions can significantly influence and bias researchers (King et al. 1997). Bias resulting from COIs can occur anywhere throughout the research process, including during study design, recruitment, data collection, analysis and reporting, peer review, and editorial decision-making.

Having a COI does not necessarily mean that one's judgment or decision-making is biased, however, a COI is a risk factor for bias (Williams-Jones 2011). Moreover, in some situations, COIs may be difficult to avoid. For example, researchers may have an interest in obtaining positive results that support their hypotheses. This may lead to confirmation bias making researchers inadvertently discount results that counter their hypothesis. It is often challenging to have researchers admit that they can be biased and that COI policies are pertinent and apply to them (Cain and Detsky 2008). It is generally acknowledged that COIs may be more prevalent and unavoidable than we think and that in some cases, they can be adequately managed (Coleman 2005). For this reason, a major policy initiative has been for researchers to disclose any real or perceived COIs, and in some cases, eliminate them altogether. While many claim that disclosing COIs permits readers to make more informed decisions regarding the validity and utility of research results (Bruton, Sacco, and Didlake 2016), disclosure may inadvertently prejudice the evaluation of research and either increase scrutiny during peer review (Rothman 1993) or make review more favorable because the researcher is perceived as being transparent and thus ethical (Cain, Loewenstein, and Moore 2010). Some studies suggest that disclosure of financial COIs by physicians may backfire, unreasonably increasing patient trust and strengthening their loyalty to physicians (Pearson et al. 2006; Weinfurt et al. 2006). In another study, only a minority of patients were concerned about physician financial incentives, while the majority reported they would still enroll in a clinical trial (Hampson et al. 2006).

Editorial organizations such as the International Committee of Medical Journal Editors (ICMJE), the World Association of Medical Editors (WAME), the Council of Science Editors (CSE), and the Committee on Publication Ethics (COPE) have comprehensive disclosure guidance for authors, peer reviewers, and editors (WAME 2009; COPE 2011; COPE 2016; ICMJE 2017). Most of these policies document various external interests and explain that author COIs should be reported in the manuscript, annual reports, or on journal websites (WAME 2009; COPE 2016; ICMJE 2017). Guidance documents require peer reviewers to declare COIs to journal editors who may decide to recuse themselves from review; editors should also recuse themselves from making editorial decisions if they have COIs (WAME 2009; COPE 2011; CSE 2012; COPE 2016; ICMJE 2017). For example, *JAMA Ophthalmology* specifies situations for editor recusal from decision making, including relationships with authors, institutional affiliation, collaboration, or financial stakes in a company, among others (Gottlieb and Bressler 2017). While guidance documents vary somewhat in their prescriptive detail, they all advise journals to produce their own COI policies.

Although the field of bioethics has considerable influence on biomedical research and clinical practice, little work has been done to understand the responsible conduct of

bioethics research (Master 2011). Bioethics is not immune from issues related to COIs. Several papers have explored how COIs may affect judgment and impartiality in the practice of clinical ethics consultation (Frolic and Chidwick 2010a; Frolic and Chidwick 2010b), research ethics consultations (Cho et al. 2008; Spielman 2008), research ethics review (Lemmens and Freedman 2000; Emanuel, Lemmens, and Elliot 2006; Campbell et al. 2006), and in providing ethical advice as consultants for biotechnology and pharmaceutical companies (Brody et al. 2002; Carroll and McGee 2002; Jansen and Sulmasy 2003; Elliott 2004; Turner 2004; Elliott 2005; Yarborough and Sharp 2006; Sontag 2007; Sharp et al. 2008).

In the context of bioethics scholarship, COIs may have a negative effect on research and publication. They can, perhaps unconsciously, bias moral judgment when developing arguments in an area of scientific or clinical research, or regarding health policy. Various COIs, including financial or personal relationships, or opposition towards a theoretical, religious or political ideology/position, may affect impartiality during peer review or editorial decision-making. These issues in bioethics publication could add legitimacy to certain arguments or positions, influence researchers or policy makers, and orient the direction of health and research policy. It may also influence how scholars teach bioethics, provide clinical ethics consultation, and provide ethics advice to different organizations.

In 2012, the former Editor-in-Chief of the *American Journal of Bioethics*, Dr. Glenn McGee, also served as President for Ethics and Strategic Initiatives at CellTex Therapeutics. Several bioethicists argued that McGee had a conflict between his editorial responsibilities to the journal and the goals of CellTex Therapeutics to promote clinical applications of stem cell interventions that were as yet unapproved by the Food and Drug Administration (Cyranoski 2012). Procedural questions were raised as to whether such conflicting roles could effectively be managed by the publisher (Munthe 2012a). As a result, two journal editors stepped down in response to this conflict of roles and a new Editor-in-Chief was appointed (Cook 2012; Munthe 2012a; Munthe 2012b). At the heart of this situation was questions about whether a value-laden field like bioethics should have bioethicists accepting fees from private companies because of the possible influence on ethical analysis and judgment (Elliott 2005). Some, however, contend that ethics consultation for private businesses should be encouraged and appropriate compensation is permissible (Brody et al. 2002). Around the same time, several members of the editorial board of the *Journal of Clinical Research and Bioethics*, an OMICs open access journal, resigned over concerns about inconsistent peer review and poor editorial management practices (Munthe 2012c). These reports have raised questions about the editorial management practices of bioethics journals, including the management of editor COIs.

The aim of our study is to examine the availability and comprehensiveness of COI policies for authors, peer reviewers, and editors of 63 bioethics journals in order to understand how journal editors perceive and handle COIs during the process of peer review and publication. Using qualitative content analysis, we found that just over half the bioethics journals had COI policies for authors, but only a quarter had policies for peer reviewers and even fewer for editors. Definitions and descriptions of COIs varied among journals, many centering on financial COIs followed by personal and professional relationships. Disclosing COIs was the

main means to address concerns in publication. Very few journals outlined consequences for non-compliance with COI policies and only a few provided additional resources.

Methods

Identifying and Selecting Bioethics Journals

Bioethics journals were identified in 3 ways: (i) journals included in papers examining authorship and publication ethics from previous studies (Borry et al. 2006; Resnik and Master 2011); (ii) searches in Journal Citation Reports and RedJasper; and (iii) searches in [Google.com](https://www.google.com) (Table 1). The latter resulted in either individual journal names or bioethics journal lists containing individual journal names, all of which were included. A total of 133 unique bioethics journals were originally identified and subjected to selection applying inclusion/exclusion criteria to develop a final dataset.

The following criteria were applied for journal inclusion: 1) journals must publish in English, 2) journals must publish original articles and cannot only publish an online newsletter or blog, 3) journals must have a website with a description outlining their subject areas, and 4) the scope of the journal must be in the area of “bioethics” or “medical ethics.” We define “bioethics” and “medical ethics” to include one or more of the following subspecialty areas: the ethics of human subjects research, the responsible conduct of research (a.k.a. research or scientific integrity), health law and ethics, healthcare ethics, care or nursing ethics, disability ethics, genetics and ethics, reproductive ethics, neuroethics, stem cell and embryo ethics, public health ethics, global health ethics, and clinical ethics. Disciplinary journals that did not include bioethics or medical ethics topics were excluded. In addition, business ethics, environmental ethics, and organizational ethics based journals were also excluded if they did not include any of the specific topics described above.

Journal descriptions of all 133 journals were analyzed for all of the four inclusion criteria by a primary coder (KW) and the selection was independently confirmed by a secondary coder (ZM). Five discrepancies between coders were found due to differing interpretations of the journal description and were resolved through discussion and mutual agreement. A final count of 63 journals were included in our dataset for full analysis of COI policies for authors, reviewers, and editors (Table 2).

At the start of this project, there was no comprehensive list of bioethics journals available. In 2015-16, two studies identified the top 50 and later top 100 bioethics journals (Hakkarinen 2015; Hakkarinen 2016). In developing these lists, bioethics journals were identified using various databases and journal article ranking with articles published as early as 1945 and included non-English language publications. After applying our inclusion/exclusion criteria, we identified 63 bioethics journals. A comparison with the top 50 publishing bioethics journals shows that 40 were included in our dataset with the remainder fitting our exclusion criteria. Of the top 100 list, 35 were not found in our searches and 6 were excluded based on our exclusion criteria. Of the 35 excluded journals, 25 were removed because they were non-English (12), had no website description (3), were non-bioethics journals (3), had ended publication (3), were not an academic publisher (2), or were created after our original

searches (2). This indicates that our list of 63 bioethics journals is comparable to other lists and thus suitable for the purpose of analyzing COI policies.

Identifying and Analyzing Journal COI Policies

COI policies for authors, peer reviewers, and editors were first identified through an analysis of extranet website content from the journal's webpage. Websites were analyzed in an orderly manner by examining all tabs and links although most of the information about COIs were in the Instructions to Authors section. COI policies were included if the textual content was obtained directly from the journal's website, within a PDF or other attachment, or from a link to an external webpage containing policy content. The content of an external webpage link of a general website (e.g., www.ICMJE.org) was not captured unless it contained the actual text specific to a COI policy.

As some COI policies, especially for peer reviewers and editors, may not be located on a journal's public website, we obtained contact information of the editorial leadership and staff of bioethics journals and emailed them, asking four questions:

1. Whether the journal has a COI policy (or policies) for authors, peer reviewers, and editors and if so, could they send us the material?
2. What is the journal's policy or procedure on how COIs are handled among authors, peer reviewers, and editors?
3. What happens if a COI of an author, peer reviewer, or editor is not declared and is discovered by a senior editor or editorial staff?
4. Do they provide additional resources on COIs for authors, peer reviewers, and editors?

Of the 63 email inquiries sent out, 35 editors/staff responded (55.6% response rate) by providing information directly in the email and/or as attachments. If website links were sent, they would have to contain the specific COI policy information and not refer to a general website. The questions asked of editors mimic the types of content information we were analyzing in the codebook (described below). Both institutional review boards (IRB) at Albany Medical College (#3564) and the National Institutes of Health (OHSRP #11391) indicated that asking information from editors did not conform to the definition of human subjects research and thus did not require IRB review.

All of the information on COI policies obtained through extranet webpages of journals and from editors was placed in a single document. Journal names, names of editors, and other identifying information was removed to blind coders and prevent bias during analysis.

Codebook

A comprehensive codebook was developed by (i) analyzing international COI policies for authors, peer reviewers, and editors (Ferris and Fletcher 2009; WAME 2009; COPE 2011; COPE 2016; CSE, 2012; ICMJE 2017); (ii) examining two major publisher policies (Wiley 2014; Taylor & Francis 2017); (iii) reviewing the academic literature on ethical, legal, and policy issues related to COI in publications and other research activities; and (iv) inductively

analyzing the content of 4 robust COI policies of bioethics journals. Our rationale for developing a codebook was based on a thorough analysis of the academic literature on ethics of COI to determine what aspects could be considered as elements for journal COI policies. We also examined COI guidance documents from four major international editorial organizations (ICMJE, COPE, WAME, and CSE) and two major publishing houses (Wiley and Taylor & Francis). Many aspects of these guidance documents, e.g., definitions or examples of COIs, are captured in individual journal COI policies and these documents are also referenced. Lastly, we performed an inductive analysis of COI policies of 4 bioethics journals known to have a detailed policy to ensure we were capturing elements specific to COI in bioethics publishing.

The codebook contained seven elements including date of policy, definition of a COI, types and examples of COIs, how COIs are handled, consequences of not addressing COIs, and whether additional resources are provided (see Supplemental Material). We reasoned that these elements should be contained within COI policies for authors, peer reviewers, and editors and as such the coding framework applies to all sets of COI policies. Prior to systematic coding of the entire dataset, a pilot analysis of two journal websites was performed to ensure coders had similar interpretations and the codebook was modified as needed. The presence of a code was counted. For the full analysis of all COI policies, both coders (KW and ES) independently and manually analyzed all the content of COI policies for authors, peer reviewers, and editors.

Statistical Analyses

For our analysis of COI policies, we performed intercoder analyses to assess reliability between two coders and statistical analysis to determine independence of our data. Percent agreements and Cohen's kappa tests were used to assess intercoder reliability (Neuendorf 2002). The range for authors was 79.4%-100% (ave. 95.2%) similarity ($k=0.566896$ to 1.00), peer reviewers was 92.1%-100% (ave. 79.8%) similarity ($k=0.833421$ to 1.00), and editors was 88.9%-100% (ave. 97.6%) similarity ($k=0.76679$ to 1.00) indicating "excellent" intercoder reliability (Neuendorf 2002). Discrepancies in coding COI policies for authors, peer reviewers, and editors were discussed and a common agreement was reached by consensus. As we counted for the presence or absence of each code (nominal data), we performed Pearson's Chi-squared (χ^2) analysis using VassarStats (<http://vassarstats.net/>) to determine statistical independence.

Results

Of the 63 bioethics journals, 57% ($n=36$) had COI policies for authors. The frequency was significantly less for peer reviewers (25%, $n=16$) and editors 19% ($n=12$) ($\chi^2=23.4$; $df=2$, $N=63$, $p<0.00001$). Table 3 provides a breakdown on the presence of specific codes for different elements of the COI policy examined. To maintain anonymity, we have chosen not to identify specific journals by name when providing examples of COI provisions. (Please contact the corresponding author for de-identified raw data.)

Definitions and Descriptions of COIs in Bioethics Journals

The definitions and descriptions of a COI were most comprehensive for authors. Over a third of policies for authors defined COI (37%, n=36) whereas only a few policies defined COIs for peer reviewers and editors ($\chi^2=28.1$; df=2, N=63, $p<0.00001$). For example, four journals (Journal #7, 8, 16, 30) cited Taylor and Francis' COI policy stating "[a] conflict of interest can occur when you (or your employer or sponsor) have a financial, commercial, legal, or professional relationship with other organizations, or with the people working with them, that could influence your research" (Taylor & Francis 2017). However, not every journal within the Taylor and Francis group cited the policy. One of the journals crafted a unique definition, saying, "A conflict of interest exists when an author (or the author's institution or employer) has financial or personal relationships or affiliations that could influence or reasonably be perceived to influence (or bias) the author's decisions, work, or manuscript" (Journal #1). Another journal defined competing interest as "when the authors' interpretation of data or presentation of information may be influenced by their personal or financial relationship with other people or organizations" (Journal #24).

When examining the different types of COIs, most bioethics journal policies defined financial COIs for authors (46%, n=29) or offered financial COIs as an example (48%, n=30) compared to peer reviewers and editors. Two journals (Journal #45 & #48) adopted Wiley's COI policy describing patent and stock ownership and speaker fees as examples indicating that "consultancy fees of USD 10,000 annually or the equivalent of 5% of an author's gross income from the previous year could be considered significant" (Wiley 2014). Nearly a quarter of the policies defined (24%, n=15) and described (22%, n=14) professional relationships for authors as COI. While personal relationships were equally defined for authors (25%, n=16), seldom were examples given. One journal's COI policy gave particular attention to professional and personal relationships, sharing examples such as members of an advocacy group interested in the research, familial connections (Journal #38), and collegial or professional connections. Interestingly, the editors responded indicating that such connections should be reported from 3 years prior to the initiation of the research.

Although nearly half the journals defined financial COIs and almost a quarter defined professional and personal relationships, only a few defined intellectual/theoretical bias, personal rivalry and moral, ideological, or political positions. We also found that nearly half of the COI policies examined for authors (41%, n=26), 13% (n=8) for peer reviewers, and 8% (n=5) for editors had a description or policy definition under the "other" category. Most of these used a catch-all term such as "any," "other," "outside" or "non-financial" association or relationship. However, some policies specified other COIs such as material, affiliation, scholarly, religious, or institutional.

Journal Mechanisms to Address COIs

More than half of the bioethics journals had a procedure or method to address COIs for authors (57%, n=36), but significantly fewer did for peer reviewers (22%, n=14) and editors (6%, n=4) ($\chi^2=20.7$; df=2, N=63, $p<0.0001$). Disclosure was the main means of handling COIs for authors, peer reviewers, and editors. Of the 36 journals having a mechanism to address author COIs, nearly all (97%, n=35) asked authors to disclose various COIs during

manuscript submission. Of these journals, 67% (n=27) explained that COI declarations would be published in the manuscript and 31% (n=11) specified that depending on the nature of the COI, the article might not be acceptable for publication. A few journals developed or adopted disclosure forms which might be published with the article. A couple of editors explained that their policy required all employees to disclose external activities and relationships relevant to the employee's role with the journal, as well as financial interests of the employee or their dependents. Disclosures were made annually and whenever a new activity, relationship or financial interest arose. Disclosures were given to a COI officer who receives and reviews them for potential or real COIs and the officer works with an internal committee to manage or mitigate conflicts (Journal #3, #57).

Consequences of Non-Compliance with the Journal's COI Policy

Although more than half the journals indicated a mechanism to address COIs for authors and nearly a quarter for peer reviewers, policies outlining consequences for non-compliance were much less common. Only 17% (n=11) of COI policies examined outlined the penalties for non-compliance for authors, and even fewer for peer reviewers (5%, n=3) and editors (7%, n=5) ($\chi^2=6.1$; df=2, N=63, $p<0.048$). Interestingly, one bioethics journal thoroughly addressed the issue of nondisclosure by authors (Journal #38). If an inquiry emerged regarding a possible COI that was not disclosed, or was disclosed improperly by an author, an "expression of concern" could be published by the journal while the appropriate authorities conducted an investigation. Author disclosure forms were kept on file by the editor for no less than seven years for the purpose of retrieval during an investigation for a possible COI that may have influenced the author's work. If the investigation found that the author's COI improperly influenced the results reported, the editor, in consultation with the editorial board, could opt to retract the article.

COI Resources Offered by Bioethics Journals

Overall, we found only a few journal COI policies referencing additional resources for authors (17%, n=11), peer reviewers (5%, n=3) and editors (8%, n=8) ($\chi^2=5.0$; df=2, N=63, $p>0.08$). A handful of journals referenced guidance through links from their main publishers, or of ICMJE, COPE, CSE and WAME websites.

Discussion

Just over half (57%) of the journals in our study had COI policies for authors, which is considerably lower than the prevalence in biomedical journals. This is a slight increase over the 43% frequency in bioethics journals reported by Sharp et al. (2008). While the prevalence of COI policies in the late 1990s was low (Krimsky and Rothenberg 2001), recent studies show that the vast majority of biomedical journals have COI policies, with frequencies ranging from 79% to 99% (Anraku et al. 2009; Blum et al. 2009; Kesselheim et al. 2012; Krimsky and Sweet 2009; Probst et al. 2015; Shawwa et al. 2016).

A possible explanation of the difference between the prevalence of COI policies in bioethics and biomedical journals may be the perception that bioethics researchers seldom have significant financial interests. For example, Sharp et al. found that for 460 empirical

bioethics research reports examined, only 5 (2%) had disclosures of research support from a pharmaceutical company or other for-profit corporation; the majority (51%) disclosing support from a governmental agency followed by a private foundation (37%) (Sharp et al. 2008). While this study indicates that bioethicists may be less likely to receive funding from pharmaceutical companies, journal disclosures are not a true representation of all types of COIs. Moreover, bioethics journals publish articles written by individuals from a variety of disciplines, some of whom might be more inclined to receive industry funding, e.g., physicians and other health care practitioners.

Our analysis showed that 25% of bioethics journals had COI policies for peer reviewers and 19% for editors. These results are similar to the frequencies reported in biomedical journals. When examining web-based policies, one study showed that only 7% of ophthalmology journals had COI policies for peer reviewers and 5% for editors (Anraku et al. 2009). Similarly, Smith et al. showed that among 10 top medical journals, only 4 had accessible COI policies for editors, while one journal had an editorial on the subject and another mentioned editorial COIs in their general guidelines (Smith et al. 2012). Policies for COIs for peer reviewers and editors might not be publicly available, thus explaining why some studies report journals having fewer policies. COI policies may be accessed when inviting peer reviewers to assess manuscripts using online manuscript management platforms. More commonly this is done when an initial invitation email is sent out for peer review and the author can decline to review the manuscript for multiple reasons, including a COI. As seen in our study and in studies in the health sciences, editor COI policies are less likely to be in the Instructions for Authors and would be circulated internally to board members. Gottlieb and Bressler explain that since 2003, 442 submissions (8%) of approximately 5,335 submissions required recusal by an Editor-in-Chief of *JAMA Ophthalmology* (Gottlieb and Bressler 2017).

Interestingly, studies that query editors or staff about COI policies show a very different picture than web-based evaluations. While an examination of ophthalmology journals on the web found that only 7% had COI policies for peer reviewers and 5% for editors, these numbers grew to 60% and 33% when editors responded to a questionnaire (Anraku et al. 2009). Cooper et al. asked editors about COI policies and found that 46% of 91 journals responded having a COI policy for peer reviewers and 40% for editors (Cooper et al. 2006). Another study had editorial board members of 121 Japanese journals report that 47.9% did not require editorial board members to disclose COIs (Kojima et al. 2015). While our study did query editors, a higher response rate would have provided a more accurate count of reviewer and editor COI policies among bioethics journal publishers. In the absence of this data, providing an accurate comparison between bioethics and medical and science journals is difficult. Nonetheless, bioethics publishers should be encouraged to have COI policies for reviewers and editors, and to make them publicly available.

We found that most bioethics COI policies for authors focused on financial COIs (46%), but several also acknowledged personal (25%) and professional (24%) relationships, and 11% mentioned moral, ideological or political positions, and intellectual or theoretical bias (8%). More frequently, journals recognized the role of non-financial COIs in research, but policies still almost always define and provide examples of financial COIs while only some

acknowledge non-financial COIs. One study showed a significant increase in the comprehensiveness of COI policies of biomedical journals from 2% in 1995 to 42% in 2003 where they defined “very comprehensive” as containing 8 or more domains: “employment or leadership position in a commercial firm; employment as consultant for commercial firm; family connection; stock ownership; honoraria; research fund or grant support; expert testimony; patents; or other remuneration” (Rowan-Legg et al. 2009).

Given the nature of bioethics scholarship, we were somewhat surprised to see that few journal COI policies cover theoretical/intellectual bias and moral/ideological/political positions. While in some fields, e.g., sociology, authors usually declare their biases and theoretical approaches, and some scholars have called on bioethicists to do the same (Ives and Dunn 2010), bioethics journals do not seem to place as much emphasis on having such provisions in their COI policies. As with most normative fields, reporting major intellectual or theoretical biases is not commonplace and it is understood that arguments will reflect a range of theoretical positions. That being said, individual views and theoretical positions can be influenced by many factors including values, ideology, beliefs, life experience, and individual and institutional pressures, among others. Even personal interests, including career advancement, fame, recognition and friendship, can affect bioethics scholarship (Baylis 2008). Understandably, journals may be reluctant to do more than merely mention intellectual, moral, and political biases as COI because everyone has them and it is difficult to codify into policy whether an intellectual or political position constitutes sufficient bias warranting disclosure. The debate on whether and how to manage non-financial COIs continues (Rodwin 2018; Wiersma et al. 2018). However, if a COI (intellectual or otherwise) may be perceived to have an important influence on the work or its assessment, then such declarations should be considered and possibly noted in the paper.

Several bioethicists note the special nature of COIs when providing ethical advice, something that is inherent to the professional mandate of bioethics, and for which there is no guidance to effectively address these concerns (Elliott 2005; Charland 2008). Supporters of this argument contend that the major objection to COIs in bioethics is that giving ethics advice or education is expected to be impartial, and personal COIs may inadvertently taint the advice or education being delivered. While transparency and disclosure may be a way of showing value commitments, it may be insufficient to truly address them. Disclosures raise a red flag but do not rid us of the influence of personal interests in providing bioethics education or advice. For some, the only effective way to manage personal and professional COIs is to recuse oneself from the conflicting role (Baylis 2008).

In our study, all bioethics journals having a COI policy for authors also had a procedure to address such situations; all but one journal (97%) required authors to disclose their COIs during manuscript submission and many policies (67%) specified they would publish the disclosure. Disclosure as a management mechanism is commonly seen in studies examining COI policies of biomedical and clinical science journals (Cooper et al. 2006; Anraku et al. 2009; Blum et al. 2009; Krinsky and Sweet 2009; Rowan-Legg et al. 2009; Kesselheim et al. 2012; Probst et al. 2015; Shawwa et al. 2016). What is less commonly written in COI policies is that the editorial team can refuse to publish an article due to a COI. In our study, only 31% of the bioethics journals outlining a procedure to handle COI of authors stated

explicitly that the editors have the right to refuse to publish an article. Similarly, one study noted that only 11% of the biomedical journals specified restriction of the publication (Cooper et al. 2006). A final important point to mention is how editors actively monitor COIs and assess what type of action, if any, is required. Guidance by COPE explains that journals should have a mechanism for managing COIs and provides several hallmarks for consideration including cases, flowcharts for addressing undisclosed COIs, reporting COIs in the manuscript, and when it might be appropriate to retract an article for an undisclosed COI (COPE 2016). We suspect that editors likely differ in how they manage COIs and reach decisions. Additional research on editorial decision-making concerning COIs in bioethics journals would enhance our understanding of COIs in this field and serve as a basis for editor best practices.

Addressing issues of non-compliance, such as a failure of authors to disclose COIs, was found in 17% of bioethics journal policies. This is similar to results from different studies showing that 5% of toxicology journals and 9% of medical journals specified penalties or sanctions for violations (Krimsky and Sweet 2009) and 11% of biomedical journals had a policy to deal with authors failing to disclose a COI (Cooper et al. 2006). If the COI is suggested to be associated with significant bias in a paper, journals can write a correction notice or retract the article, although full retraction for non-disclosed COI is rarer. COPE mentions that retraction is justified given a failure to disclose a major competing interest likely to influence interpretations or recommendations (COPE 2009). However, the issue remains that many individuals may have read or cited the research beforehand. Preventing retraction is always the ideal situation which makes clear COI policy directives of central importance.

Limitations

There are several important limitations in this study worth noting. First, our approach to journal identification and selection of topics was determined by a rational systematic approach but would not be universal given the various definitions of bioethics. And while our study focused on bioethics journals, bioethicists publish in a range of science and medical journals, among others, which were not included in our sample. As such, the study is limited to COI policies among bioethics journal publishers, not how bioethicists address COI in publication more generally. A second limit to our approach was the reliance on editors to provide us with information regarding COI policies for authors, peer reviewers, and editors. Given the approximate 56% response rate and the variability in how editors responded, COI policies in bioethics journals could be underreported. Lastly, our analysis of bioethics policies was performed in 2015 and since then some journals may have improved their COI policies.

Conclusions

Compared to biomedical journals, bioethics journals have significantly fewer COI policies available for authors, and likely fewer for peer reviewers and editors. There was also significant variability among journal policies. The content of COI policies was comparable to biomedical journals in that bioethics journals focused on financial COI and less often on

non-financial COI, and disclosure and reporting in the manuscript was the main procedure that publishers used to address COI situations.

We encourage bioethics journal editors and publishers to draft COI policies and place them directly in their Instructions to Authors. To enhance transparency and accountability, peer review and editorial COI policies should also be visible and readily accessible on journal websites. A robust policy contains several elements including a definition of COIs, identifying and providing examples, and clear guidance on the types of financial and non-financial COIs. For the latter, we suggest that bioethics editors initiate a conversation on what might constitute an intellectual COI or theoretical bias, or major leaning towards a political or moral ideology or religious doctrine that can affect peer review and the handling of manuscripts by editors. Perhaps from such discourse, more comprehensive provisions could be drafted surrounding theoretical, intellectual, political, and ideological interests. A robust COI policy for authors, peer reviewers, and editors should also outline how COIs will be evaluated and handled, and the consequences for non-compliance. Lastly, given that COI policies also serve to educate stakeholders, additional resources such as web links to COPE, CSE, ICMJE, WAME and other international organizations, and to large publishing houses such as Wiley or Springer, should be provided. Having a robust COI policy will heighten the integrity of bioethics journals and help enhance ethical publication practices in the field.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

We would like to acknowledge Dr. Paul Feustel for providing advice and help with the statistical analysis and Mr. Devin Midura for help with some of the analysis of this project. The research undertaken here was partly supported by a research grant from the Committee on Publication Ethics (ZM and BWJ). ZM is also partly supported through the National Center for Advancing Translational Sciences (NCATS) (UL1 TR002377) grant at Mayo Clinic. We would like to thank the three anonymous peer reviewers for helpful feedback on the manuscript.

FUNDING:

The research undertaken here was partly supported by a research grant from the Committee on Publication Ethics (PI: ZM, Albany Medical College and Co-I: BWJ, University of Montreal). ZM is also partly supported through the National Center for Advancing Translational Sciences (NCATS) (UL1 TR002377) grant at Mayo Clinic. ES is supported by a collaborative fellowship from the National Institutes of Health (NIH) and the *Fonds de Recherche du Québec en Santé* (FRQ-S). DBR is funded by the Intramural Program of the National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health (NIH). The opinions expressed in this paper do not represent those of NIEHS, NIH, FRQ-S, or any governmental institution.

References

- Anglemyer AT, Krauth D, and Bero L. 2015 Industry sponsorship and publication bias among animal studies evaluating the effects of statins on atherosclerosis and bone outcomes: a meta-analysis. *BMC Medical Research Methodology* 15:12. doi: 10.1186/s12874-015-0008-z [PubMed: 25880564]
- Anraku A, Jin YP, Trope GE, and Buys YM. 2009 Survey of conflict-of-interest disclosure policies of ophthalmology journals. *Ophthalmology* 116(6):1093–6. [PubMed: 19376583]
- Baylis F 2008 A commentary in response to: By what authority? Conflicts of interest in professional ethics. *Journal of Ethics in Mental Health* 3(2).

- Bero L, Anglemeyer A, Vesterinen H, and Krauth D. 2016 The relationship between study sponsorship, risks of bias, and research outcomes in atrazine exposure studies conducted in non-human animals: Systematic review and meta-analysis. *Environmental International* 92-93:597–604.
- Blum JA, Freeman K, Dart RC, and Cooper RJ. 2009 Requirements and definitions in conflict of interest policies of medical journals. *JAMA* 302(20):2230–4. [PubMed: 19934424]
- Borrie P, Schotsmans P, and Dierickx K. 2006 Author, contributor or just a signer? A quantitative analysis of authorship trends in the field of bioethics. *Bioethics* 20(4):213–20. [PubMed: 17044155]
- Brody B, Dubler N, Blustein J, et al. 2002 Bioethics consultation in the private sector. *Hastings Center Report* 32(3):14–20.
- Bruton SV, Sacco DF, and Didlake R. 2016 Financial conflicts of interest, disclosure, and academic discipline. *Journal of Empirical Research on Human Research Ethics* 11(2):165–9. [PubMed: 27009304]
- Cain DM, and Detsky AS. 2008 Everyone's a little bit biased (even physicians). *JAMA* 299(24):2893–5. [PubMed: 18577735]
- Campbell EG, Weissman JS, Vogeli C, et al. 2006 Financial relationships between institutional review board members and industry. *New England Journal of Medicine* 355(22):2321–9. [PubMed: 17135585]
- Carroll KA, and McGee G. 2002 Conflict of interest and AJOB. *American Journal of Bioethics* 2(3):1–2.
- Charland L. 2008 By what authority? Conflicts of interest in professional ethics. *Journal of Ethics in Mental Health* 3(2).
- Cho MK, Tobin SL, Greely HT, McCormick J, Boyce A, and Magnus D. 2008 Strangers at the benchside: research ethics consultation. *American Journal of Bioethics* 8(3):4–13.
- Coleman S. When conflicts of interest are an unavoidable problem; Australian Association for Professional and Applied Ethics 12th Annual Conference; Adelaide. 2005. https://www.researchgate.net/publication/265404753_When_conflicts_of_interest_are_an_unavoidable_problem
- Committee on Publication Ethics (COPE). 2009 Retraction Guidelines. Available at: https://publicationethics.org/files/retraction%20guidelines_0.pdf (accessed November 16, 2017).
- Committee on Publication Ethics (COPE). 2011 Code of Conduct and Best Practice Guidelines for Journal Editors. Available at: https://publicationethics.org/files/Code%20of%20Conduct_2.pdf (accessed November 15, 2017).
- Committee on Publication Ethics (COPE). 2016 Discussion/guidance document on handling competing interests. Available at: https://publicationethics.org/files/u7140/Discussion_document_on_handling_competing_interests.pdf (accessed November 15, 2017).
- Cook M. 2012 American bioethics shaken by dispute over conflict of interest. *BioEdge*. Available at: https://www.bioedge.org/bioethics/bioethics_article/9934 (accessed November 16, 2017).
- Cooper RJ, Gupta M, Wilkes MS, and Hoffman JR. 2006 Conflict of Interest disclosure policies and practices in peer-reviewed biomedical journals. *Journal of General Internal Medicine* 21(12):1248–52. [PubMed: 17105524]
- Council of Science Editor's Editorial Policy Committee. 2012 CSE's White Paper on Promoting Integrity in Scientific Journal Publications, 2012 Update. Available at: <https://www.councilscienceeditors.org/resource-library/editorial-policies/white-paper-on-publication-ethics/> (accessed November 16, 2017).
- Cyranoski D. 2012 Editor's move sparks backlash. *Nature* 482(7386):449–50. [PubMed: 22358804]
- Elliott C. 2004 Six problems with pharma-funded bioethics. *Studies in History and Philosophy of Biological and Biomedical Sciences* 35:125–9.
- Elliott C. 2005 Should journals publish industry-funded bioethics articles? *Lancet* 366(9483):422–4. [PubMed: 16054943]
- Emanuel EJ, Lemmens T, and Elliot C. 2006 Should society allow research ethics boards to be run as for-profit enterprises? *PLoS Medicine* 3(7):e309. 10.1371/journal.pmed.0030309. [PubMed: 16848618]

- Ferris LE, and Fletcher RH. 2009 Conflict of Interest in Peer-Reviewed Medical Journals: The World Association of Medical Editors (WAME) Position on a Challenging Problem. Available at: <http://www.wame.org/about/wame-editorial-on-coi> (accessed November 16, 2017).
- Flanagin A 2000 Conflict of interest In: Anne Hudson Jones FM, editor. Ethical Issues in Biomedical Publication, ed. Hudson Jones A, 137–65. Baltimore, MD: Johns Hopkins University Press.
- Frolic A, and Chidwick P. 2010 A pilot qualitative study of “conflicts of interests and/or conflicting interests” among Canadian bioethicists. Part 1: Five cases, experiences and lessons learned. HEC Forum 22(1):5–17. [PubMed: 20431915]
- Frolic A, and Chidwick P. 2010 A pilot qualitative study of “conflicts of interests and/or conflicting interests” among Canadian bioethicists. Part 2: Defining and managing conflicts. HEC Forum 22(1):19–29. [PubMed: 20431914]
- Gottlieb JD, and Bressler NM. 2017 How should journals handle the conflict of interest of their editors?: Who watches the “watchers”? JAMA 317(17):1757–8. [PubMed: 28464152]
- Hakkarinen M 2015 Top 100 Bioethics Journals in the World. Georgetown Library Available at: <http://hdl.handle.net/10822/1043496> (accessed November 16, 2017).
- Hakkarinen M 2016 Top 50 Bioethics Journals and Top 250 Most Cited Bioethics Articles Published 2011-2015. Georgetown University Available at: <http://hdl.handle.net/10822/1043487> (accessed November 16, 2017).
- Hampson LA, Agrawal M, Joffe S, Gross CP, Verter J, and Emanuel EJ. 2006 Patients’ views on financial conflicts of interest in cancer research trials. New England Journal of Medicine 355(22): 2330–7. [PubMed: 17135586]
- International Committee of Medical Journal Editors (ICMJE). 2017 Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. Available at: <http://www.icmje.org/icmje-recommendations.pdf> (accessed August 3, 2018).
- Ives J, and Dunn M. 2010 Who’s arguing? A call for reflexivity in bioethics. Bioethics 24(5):256–65. [PubMed: 20500762]
- Jansen LA, and Sulmasy DP. 2003 Bioethics, conflicts of interest, & the limits of transparency. Hastings Center Report 33(4):40–3. [PubMed: 12971060]
- Kempers RD 2002 Ethical issues in biomedical publications. Fertility Sterility. 77(5):883–8. [PubMed: 12009339]
- Kesselheim AS, Lee JL, Avorn J, Servi A, Shrank WH, and Choudhry NK. 2012 Conflict of interest in oncology publications: a survey of disclosure policies and statements. Cancer 118(1):188–95. [PubMed: 21717432]
- Kojima T, Green J, and Barron JP. 2015 Conflict-of-interest disclosure at medical journals in Japan: a nationwide survey of the practices of journal secretariats. BMJ Open. 5(8):e007957. doi: 10.1136/bmjopen-2015-007957.
- King CR, McGuire DB, Longman AJ, and Carroll-Johnson RM. 1997 Peer review, authorship, ethics, and conflict of interest. Image—Journal of Nursing Scholarship 29(2):163–7.
- Krimsky S, and Rothenberg LS. 2001 Conflict of interest policies in science and medical journals: editorial practices and author disclosures. Science and Engineering Ethics 7(2):205–18. [PubMed: 11349360]
- Krimsky S, and Sweet E. 2009 An analysis of toxicology and medical journal conflict-of-interest policies. Accountability in Research 16(5):235–53. [PubMed: 19757230]
- Lemmens T, and Freedman B. 2000 Ethics review for sale? Conflict of interest and commercial research review boards. Milbank Quarterly 78(4):547–84, iii–iv. [PubMed: 11191449]
- Lundh A, Lexchin J, Mintzes B, Schroll JB, and Bero L. 2017 Industry sponsorship and research outcome. Cochrane Database of Systematic Reviews 2:MR000033. doi: 10.1002/14651858.MR000033.pub3
- Master Z 2011 The responsible conduct of bioethics research. Accountability in Research 18(2):102–19. [PubMed: 21390874]
- Munthe C 2012a John Lantos resigns from the AJOB editorial board: Philosophical Comment. Available at: <http://philosophicalcomment.blogspot.com/2012/02/john-lantos-resigns-from-ajob-editorial.html> (accessed November 16, 2017).

- Munthe C 2012b David Magnus Defends the New Managerial Solution for AJOB as Udo Schuklenk Resigns from the Editorial Board. Philosophical Comment Available at: <http://philosophicalcomment.blogspot.com/2012/02/david-magnus-defends-new-managerial.html> (accessed November 16, 2017).
- Munthe C 2012c Further Deterioration in Bioethics: The Journal of Clinical Research and Bioethics. Philosophical Comment Available <http://philosophicalcomment.blogspot.com/2012/01/further-deterioration-in-bioethics.html> (accessed November 16, 2017).
- Neuendorf KA 2002 The content analysis guidebook. Thousand Oaks, CA: Sage Publications Inc.
- Pearson SD, Kleinman K, Rusinak D, and Levinson W. 2006 A trial of disclosing physicians' financial incentives to patients. *Archives of Internal Medicine* 166(6):623–8. [PubMed: 16567600]
- Probst P, Huttner FJ, Klaiber U, Diener MK, Buchler MW, and Knebel P. 2015 Thirty years of disclosure of conflict of interest in surgery journals. *Surgery* 157(4):627–33. [PubMed: 25704418]
- Resnik DB, and Master Z. 2011 Authorship policies of bioethics journals. *Journal of Medical Ethics* 37(7):424–8. [PubMed: 21266387]
- Rodin M 2018 Should we try to manage non-financial interests? No. *BMJ* 361:k1240.
- Rothman KJ 1993 Conflict of interest. The new McCarthyism in science. *JAMA* 269(21):2782–4. [PubMed: 8192721]
- Rowan-Legg A, Weijer C, Gao J, and Fernandez C. 2009 A comparison of journal instructions regarding institutional review board approval and conflict-of-interest disclosure between 1995 and 2005. *Journal of Medical Ethics* 35(1):74–8. [PubMed: 19103950]
- Sharp RR, Scott AL, Landy DC, and Kicklighter LA. 2008 Who is buying bioethics research? *American Journal of Bioethics* 8(8):54–8; discussion W1–2.
- Shawwa K, Kallas R, Koujanian S, et al. 2016 Requirements of clinical journals for authors' disclosure of financial and non-financial conflicts of interest: a cross sectional study. *PLoS One* 11(3):e0152301. doi: 10.1371/journal.pone.0152301. [PubMed: 27030966]
- Smith E, Potvin MJ, and Williams-Jones B. 2012 Accessibility and transparency of editor conflicts of interest policy instruments in medical journals. *Journal of Medical Ethics* 38(11):679–84. [PubMed: 22556312]
- Sontag DN 2007 What is wrong with “ethics for sale”? An analysis of the many issues that complicate the debate about conflicts of interests in bioethics. *Journal of Law, Medicine & Ethics* 35(1):175–86.
- Spielman B 2008 Conflicts of interest in research ethics consultation: where to go from here? *American Journal of Bioethics* 8(3):17–8.
- Taylor & Francis. 2017 What is a conflict of interest? Available at: <http://authorservices.taylorandfrancis.com/what-is-a-conflict-of-interest/> (accessed November 16, 2017).
- Tringale KR, Marshall D, Mackey TK, Connor M, Murphy JD, and Hattangadi-Gluth JA. 2017 Types and distribution of payments from industry to physicians in 2015. *JAMA* 317(17):1774–84. [PubMed: 28464140]
- Vartanian LR, Schwartz MB, and Brownell KD. 2007 Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis. *American Journal of Public Health* 97(4):667–75. [PubMed: 17329656]
- Weinfurt KP, Friedman JY, Allsbrook JS, Dinan MA, Hall MA, and Sugarman J. 2006 Views of potential research participants on financial conflicts of interest: barriers and opportunities for effective disclosure. *Journal of General Internal Medicine* 21(9):901–6. [PubMed: 16918732]
- Wiersma M, Kerridge I, and Lipworth W. 2018 Should we try to manage non-financial interests? Yes. *BMJ* 361:k1240.
- Wiley. 2014 Wiley's Best Practice Guidelines on Publishing Ethics: A Publisher's Perspective, Second Edition. Available at: <https://authorservices.wiley.com/ethics-guidelines/index.html> (accessed November 16, 2017),
- Williams-Jones B 2011 Beyond a pejorative understanding of conflict of interest. *American Journal of Bioethics* 11(1):1–2.
- World Association of Medical Editors (WAME). 2009 Conflict of Interest in Peer-Reviewed Medical Journals. Available at: <http://www.wame.org/about/conflict-of-interest-in-peer-reviewed-medical> (accessed November 15, 2017).

Yarborough M, and Sharp RR. 2006 Bioethics consultation and patient advocacy organizations: expanding the dialogue about professional conflicts of interest. *Cambridge Quarterly of Healthcare Ethics* 16(1):74–81.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 1.

Search Methods Used to Identify “Bioethics” Journals

Search Method	Search Terms	Results
Journal Citation Reports Web 4.5 database (ISI Web of Knowledge) database	“medical ethics” and “medicine, legal”	31 journals
RedJasper Journal-Ranking website (www.journalranking.com)	“medical ethics” and “ethics”	42 journals
Google (www.google.com)	“bioethics journals”	From first 30 websites: 13 journals and 6 journal lists

Table 2.**Comprehensive List of Bioethics Journals**

Accountability in Research
Acta Bioethica
American Journal of Bioethics
AJOB Neuroscience
AJOB Empirical Bioethics
American Journal of Law and Medicine
Asian Bioethics Review
Bioethics
BMC Medical Ethics
Cambridge Quarterly of Healthcare Ethics
Christian Bioethics
Clinical Ethics
Developing World Bioethics
Ethics & Behavior
EUBIOS Journal of Asian and International Bioethics
European Journal of Health Law
Genomics, Society and Policy
Guinea Pig Zero: A Journal for Human Research Subjects
Hastings Center Report
Health Progress
Health Care Analysis
HEC Forum
Houston Journal of Health Law & Policy
Human Life Review
Human Reproduction & Genetic Ethics
Indian Journal of Medical Ethics
International Journal of Feminist Approaches to Bioethics
IRB: Ethics & Human Research
JONA's Healthcare Law, Ethics and Regulation
Journal of Bioethical Inquiry
Journal of Clinical Ethics
Journal of Clinical Research and Bioethics
Journal of Empirical Research on Human Research Ethics
Journal of Forensic and Legal Medicine
Journal of Health Politics, Policy and Law
Journal of Law, Medicine and Ethics
Journal of Legal Medicine
Journal of Medical Ethics

Journal of Medical Ethics and History of Medicine
Journal of Medical Humanities
Journal of Medicine and Philosophy
Journal of Medicolegal and Bioethics
Kennedy Institute of Ethics Journal
Lahey Clinic Medical Ethics Journal
Linacre Quarterly
Medical Humanities
Medicine, Healthcare and Philosophy
The Milbank Quarterly
Monash Bioethics Review
Narrative Inquiry in Bioethics
National Catholic Bioethics Quarterly
New Genetics and Society
Neuroethics
Nursing Ethics
Online Journal of Health Ethics
Penn Bioethics Journal
Philosophy, Ethics, and Humanities in Medicine
Public Health Ethics
Science and Engineering Ethics
South African Journal of Bioethics and Law
Theoretical Medicine and Bioethics
Virtual Mentor
Yale Journal of Health Policy, Law and Ethics

Table 3:

Content of COI Policies for Authors, Peer Reviewers and Editors of Bioethics Journals

Elements of a COI Policy	Authors% (N)	Peer Reviewers% (N)	Editors % (N)
Policy contains a created and/or revised date	2% (1)	0% (0)	3% (2)
Policy defines COI	37% (23) *	5% (3) *	8% (5) *
Policy identifies different types of COIs			
Financial	46% (29) *	8% (5) *	6% (4) *
Gifts	0% (0)	0% (0)	3% (2)
Professional rivalry	2% (1)	2% (1)	0% (0)
Professional relationships	24% (15)	5% (3)	3% (2)
Personal relationships	25% (16)	8% (5)	3% (2)
Intellectual/theoretical bias	8% (5)	5% (3)	3% (2)
Moral, ideological, political positions	11% (7)	3% (2)	3% (2)
Other	41% (26)	13% (8)	8% (5)
Policy provides a description or examples of different types of COIs			
Financial	48% (30) *	6% (4) *	8% (5) *
Gifts	3% (2)	0% (0)	2% (1)
Professional rivalry	2% (1)	0% (0)	0% (0)
Professional relationships	22% (14)	6% (4)	6% (4)
Personal relationships	2% (1)	0% (0)	3% (2)
Intellectual/theoretical bias	0% (0)	0% (0)	0% (0)
Moral, ideological, political positions	0% (0)	0% (0)	2% (1)
Other	6% (4)	3% (2)	3% (2)
Policy provides a method to address or handle COIs	57% (36) *	22% (14) *	6% (16) *
Policy outlines consequences for non-compliance	17% (11) *	5% (3) *	7% (5) *
Policy provides additional resources	17% (11)	5% (3)	8% (8)

* denotes statistically significant differences ($p < 0.05$) between COI policies for authors, peer reviewers, and editors. Statistical analysis was not performed for all comparisons due to low counts.