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# Editorial Independence at Medical Journals Owned by Professional Associations: A Survey of Editors

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**Keywords:** editors, editorial independence, editorial freedom, medical journals, scientific journals

**ABSTRACT:** *The purpose of this study was to assess the degree of editorial independence at a sample of medical journals and the relationship between the journals and their owners. We surveyed the editors of 33 medical journals owned by not-for-profit organizations (“associations”), including 10 journals represented on the International Committee of Medical Journal Editors (nine of which are general medical journals) and a random sample of 23 specialist journals with high impact factors that are indexed by the Institute for Scientific Information. The main outcome measures were the authority to hire, fire, and oversee the work of the editor; the editor’s tenure and financial compensation; control of the journal’s budget; publication of material about the association; and the editor’s perceptions about editorial independence and pressure over editorial content. Of the 33 editors, 23 (70%) reported having complete editorial freedom, and the remainder reported a high level of freedom (a score of  $\geq 8$ , where 10 equals complete editorial freedom and 1 equals no editorial freedom). Nevertheless, a substantial minority of editors reported having received at least some pressure in recent years over editorial content from the association’s leadership (42%), senior staff (30%), or rank-and-file members (39%). The association’s board of directors has the authority to hire (48%) or fire (55%) the editor for about half of the journals, and the editor reports to the board for 10 journals (30%). Twenty-three editors (70%) are appointed for a specific term (median term = 5*

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years). Three-fifths of the journals have no control over their profit, and the majority of journals use the association's legal counsel and/or media relations staff. Stronger safeguards are needed to give editors protection against pressure over editorial content, including written guarantees of editorial freedom and governance structures that support those guarantees. Strong safeguards are also needed because editors may have less freedom than they believe (especially if they have not yet tested their freedom in an area of controversy).

## INTRODUCTION

On January 15, 1999 the American Medical Association (AMA) dismissed Dr. George Lundberg from his post as editor of the *Journal of the American Medical Association (JAMA)*, a position he had held for 17 years. This action was prompted by publication of an article in *JAMA* reporting data from a 1991 survey of university students conducted by the Kinsey Institute, concerning their views about the meaning of "having sex."<sup>1</sup> The results of the study were published during the Congressional impeachment proceedings involving US President Bill Clinton, in which his interpretation of "having sex" was a matter of contention. In a press release, the Executive Vice President of the AMA said that Lundberg had "threatened the historic tradition and integrity of the *Journal of the American Medical Association* by inappropriately and inexcusably interjecting *JAMA* into a major political debate that has nothing to do with science or medicine."<sup>2</sup>

Many observers believed, and AMA officials confirmed, that the reasons for the firing of Lundberg extended beyond publication of the article about sex.<sup>3,4</sup> Nevertheless the AMA's action was widely interpreted as an egregious encroachment on the journal's editorial independence, and was condemned by journal editors and many others.<sup>5-19</sup>

Six months later another sentinel event involving the editor of a leading medical journal occurred. On July 25, 1999 the Massachusetts Medical Society, publisher of the *New England Journal of Medicine (NEJM)*, announced that it would not renew its contract with Dr. Jerome Kassirer, the journal's editor-in-chief for the past eight years.<sup>20,21</sup> The society cited, as the reason for its action, "honest differences of opinion between Dr. Kassirer and the Medical Society over administrative and publishing issues."<sup>20</sup> "Behind this oblique explanation," wrote Dr. Marcia Angell, who succeeded Kassirer as editor-in-chief, "lay a long-standing struggle between Kassirer and the society's leadership over the latter's ambitious plans to expand its role as a medical publisher, both in print and online, by launching and acquiring new publications, repackaging the *Journal's* content for consumers, and entering into joint arrangements ('cobranding') with various information-based commercial enterprises."<sup>22</sup>

The society, according to unnamed sources, planned to spin off "a slew of 'New England Journals' of cardiology, gastroenterology, and so on" using articles rejected for publication in *NEJM*.<sup>23,24</sup> Kassirer had argued that "it was misleading to use this highly respected brand name to promote other products simply because the Society

owned the *Journal*” and that “such ‘cobranding’ would sully the *Journal*’s reputation.”<sup>25</sup> The society, on the other hand, considered these arrangements to be good business practice and supportive of the organization’s educational mission.<sup>22</sup>

As in the case of the Lundberg firing, the abrupt departure of Kassirer provoked a litany of negative commentary from journal editors and others.<sup>24, 26-34</sup> Throughout the controversy both Kassirer and the society’s leadership emphasized that their disagreement was not about editorial independence, which the society had always supported.<sup>20,35,36</sup>

The AMA sought to resolve the crisis over the *JAMA* editorship by appointing a blue-ribbon search committee to help the association develop a new governance structure for the journal and select a new editor. The products of this effort were the creation of a journal oversight committee, enactment of special protections against dismissal of the editor, adoption of a clear statement that the editor has “total responsibility for the editorial content of *JAMA*,” and the appointment of a new editor.<sup>37,38</sup> The Massachusetts Medical Society also appointed a new editor with the help of a blue-ribbon search committee.<sup>39,40</sup> During the search for a new editor, vigorous debate occurred within the society with regard to governance of the journal and use of its name, logo, and content in other products.<sup>41,42</sup> In the press release announcing the appointment of a new editor, the society announced that he “will be vested with all of the authority and prerogatives that we have given to all of the editors before him ... complete editorial freedom and complete authority over the editorial content ... [and] complete authority over the brand of the *Journal*, including the use of the name, logo, look and feel, in both the print and electronic versions of the *Journal*.”<sup>40</sup>

Thoughtful papers have been written – before and after the latest crises involving *JAMA* and *NEJM* – on editorial independence and the relationship between journals and the professional associations that own them.<sup>43-45</sup> Editorial freedom has been called “the sine qua non of a respectable medical journal.”<sup>44</sup> When editorial independence is compromised – by pressures from advertisers, by sectarian interests of the publisher, by an editor’s conflict of interest, or by any other factor – the integrity of the research published in the journal is called into question. The journal loses credibility and is less likely to attract manuscripts from authors, to receive assistance from peer reviewers, to be read by researchers and practitioners, to be taken seriously by the lay press, or to be supported by advertisers. If the journal is a leader in its field, the reputational damage may extend to an entire scientific discipline.

The published commentary about these issues and the debate about them among stakeholders have proceeded in a vacuum of data on how medical journals are typically governed. To help define the issues and inform the debate, we conducted a survey of medical journal editors concerning editorial independence and the relationship between journals and their owners.

## METHODS

### SAMPLE

Only journals owned by professional associations and other not-for-profit health organizations were included in the study. Journals owned by for-profit medical publishers were excluded because we assumed that editorial independence and governance matters are either not at issue for these journals, or are different in substance from those likely to arise for journals owned by not-for-profit organizations. For example, a journal's editorial positions on controversial subjects such as abortion or doctor-assisted suicide may be important to the professional association that owns it, but those positions are unlikely to interest a for-profit publisher (as long as they do not affect revenue).

The sampling approach was devised to assure a mix of general medical journals and specialist journals, and a mix of journals from North America and other regions. We included journals represented on the International Committee of Medical Journal Editors (ICMJE) at the time of its meeting in May 1999, with the following exceptions: the *Lancet*, because it is owned by a for-profit publisher; *Index Medicus/Medline*, because it is owned by the US government; and the *Western Journal of Medicine*, because its ownership and editorship had recently changed. Those exclusions left 10 journals in the sample: nine general medical journals and one specialist journal (*Annals of Internal Medicine*) (see Appendix).

We derived a sample of specialist journals as follows. First we obtained a list of the categories of scientific journals used by the Institute for Scientific Information ([www.isinet.com](http://www.isinet.com)) in its Journal Citation Reports.<sup>46</sup> We identified 37 of these categories as being most relevant to medicine and health. We excluded the category "Medicine, General & Internal," because it overlapped with the journals represented on the ICMJE, and we then randomly selected 12 of the remaining 36 categories. Within each of these 12 categories, we selected two journals for inclusion in the sample: the North American journal and the non-North American journal with the highest "impact factor," a measure used to rank journals according to the number of citations to the articles they publish.<sup>47</sup> See the addendum for more information on sampling.

Thus the total sample consisted of 34 journals: 10 journals represented on the ICMJE (nine of which are general medical journals) and 24 specialist journals (besides the *Annals of Internal Medicine*) indexed by the Institute for Scientific Information (Appendix). Of the 34 journals included in the sample, 31 are owned by one or more professional associations. Two of the journals (*Health Affairs* and *Milbank Quarterly*) are owned by a foundation and one (*Circulation*) is owned by a health charity (Appendix). For the sake of convenience, these owners are collectively referred to below as "associations."

### QUESTIONNAIRE AND RESPONDENTS

We developed a questionnaire with 31 items covering the hiring and firing of the editor; the editor's tenure and financial compensation; the person(s) to whom the editor is accountable; the journal's budget and editorial board; support for legal counsel and

media relations; publication of material from or about the owner of the journal; and the editor's perceptions about editorial independence and pressure over editorial content.

Beginning in May 1999 questionnaires were sent by fax and/or email to the editors-in-chief of the 34 journals in the sample. Efforts to retrieve completed questionnaires continued through September of that year. The questionnaire was administered by telephone to a few editors who had not responded to earlier communications. In the introduction to the questionnaire we indicated that the results would be published only in aggregate form, and that individual results would remain confidential.

## **ANALYSIS**

Quantitative data are presented below as the median and interquartile range (IQR). For intergroup comparisons, statistical significance was tested using the Mann-Whitney U-test for ordinal variables and Fisher's exact test for dichotomous variables. P-values less than 0.05 were considered statistically significant.

## **RESULTS**

### **RESPONDENTS**

Of the 34 editors in the sample, 33 (97%) returned a completed questionnaire, including the editors of nine general medical journals (three in North America) and 24 specialist journals (13 in North America). Of the 33 responding editors, 29 were editors-in-chief; the remaining questionnaires were completed by co-editors of journals that had two or more editors of equivalent status. The median tenure of the responding editors in their current positions with the journal was 4.5 years (IQR 3 to 8).

### **HIRING AND FIRING**

About half (16/33) of the responding editors are hired by the association's board of directors or an equivalent body. This proportion was similar for general medical journals and specialist journals (Table 1) and for North American and non-North American journals (data not shown). Another editor is hired jointly by the board of directors and the association's chief executive officer (CEO). The other editors are hired by the association's CEO, president, publications committee, general assembly, or full membership; an ad hoc selection committee; the journal's editorial board; or the editor of *JAMA* or the *BMJ* (for journals wholly owned by the AMA or the British Medical Association (BMA)/BMJ Publishing Group, respectively) (Table 1).

For 27 of the 33 journals, authority to fire the editor resides with the same entity or individual as does hiring authority. The association's board of directors (or equivalent) has the authority to fire the editor for 18 of the 33 journals (55%) (Table 1). A few editors expressed some uncertainty about their answer regarding firing authority because "it has never happened before."

**Table 1. Hiring authority, firing authority, and editors' reporting responsibility**

Number of journals					
Association's board of directors or equivalent # (%)	Committee*	Association's CEO or president	Combination**	Other	Total

*Hiring authority*

Generalist journals	5 (56%)	–	1	1	2	9
Specialist journals	11 (46%)	7	1	–	5	24
Total	16 (48%)	7	2	1	7	33

*Firing authority*

Generalist journals	5 (56%)	–	1	1	2	9
Specialist journals	13 (54%)	6	1	–	4	24
Total	18 (55%)	6	2	1	6	33

*Reporting responsibility*

Generalist journals	2 (22%)	2	–	2	3	9
Specialist journals	8 (33%)	7	1	4	4	24
Total	10 (30%)	9	1	6	7	33

\* Association's publications committee, ad hoc selection committee (for hiring), joint management committee (for co-owned journals), or journal's editorial board.

\*\* Combination of two of the following categories: a) association's board of directors or equivalent; b) committee; and c) the association's CEO or president.

**REPORTING RESPONSIBILITY**

Reporting responsibility indicates to whom the editor is accountable for the performance of the editor and journal. The editor reports solely to the association's board for 10 of the journals; to a publications committee for five of the journals; to the editor of *JAMA* or the *BMJ* for four journals that are wholly owned by the AMA or the BMA/BMJ Publishing Group, respectively; to a joint management committee for three journals that are co-owned by two associations (the committee is comprised of three

representatives from each organization); and to the following for one journal each: the association's CEO, the association's director of publications, the association's general membership, the association's general assembly, or the journal's editorial board. Six editors report jointly to two individuals or entities (Table 1).

### **TENURE OF THE EDITOR**

Twenty-three of the 33 editors (70%) are appointed for a specific length of time (term of office), ranging from three to 10 years. The median term – five years – was used by 14 journals. Specialist journals are more likely than general medical journals to have a specific term of office for their editors (83% [20/24] vs 33% [3/9],  $p = 0.01$ ).

Nine of the 33 journals have a maximum tenure for the editor, ranging from five to 10 years (median = 10). Having a maximum tenure for editors was more common among specialist journals (33%, 8/24) than among general medical journals (11%, 1/9), but this difference was not statistically significant ( $p = 0.4$ ).

Seven journals, all non-North American, have a compulsory retirement age for their editors: 60 years for two journals, 65 for four, and 70 for one. General medical journals from outside North America (5/6) were more likely than general medical journals in North America (0/3) to have a compulsory retirement age ( $p = 0.05$ ).

### **FINANCIAL COMPENSATION OF EDITORS**

Nine editors receive a full-time salary, four receive a part-time salary (defined as “equivalent to one-third or more of a full-time salary”), 17 earn a “modest stipend” (defined as “less than one-third of a full-time salary”), and three receive no financial compensation. Seven of the nine editors of general medical journals (78%) receive a full-time salary vs 8% (2/24) of the editors of specialist journals ( $p < 0.001$ ). Two-thirds (16/24) of the editors of specialist journals receive a “modest stipend.”

### **THE JOURNAL'S BUDGET**

Respondents were asked if the journal's budget has an accounting system that is separate from that of the association. Nineteen of 32 editors (59%) responding to this question indicated that their journals have a separate accounting system. When asked if they have control over their journal's “profit” (ie, surplus revenue), 12% (4/33) said they have “total” control, 24% (8/33) have “partial” control, and 61% (20/33) have no control. Most (88%, 28/32) of the journals give revenue to the association and 58% (19/33) receive funding from the association.

### **LEGAL COUNSEL AND MEDIA RELATIONS SUPPORT**

Five of 32 responding editors (16%) indicated that their journals have their own legal counsel (either employed or contractual), separate from that of the association. Four of the nine general medical journals (44%) have their own legal counsel but only one of 23 specialist journals (4%) has its own legal counsel ( $p = 0.01$ ). Of 27 journals lacking their own legal counsel, 23 (85%) use the association's in-house or outside legal counsel.

Seven of 32 editors (22%) reported that their journals have their own media relations staff (either employed or contractual), separate from that of the association.

Specialist journals (26%, 6/23) were more likely than general medical journals (11%, 1/9) to have their own media relations staff ( $p = 0.6$ ). Of 25 journals lacking their own media relations staff, 17 (68%) use the association's in-house or outside media relations staff.

### **PUBLISHING MATERIAL FROM THE ASSOCIATION**

The questionnaire asked how often the journal publishes material regarding the association's activities, such as announcements of upcoming meetings, actions taken at recent meetings, policies adopted, scientific reports or clinical practice guidelines approved. Of the 33 editors, 11 (33%) answered "frequently," 11 (33%) said "occasionally," three (9%) said "rarely," and eight (24%) said "never."

Of the 25 journals that do publish such material, 14 (56%) give it "special consideration" compared to similar material that might be received from other organizations, and one other journal gives special consideration to some (but not all) of the association's material. Fifteen of the 25 journals (60%) segregate the association's material to a separate section of the journal, seven (28%) integrate it with other editorial content, and three (12%) handle it both ways. When asked if they have control over the content of the association's material, 14 editors (56%) said they have "full" control, 10 (40%) have "partial" control, and one (4%) has full control over some association material but no control over other association material. Eighteen (72%) of the journals that publish association material reported that the association has another publication where this material might be published (i.e., "a publication that would be more of a 'house organ'").

### **EDITORIAL INDEPENDENCE AND PRESSURE OVER EDITORIAL CONTENT**

Nineteen of 33 editors (58%) reported that the association has an explicit written policy (eg, in its bylaws, policy manual, etc) indicating that the journal has editorial independence (Table 2). One editor did not know the answer to this question. When asked to rank "the degree of editorial independence that the journal editors have had in recent years" (10 = complete editorial freedom to 1 = no editorial freedom), 23 of 33 editors (70%) opted for a score of 10, one gave a score of 9.5, six chose a score of 9, and two gave a score of 8 (one did not reply to this question).

The respondents were asked to rank the degree of pressure that "the journal editors have received in recent years over editorial content" (1 = no pressure to 10 = heavy pressure, in frequency and/or intensity). With regard to pressure from the association's "rank-and-file" members, the scores ranged from 1 to 6 (median 1, IQR 1 to 2), with 20 editors (61%) reporting no pressure at all. With respect to pressure from the association's "leadership" (eg, officers, trustees), the scores ranged from 1 to 8 (median 1, IQR 1 to 2), with 19 editors (58%) reporting no pressure at all. With regard to pressure from the association's "senior staff" (e.g., the CEO), the scores ranged from 1 to 6 (median 1, IQR 1 to 2), with 23 editors (70%) reporting no pressure at all. There was no significant difference in editorial pressure from any of these sources between general medical journals and specialist journals (Table 2).

**Table 2. Journals with a written policy on editorial independence, and editors' perceptions of degree of editorial freedom and pressure over editorial content.**

Journals	Written policy on editorial independence # (%)	Degree of editorial independence*	Pressure over editorial content** from the association's ...		
			Rank-and-file members	Leadership	Senior staff
Generalist (N=9)	7 (78%)	10 (9-10)	2 (1-4)	1 (1-3)	1 (1-3)
Specialist (N=24)	12 (50%)	10 (9-10)	1 (1-2)	1 (1-2)	1 (1-2)
Total (N=33)	19 (58%)	10 (9.5-10)	1 (1-2)	1 (1-2)	1 (1-2)

\* Median score (and interquartile range), where 1 = no editorial freedom and 10 = complete editorial freedom.

\*\* Median score (and interquartile range), where 1 = no pressure and 10 = heavy pressure (in frequency and/or intensity).

## **DISCUSSION**

### **PRINCIPAL FINDINGS**

Our key finding was that 70% of the editors reported having complete editorial freedom, and the remainder reported a high level of editorial independence (a score of 8 or higher, where 10 equals complete editorial freedom and 1 equals no editorial freedom). Nevertheless, a substantial minority of editors reported having received at least some pressure in recent years over editorial content from the association's leadership (42%), senior staff (30%), or rank-and-file members (39%).

### **STRENGTHS AND WEAKNESSES OF THE STUDY**

This study is the first, to our knowledge, that assesses editorial independence among medical journals and their relationship with the associations that own them. The key strengths of the study are the high response rate (97%) and the sampling methodology, which ensured a balanced distribution between general medical journals and specialist journals, and between journals within and outside North America.

A limitation of the study is the relatively small sample size, which reduces the ability to detect differences between categories of journals and to detect correlations between journal characteristics (e.g., reporting responsibility of the editor) and the degree of editorial independence. Our sample size was constrained because the sampling scheme was devised to assure a mix of general medical journals and specialist journals.

Another limitation is that our sampling methodology favored selection of "high stature" medical journals (those represented on the International Committee of Medical Journal Editors or those with high impact factors). Thus we do not know whether the

findings might have been different for journals with lower impact factors, particularly those from developing countries.

Thirdly, we do not have information on the validity of editors' responses with regard to pressure over editorial content and perceptions of editorial independence. It is possible that editors may have less editorial freedom than they believe, especially if they have not yet tested their freedom in an area of controversy. It is also conceivable that owners may intentionally hire editors who are more likely to "toe the line." We are not aware of a "gold standard" for these variables against which we might assess the validity of editors' impressions, so their impressions may be the most accurate measure of these constructs that is available. We presume that editors' assessments would be more accurate than publishers' assessments. Qualitative research methods might be useful in addressing these issues.

### **IMPLICATIONS AND RECOMMENDATIONS**

While most journals in our sample appear to have maintained editorial independence, 30% of editors report less-than-complete freedom, and many editors do receive pressure over editorial content from their owners. Fortunately this pressure is usually modest in intensity and/or frequency. Nevertheless editors are likely to continue to experience pressure when they delve into matters of controversy. That pressure can often be relieved by encouraging an offended party to publish a riposte in the journal.<sup>43</sup> In addition, safeguards can be put into place to insulate editors from pressure.

One safeguard is for the association to provide a written guarantee of editorial independence within its policy framework and in an employment contract or consulting agreement with the editor-in-chief. Two-fifths of the journals in our study did not have explicit written policy on editorial independence. Associations should publicize such a policy in the journal, on the association's website, and in other communications to the journal's readership and the association's membership. Beginning in April 2002, for example, the *BMJ* added the following to its masthead:

"The BMA grants editorial freedom to the editor of the *BMJ*. The views expressed in the journal are those of the authors and may not necessarily comply with BMA policy."<sup>48</sup>

The World Association of Medical Editors (WAME) recommends that editors-in-chief report to the highest governing body of the owning organization (not to its administrative officers), and that major decisions regarding the editor's employment be made by this body "with open discussion and time to hear from all interested parties." In addition, WAME points out that "Some owners have found it useful to appoint an independent board to advise them on major decisions regarding their editor and journal."<sup>49</sup>

Among the journals in our study, we found a wide variety of governance structures dealing with the hiring, firing, and oversight of editors. For about half of the journals, authority to hire and fire the editor resides in the association's board of directors (or equivalent). We doubt that any one governance structure will work for all journals and their owners. For example, one editor responding to our survey indicated that the

association's CEO protects him from the board, even though WAME advises against the editor reporting to the association's administrative officers. We recommend that journals and their owners develop a structure that will provide maximal protection of editorial freedom within their existing environment.

Another safeguard is to appoint the editor for a term of office lasting at least five years, the median term used by the journals in our sample. Editors with no specific term of office, or with a short term of office, may be reluctant to take editorial positions in conflict with the publisher's interests because of the risk of early termination of their editorship. Thirty percent of the responding editors in our study were not appointed for a specific term. The term of appointment (along with a guarantee of editorial freedom and a delineation of authority and responsibilities) should be laid out in an employment contract or consulting agreement.

Journal editors should not expect to enjoy editorial freedom without being held accountable for their own performance and that of their journals. As Davies and Rennie have noted, "editorial independence is not a right to unfettered action."<sup>44</sup> WAME asserts that owners should dismiss editors "only for substantive reasons such as a pattern of bad editorial decisions, disagreement with the long-term editorial direction of the journal, or personal behavior (such as criminal acts) that are incompatible with a position of trust."<sup>49</sup>

About three-fourths of the journals in our sample publish material about the association's activities, and slightly more than half of these journals give special consideration to that material compared to similar material that might be received from other organizations. Publication of material from the association (eg, scientific reports, policy statements, clinical practice guidelines) is not at issue if it passes the same editorial and peer review as material submitted by others. On the other hand, preferential publication of "news" from the association would seem to violate the notion of editorial independence, and such material might best be reserved for other publications (i.e., "house organs") distributed by the association to its membership. Indeed editors of 18 (72%) of the 25 journals that publish association material reported that the association has a house organ in which this material could be published.

An important matter deserving debate is whether the editor should have direct responsibility for the publishing functions of a journal. We found that many journals do not have full control over their finances and that they depend on the association for some non-editorial services such as legal counsel and media relations. These arrangements can be problematic when the association's interests conflict with those of the journal. For example, while journal editors want the news media to fairly represent the findings and the limitations of the studies they publish, press officers who typically write press releases for the articles are generally more interested in maximizing media coverage, and might be motivated to downplay a study's limitations. A review of 127 press releases issued by seven prominent medical journals about their published research showed that only 29 (23%) reported study limitations, and that industry funding was noted in the press releases for only 22% of 23 studies receiving such funding.<sup>50</sup> The investigators concluded that "The most direct way to improve the quality of journal press releases lies in enhanced editorial oversight of the process."<sup>50</sup>

Editorial oversight over the press officers is easier to secure when the officers work directly for the journal rather than for the association.

A unique arrangement exists at the *BMJ*, where the editor serves as chief executive of the BMJ Publishing Group and is on the same level in the British Medical Association as the BMA secretary (the association's chief administrative officer). This dual role gives the *BMJ* editor authority over the publishing group's finances, the launch of new journals and other scientific publications, and use of the names and logos of the *BMJ* and the BMJ Publishing Group. Dr. Richard Smith, current editor of the *BMJ*, believes that this system may be responsible for the stability of the journal, which has had only six editors during the past century.<sup>51</sup> He has explained another benefit of this structure:

“The reality is that any system – be it a hospital or a publishing group – that makes one set of players think about quality and another about cost will experience unresolvable conflict. A better system is to oblige all players to think about quality and cost, and that is the system of the BMJ Publishing Group...”<sup>26</sup>

On the other hand, a former editor of the *Annals of Internal Medicine* has argued against combining editorial and publishing responsibilities:

“Most journals seem to find it works better to separate the two functions as cleanly as possible. This is both for practical reasons (dealing with publishing matters distracts from editing) and as a matter of principle (internal conflicts are created when a single person tries to do both).”<sup>52</sup>

An in-depth qualitative study of the different systems that are in place would help identify when and why they succeed or fail in various settings.

**Addendum:** During the process of sampling specialist journals, a few journals with higher rankings by impact factor were skipped over because we were unable to obtain the journals or information about them from the library services available to us. For one category (health care sciences & services), we selected the two North American journals with the highest impact factors because all the non-North American journals in that category are owned by commercial publishers.

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Dr. Müllner is an associate editor of the *BMJ*. Dr. Davis was North American editor of the *BMJ* and Dr. Müllner was an editorial registrar at the *BMJ* at the time of the survey. Dr. Davis has had several leadership positions within the American Medical Association (AMA), was a member of the AMA House of Delegates while the survey was conducted, and was elected to the AMA Board of Trustees in June 2001 (after the survey was completed). The BMJ Publishing Group and the AMA own or co-own eight of the journals included in the study sample.

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## **Appendix: Journals (and their owners) included in the sample**

<b>Journal*</b>	<b>Owner(s)</b>
<b>International Committee of Medical Journal Editors</b>	
<i>Annals of Internal Medicine</i>	American College of Physicians – American Society of Internal Medicine
<i>British Medical Journal (BMJ)</i>	British Medical Association / BMJ Publishing Group
<i>Canadian Medical Association Journal (CMAJ)</i>	Canadian Medical Association
<i>Journal of the American Medical Association (JAMA)</i>	American Medical Association
<i>Medical Journal of Australia (MJA)</i>	Australian Medical Association
<i>Nederlands Tijdschrift voor Geneeskunde (Dutch Journal of Medicine)</i>	Vereniging Nederlands Tijdschrift voor Geneeskunde (Association of the Dutch Journal of Medicine)
<i>New England Journal of Medicine</i>	Massachusetts Medical Society
<i>New Zealand Medical Journal</i>	New Zealand Medical Association
<i>Tidsskrift for Den norske lægeforening (Journal of the Norwegian Medical Association)</i>	Norwegian Medical Association
<i>Ugeskrift for Læger (Danish Medical Journal)</i>	Danish Medical Association
<b>Cardiac &amp; cardiovascular systems</b>	
<i>Circulation</i>	American Heart Association
<i>Heart</i>	British Cardiac Society** British Medical Association / BMJ Publishing Group**
<b>Dermatology &amp; venereal diseases</b>	
<i>Archives of Dermatology</i>	American Medical Association
<i>Journal of Investigative Dermatology</i>	Society for Investigative Dermatology
<b>Gastroenterology &amp; hepatology</b>	
<i>Gastroenterology</i>	American Gastroenterological Association
<i>Gut</i>	British Medical Association / BMJ Publishing Group** British Society of Gastroenterology**
<b>Health care sciences &amp; services</b>	
<i>Health Affairs</i>	Project Hope
<i>Milbank Quarterly</i>	Milbank Memorial Fund

**Appendix** (continued)

<b>Journal*</b>	<b>Owner(s)</b>
<b>Infectious diseases</b>	
<i>Journal of Antimicrobial Chemotherapy</i>	British Society for Antimicrobial Chemotherapy
<i>Journal of Infectious Diseases</i>	Infectious Diseases Society of America
<b>Medicine, legal</b>	
<i>Journal of Forensic Sciences</i>	American Academy of Forensic Sciences
<i>Medicine, Science and the Law</i>	British Academy of Forensic Sciences
<b>Ophthalmology</b>	
<i>British Journal of Ophthalmology</i>	British Medical Association / BMJ Publishing Group
<i>Investigative Ophthalmology and Visual Science</i>	Association for Research in Vision and Ophthalmology
<b>Pathology</b>	
<i>American Journal of Pathology</i>	American Society for Investigative Pathology
<i>Brain Pathology</i>	International Society of Neuropathology
<b>Psychiatry</b>	
<i>Archives of General Psychiatry</i>	American Medical Association
<i>British Journal of Psychiatry</i>	Royal College of Psychiatrists
<b>Respiratory system</b>	
<i>American Journal of Respiratory and Critical Care Medicine</i>	American Thoracic Society
<i>Thorax</i>	British Medical Association / BMJ Publishing Group** British Thoracic Society**
<b>Surgery</b>	
<i>Journal of Neurology, Neurosurgery &amp; Psychiatry</i>	British Medical Association / BMJ Publishing Group
<i>Journal of Neurosurgery</i>	American Association of Neurological Surgeons
<b>Tropical medicine</b>	
<i>American Journal of Tropical Medicine and Hygiene</i>	American Society of Tropical Medicine and Hygiene
<i>Transactions of the Royal Society of Tropical Medicine and Hygiene</i>	Royal Society of Tropical Medicine and Hygiene

\* Categories of specialist journals are from the Institute for Scientific Information.<sup>46</sup>

\*\* Co-owner of the journal.