Industry Payments to Physician Journal Editors

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Abstract

Objective: To assess industry payments to physician journal editors, and determine how their financial conflict of interest rate compares to all physicians within the specialty.

Study Design and Setting: Open Payments is a United States federal program that mandates reporting of medical industry payments to physicians. We performed a retrospective analysis of prospectively collected data, reviewing August 1, 2013 to December 31, 2016 payments using the Open Payments search tool. We collected payments data on “top tier” US-based physician-editors of highly-cited medical journals including 1) total general payments from industry, 2) total “direct” research payments, and 3) associated “indirect” research funding. We compared payments to physician-editors and payments to physicians-by-specialty using existing published data.

Results: In 35 journals, 333 (74.5%) of 447 “top tier” editors met inclusion criteria as US-based physician-editors. Of these, 212 (63.7%) received any industry-associated payments in the study period. In an average year during the study period, 141 (42.3%) of physician-editors received any payments directed to themselves (rather than their institutions), 120 (36.0%) received payments >$50; 66 (19.8%) received payments >$5,000 (the threshold designated by the National Institutes of Health as a Significant Financial Interest); and 51 (15.3%) received payments >$10,000. Mean annual payment of "total general payments" was $55,157 (standard deviation 561,885, range 10-10,981,153) with median of $3,512. Median general industry payments to physician-editors were mostly higher compared to all physicians within their specialty.

Conclusions: A substantial minority of physician-editors receive direct payments from industry within any given year, though most editors received payment of some kind in the study period. There were significant outliers. More robust and specific editor financial COI declarations may be appropriate given the extent of editors’ influences on the medical literature.

Introduction

The Open Payments program, also known as the Physician Payments Sunshine Act, is a federal program in the United States (US) under the Affordable Care Act that aims to increase transparency of physician conflicts of interest (COI) by providing information about medical industry payments to physicians and teaching hospitals.1,2 Drug and device manufacturers must, by law, report payments to licensed physicians or teaching hospitals3 or risk large fines if they fail to comply.4 The Open Payments search tool5 provides this data to the public, with data collection that started August 1, 2013.3 This data should increase the accuracy of financial COI information compared to the previously reported high rate of COI nondisclosure among physicians.6
One group of physicians for whom COI are particularly relevant is physician journal editors who make decisions about which research manuscripts to publish, and thus play a major role in shaping medical knowledge and practice. Present vague requirements regarding medical editor COI by the International Committee of Medical Journal Editors7–9 stand in stark contrast to requirements by the same organization for very specific declarations by authors which accompany each paper published.10

Few studies have sought to clarify the degree and types of COI among editors of medical journals, with early studies focusing on whether editor COI were disclosed at all. In 2004, Haivas et al. surveyed a random sample of senior editors from 30 journals and found that 63% felt “it was either important or very important to declare the financial conflicts of interest of their editors” while 23% reported “it was not important to declare editors’ financial interests.”11 Smith et al. found that in 2011, only three of the top ten peer-reviewed medical journals had public declaration of editor COI.12 Bosch et al. found also in 2011 that among high-impact medical journals, 38.8% required COI disclosure from editors.13

There is a paucity of studies that examine actual industry payments to medical editors, and these existing studies have been based on voluntary data from editors rather than a broad inclusive database with mandatory reporting. Wong et al. surveyed 95 editors-in-chief of clinical medical journals in 2009 and found that 9% reported receiving $1,000 or more from industry in the past year.14 Janssen et al. reviewed disclosure statements from conferences and other sources, applying this information to editorial board members of five leading spine journals, and identified that 29% of editorial board members reported potential COI, and of those, 42% reported a financial relationship of greater than $10,000 in the prior year.15

Our study uses Open Payments data to specifically quantify financial COI among physician journal editors in prominent medical journals. We also compare financial payments to physician journal editors with existing research data on financial COI within the medical specialties of internal medicine, neurology, surgery, cardiology, psychiatry, pediatrics, and emergency medicine. We hypothesized that physician journal editors would have a non-negligible rate of financial COI though lower than the estimated rate among clinicians in the field, previously established using the same data source.16

Methods

Journal Selection:
Our goal in selecting journals was to aim for clinical specialties encompassing a variety of practices (e.g., primary and specialty care, interventional/surgical care) and accounting for a large proportion of directly clinically relevant recommendations and conclusions. We identified the most highly cited journals in 2015 as stated by the InCites™ Journal Citation Reports17 within the following seven medical categories: general/internal medicine, neurology, general surgery, cardiology, psychiatry, pediatrics, and emergency medicine. Journals were included, prior to data collection, if they were “clinically relevant” (rather than focusing on basic science research), as determined by a previously published protocol.14 Journals were excluded if they were not felt to be representative of the medical specialty or the subspecialties under it. Journals were excluded if 50% or more of the editors were based outside of the US, since the Open Payments search tool includes only physicians based in the US. Based on these inclusion and exclusion criteria, we chose the top five highly cited journals within each of the seven medical categories. A mini-Delphi technique was used among the authors to reach agreement in difficult cases.18
**Editor Selection:**

We reviewed each journal’s masthead to identify a “top tier” of physician-editors judged to be senior within the editorial hierarchy, aiming to include editors most likely to be directly responsible for making manuscript decisions (not simply comments or suggestions). Mastheads had significant variability regarding editor titles. Informal query of a number of medical editors confirmed heterogeneity of practice across journals. There was thus no editorial board category listing that precisely identified editors who made decisions about manuscript acceptance, and those who did not, nor is this information listed on editorial mastheads.

We settled on a set of inclusion/exclusion criteria to systematically identify a “top tier” of physician-editors for each journal likely to be involved in manuscript decision-making.

- Include the editor-in-chief
- Include editors with titles containing “deputy,” “senior,” “executive,” “head,” “vice,” or “associate,” UNLESS they also have “assistant” in their title
- Exclude all editors with “assistant” in their title
- Exclude all “consulting” and “managing” editors
- Exclude all section or “specialty” editors, UNLESS they have the word “research” or “clinical” in their title and are felt to be largely responsible for clinical content within the journal, or UNLESS there are no higher-ranking editors (besides editor-in-chief) in which case all clinical section editors are included
- Exclude statistical, epidemiological, CME, and other non-clinical editors
- Exclude all non-US regional editors
- Exclude the “editorial board” or other similar “hanging committee” of consulting editors or committee members, UNLESS there are no higher-ranking editors (besides editor-in-chief) in which case the entire editorial board is included
- Exclude editors emeritus, guest editors, advisory editors
- Exclude non-physician editors
- Exclude physicians based at institutions outside the US

**Outcome Measures:**

For each physician-editor fulfilling inclusion criteria, we collected all available payments data using the Open Payments search tool. August 1, 2013 to December 31, 2015 data were collected prior to the June 30, 2017 data release, whereas January 1, 2016 to December 31, 2016 data were collected after the June 30, 2017 data release.\(^1^9\) Collected data included:\(^1^9,2^0\)

1) Total general payments from industry,
2) Total “direct” research payments (defined as “Payments where the company making the payment has named a physician as the primary recipient”), and
3) Associated “indirect” research funding (defined as “Payments to a research institution or entity where a physician is named as a principal investigator on the research project”).

We also collected data on any reported industry ownership or investment.\(^1^9\) We excluded disputed payments flagged by physician recipients as being incorrect data.

Since the Open Payments database does not include physicians that have no industry payments, all identified editors had their physician degrees (MD, DO, or international equivalent) confirmed using a
Google search to establish an accurate denominator. We used a recent observational retrospective study focusing on industry payments to physicians by specialty for comparison data.16

Simple descriptive statistics were used for data analysis.

Institutional Review Board:
This study was reviewed and approved by The Queen’s Medical Center Research & Institutional Review Committee, and qualified as exempt under the University of California, San Francisco Institutional Review Board.

Results

Out of 447 “top tier” editors of 35 journals, 333 (74.5%) met inclusion criteria as physician-editors based at a US institution (mean: 9.5 editors per journal; standard deviation: 7.4; range: 1-30). Of these, 212 (63.7%) physician-editors received industry-associated payments of any kind in the 41-month period. Averaging complete (12-month) 2014 to 2016 data, 139 (41.7%) physician-editors received general industry payments per year, 19 (5.7%) received direct “total research payments,” and 60 (18.0%) received indirect “associated research payments.” Disputed payments represented a very small proportion of all transactions, with only 20 (0.1%) transactions (out of 14,101) from 7 individuals totaling $138,152.76 over the 41-month period, and were excluded. Mean industry payments among physician-editors receiving payments are separated by type and year in Figure 1.

Figure 1: Mean industry payments to physician-editors by year with standard deviations

* 2013 calendar year begins 08/01/2013
Total payments of each type (total general payments, direct total research payments, and indirect associated research funding) averaging complete 2014 to 2016 data are detailed in Table 1 below. For each payment type, analyses were performed for all qualifying physician-editors in the study population irrespective of whether they received payments (n=333), and were also calculated among only physician-editor recipients of each payment type (i.e., physician-editors with non-zero Open Payment entries).

Table 1: Annual payments to physician-editors using combined 2014 to 2016 data

<table>
<thead>
<tr>
<th>Total General Payments (annual number of physicians)</th>
<th>Mean, US $</th>
<th>Range, US $</th>
<th>Median (IQR), US $</th>
<th>Standard Deviation, US $</th>
</tr>
</thead>
<tbody>
<tr>
<td>All physician-editors in study population (n=333, 100%)</td>
<td>23,024</td>
<td>0-10,981,153</td>
<td>0 (0-844)</td>
<td>363,787</td>
</tr>
<tr>
<td>Among physician-editor payment recipients (mean n=139, 42%)</td>
<td>55,157</td>
<td>10-10,981,153</td>
<td>3,512 (135-20,000)</td>
<td>561,885</td>
</tr>
<tr>
<td>Total (direct) research payments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All physician-editors in study population (n=333, 100%)</td>
<td>831</td>
<td>0-174,440</td>
<td>0 (0-0)</td>
<td>8,837</td>
</tr>
<tr>
<td>Among physician-editor payment recipients (mean n=19, 6%)</td>
<td>14,558</td>
<td>15-174,440</td>
<td>4,000 (1,050-10,000)</td>
<td>34,471</td>
</tr>
<tr>
<td>Associated (indirect) research funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All physician-editors in study population (n=333, 100%)</td>
<td>31,582</td>
<td>0-5,000,000</td>
<td>0 (0-0)</td>
<td>213,957</td>
</tr>
<tr>
<td>Among physician-editor payment recipients (mean n=60, 18%)</td>
<td>175,282</td>
<td>0.18-5,000,000</td>
<td>49,107 (12,543-130,947)</td>
<td>479,480</td>
</tr>
</tbody>
</table>

Abbreviation: IQR, interquartile range.

Reported industry ownership and investment transactions were rare though prominent, with a total of $12,766,532 in only three transactions reported over the 41-month period. The bulk of this was in a single $12,736,276 declaration of stock ownership, held by an immediate family member.

During the 41-month period, 100 (30.0%) editors received payments directed to themselves, not to their institution, of >$5,000 within a year. These payments include the “general payments” and “total research payments” categories, but exclude the indirect “associated research payments” category. The threshold of $5,000 is designated by the National Institutes of Health (NIH) as a Significant Financial Interest (SFI).\(^{21}\) Averaging 2014 to 2016 data, on an annual basis, 141 (42.3%) of physician-editors received any payments directed to themselves rather than their institution, 120 (36.0%) received payments >$50; 66 (19.8%) received payments >$5,000; and 51 (15.3%) received payments >$10,000. Thresholds by year are identified in Figure 2.
Figure 2: Proportion of physician-editors receiving payments directed to themselves beyond various arbitrary thresholds, 2013 to 2016

Using the same data source, general industry payments received by physician-editors of specialty journals were compared to all physicians within that specialty, using data from a previously published study for the latter values in Table 2.16

Table 2: “Per-Physician” general industry payments received by physician-editors versus all physicians within a specialty in 2015

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Physician-editors</th>
<th>All physicians within specialty</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Number of recipients (%)</td>
<td>Median value (IQR), US $</td>
</tr>
<tr>
<td>Cardiology</td>
<td>50 (76)</td>
<td>17,704 (2,430-38,096)</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>16 (25)</td>
<td>114 (66-9,141)</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>17 (25)</td>
<td>5,052 (91-31,391)</td>
</tr>
<tr>
<td>Neurology</td>
<td>10 (29)</td>
<td>207 (65-2,655)</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>8 (36)</td>
<td>1,518 (25-3,887)</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>16 (46)</td>
<td>9,016 (3,332-</td>
</tr>
</tbody>
</table>
Editors-in-chief were analyzed separately in Table 3. A total of 35 editors-in-chief from 32 unique journals met inclusion criteria. (Three journals each had two editors-in-chief included who were given “equal billing” on the masthead.) For each payment type, analyses were performed for all qualifying physician editors-in-chief in the study population irrespective of whether they received payments (n=35), and were also calculated among only physician editor-in-chief recipients of each payment type (i.e., physician-editors with non-zero Open Payment entries).

**Table 3: Annual payments to physician editors-in-chief using combined 2014 to 2016 data**

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<tbody>
<tr>
<td>All editors-in-chief in study population (n=35, 100%)</td>
<td>4,046</td>
<td>0-64,318</td>
<td>0 (0-1,197)</td>
<td>10,392</td>
</tr>
<tr>
<td>Among editor-in-chief payment recipients (mean n=14, 40.0%)</td>
<td>9,598</td>
<td>12-64,318</td>
<td>4,111 (396-12,050)</td>
<td>14,322</td>
</tr>
<tr>
<td>Total research payments</td>
<td>77</td>
<td>0-4,000</td>
<td>0 (0-0)</td>
<td>3,913</td>
</tr>
<tr>
<td>Among editor-in-chief payment recipients (mean n=1, 2.9%)</td>
<td>3,913</td>
<td>3,825-4,000</td>
<td>3,913 (3,869-3,956)</td>
<td>124</td>
</tr>
<tr>
<td>Associated research funding</td>
<td>29,420</td>
<td>0-1,350,000</td>
<td>0 (0-0)</td>
<td>146,435</td>
</tr>
<tr>
<td>Among editor-in-chief payment recipients (mean n=5, 14.3%)</td>
<td>214,343</td>
<td>5,302-1,350,000</td>
<td>110,718 (35,628-168,090)</td>
<td>352,010</td>
</tr>
</tbody>
</table>

**Discussion**

The *Open Payments* federal program has, for the first time, allowed for reasonably complete transparency in financial COI among US physicians. In this study, we focused on COI among physician-editors at the top of the editorial hierarchy. A substantial minority of physician-editors receive direct payments from industry within any given year. However, over the 41-month study period, physician-editors directly or indirectly receiving industry payments of some kind represented a majority. In some cases, physician-editors have very large COI. Also, median general industry payments to physician-editors are mostly higher compared to all physicians within the specialty suggesting at the very least that physician-editors do not have a lesser degree of COI compared to their non-editor peers.

Although the NIH has currently designated a $5,000 threshold as being a SFI (previously defined as...
$10,000), we were unable to identify any objective data supporting this amount. It is known that even small payments can result in bias. For example, among prescribing physicians, a single meal promoting a brand-name medication results in an increased rate of prescribing that medication. Readers will have to reach their own conclusions whether a large number of small payments to editors making decisions, or a small number of very large ones, is most likely to introduce bias, but it seems inescapable that bias would be introduced to some degree, and that currently a reader cannot know how much or by whom.

Our study had limitations. Though we aimed to target physician-editors primarily responsible for making manuscript decisions, we were unable to confirm each editor’s role, nor we could confirm whether editors worked part- or full-time in paid or unpaid positions. Also, using our inclusion criteria for identifying handling editors within a journal’s masthead led to significant variability in the number of editors reviewed per journal. However, no standard system exists for distribution or identification of editorial roles, so we chose a conservative definition to focus attention on editors most likely to make manuscript decisions. Our analysis on editors-in-chief focused even more specifically on the group of editors with the highest level of decision authority within a journal.

There have also been critiques of the Open Payments database in the past, including the vagueness of payment categories, low rates of physician and institutional review of data for accuracy, unresolved disputed records, and a paucity of contextual commentary. Data collection occurred entirely in 2017 for this present study, bypassing earlier issues with missing data.

Beyond deciding what gets published in medical journals (thereby shaping published research and widespread clinical practice), journal editors also decide who the peer reviewers are, which ones to use for a particular article, which articles are prioritized within a journal issue, and also determine the need for additional editorials or commentary, which might be pro or con the article’s conclusions. In any other setting, such a position would be considered to be very vulnerable to COI and perhaps the most important step in the process of preventing COI. At most journals, however, there is not a standardized approach or requirement for how or whether financial COI are reported to readers. Some journals have established criteria for editor recusal, though such formal recusal policies are not wide-spread.

Standards for declaration of financial COI among medical editors are presently poorly-defined and lax in comparison to the vigorous requirements for declaration of COI by manuscript authors and CME presenters. Requiring full transparency in declaring financial COI among medical editors may be a reasonable first step in identifying potential conflicts, though one could argue that mere transparency is not sufficient. Financial COI have been shown to result in biased behavior both outside and within the medical field, among prescribing physicians, and within clinical trials. Since editorial decisions are a black box, it is difficult to determine the explicit reasons why an editor makes a manuscript decision and cognitive research suggests that they might very well not be conscious of the reasons themselves, so any amount of financial COI, even declared, may result in unacceptable bias.

Based on the study results, we recommend at the very least, a system of mandatory financial COI declaration for medical editors, as is common with manuscript authors. The next step in improvement would be for each published article to name all editors who were involved in handling and decision-making for the manuscript, and declare whether they had COI related to the published study. Finally, the most definitive remedy would be to ban editors from taking any industry funds, removing this source of bias entirely.
Conflicts of interest and disclosures

Michael L. Callaham is paid a stipend by the American College of Emergency Physicians to edit their peer reviewed journal. Otherwise, all authors have no financial conflicts of interest to declare. This study was presented in abstract form at the Eighth International Congress on Peer Review and Scientific Publication on September 10-12, 2017. http://peerreviewcongress.org/pra17-0277

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