Consensus and contention regarding redundant publications in clinical research: cross-sectional survey of editors and authors

V Yank, D Barnes

Objectives: To examine the perspectives of journal editors and authors on overlapping and redundant publications in clinical research.

Design: Pretested cross-sectional survey, containing both forced choice and open ended questions, administered by mail to the senior editors (N=99) and one randomly selected author (N=99) from all journals in the Abridged Index Medicus (1996) that published clinical research.

Main measurements: The views of editors and authors about the extent of redundant publications, why they occur, how to prevent and respond to cases, and when the publication of overlapping manuscripts is justified.

Results: Seventy two per cent (N=71) of editors and 65% (N=64) of authors completed the survey. There was consensus between both groups that redundant publications occur because authors feel the pressure to publish and journals do not do enough to publicise, criticise, and punish cases, and that the publication of most types of overlapping articles is unacceptable. Sixty seven per cent of authors but only 31% of editors felt, however, that it was justified to publish an overlapping article in a non-peer reviewed symposium supplement, and 68% of editors but 39% of authors supported imposing restrictions on guilty authors’ future submissions. In written comments, 15% to 30% of both groups emphasised that it was justified to publish overlapping articles when there were different or non-English-speaking audiences, new data, strengthened methods, or disputed findings.

Conclusions: Editors, authors, and other academic leaders should together develop explicit guidelines that clarify points of contention and ambiguity regarding overlapping manuscripts.

A profession has a duty to establish standards, regulate members according to these, and punish those who violate them. In its definition of redundant publication, the Uniform Requirements proposes such a standard. Yet evidence suggests that authors may not know about, may not understand, or may ignore, such editorial policies. Authors and editors also continue to express confusion about where to draw the line between unjustified and acceptable redundancy. Similarly, while members of the research community appear willing to assign punishments for unethical behaviour, they disagree about what constitutes a suitable response. Finally, many have emphasised the importance of correcting the scientific literature when cases of misconduct are exposed, but they have also raised questions about who among authors, journals, institutions, federal agencies, or others is responsible for doing so. We know little, therefore, about why redundant publications occur, what practices might prevent them, and what responses or punishments are appropriate.

The current study assesses the perspectives and practices of editors and authors on issues related to redundant publication. Special attention is paid to identifying areas of consensus and contention. Consensus may indicate support for the implementation of uniform standards. Conversely, contention may underscore the need for mediation between divergent perspectives. If not addressed, these may continue to undermine attempts to define, disclose, and eliminate redundant articles. The study objectives were to determine if there is agreement among authors and editors regarding the extent of redundant articles; why they occur; when overlapping articles are justified, and how journals should prevent and respond to cases of redundant publication.

See end of article for authors’ affiliations

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In 1981 the International Committee of Medical Journal Editors began to define duplicate publication in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals. The expanded Requirements for Manuscripts Submitted to Biomedical Journals are now endorsed by over 500 medical journals. The group currently defines “redundant or duplicate publication” as “the publication of a paper that overlaps substantially with one already published”, cautioning authors that, if undisclosed, the practice will prompt editorial action. The National Library of Medicine indexes published notices of cases under the medical subject heading (MeSH) “duplicate publication”.

There are numerous problems with redundant publications that are not disclosed to editors or readers (hereafter simply referred to as “redundant articles”). They may break international copyright laws. They squander the efforts of journals, editors, peer reviewers, and readers. They inflate authors’ curricula vitae, potentially distorting the academic promotions process. Most importantly, they may mislead the reader about the strength and direction of research findings. For example, they can lead to duplicate counting of subjects in meta-analyses, because subjects from the same trials are reanalyzed repeatedly, without disclosure, in different papers—twice, thrice, or even more—thus biasing the evidence upon which patient care is founded.

Studies have shown that the practice of redundant publication is widespread, and may even be increasing. Editorial and published notices of redundant publication highlight an ongoing problem in diverse journals. Estimates of incidence within given fields range from 12% to 28%, exposing what seems to be a blatant disregard for professional and medical ethics.
METHODS

Subjects
The target sample was editors and authors who publish research on clinical medicine. The actual sample included editors and authors of articles in journals listed in the 1996 Abridged Index Medicus, which references 124 “high impact” biomedical journals. Twenty-five of these journals were excluded because they did not publish original clinical research. In the summer of 1997, we mailed the survey to the senior editor and one randomly selected author from the remaining 99 journals. The selection of the author involved identification of all original research articles (excluding case studies) in the December 1996 issue of each journal, random selection of one of these articles, and identification of the person listed as its corresponding author.

The study was approved by the Committee on Human Research of the University of California, San Francisco (approval #H2758–13960–01). All participants gave their informed consent to take part and returned the completed survey anonymously.

Survey
The survey was pretested and modified in response to comments from 25 academicians, both editors and authors. In the study, respondents were asked to use the following definition of a redundant article: “a second article that is based on the same research as the first article, contains no substantially new work or message, and is directed at a similar audience in a similar journal. In addition, the overlap has not been disclosed to the editor or reader” (emphasis in original). “Overlapping article” indicated an article that may or may not have been deemed redundant. The survey was divided into six sections (described below) containing forced choice or open ended questions, with the option of answering “don’t know” to any question. In analyses, we defined “consensus” as an agreement of response of 67% or greater within a group of editors or authors.

Exposure to definitions of redundant publication:
Editors were asked if their journal published its definition of redundant publication for prospective authors. Authors were asked if they had ever heard the Uniform Requirements’ definition of redundant publication. The survey anonymously.

Extent of redundancy:
Editors were asked to estimate, for an average year, the rate of redundant manuscripts they received, as well as the rate of redundant articles published. Authors received a more inclusive question regarding their knowledge of cases within their immediate sphere of colleagues. They were asked whether “they or a colleague” had ever had a manuscript or publication determined to be redundant by the editor.

Why redundant publications occur: Both editors and authors rated the extent of their agreement with ten proposed reasons for the occurrence of redundant publications—for example, that “authors feel pressure to amass publications”. They answered the forced choice questions using the scale 1 = “strongly disagree”, 2 = “disagree”, 3 = “agree”, and 4 = “strongly agree”.

Whether overlapping papers are ever justified: Respondents indicated whether they believed it to be justified to publish any of sixteen different pairs of overlapping papers. An example of a pair of articles was “a letter to the editor and a research article with the same outcome data”. Respondents used the scale 1 = “never justified”, 2 = “rarely justified”, 3 = “often justified”, and 4 = “always justified”.

Prevention and response: Regarding redundant articles, editors and authors stated whether they supported potential methods of prevention and response by answering “yes” or “no”, for instance, to the proposal that journals “should publish a notice of redundant publication for readers”.

Written comments: Respondents were asked to answer two open ended questions: “When do you think authors might be justified in publishing research articles that overlap with their previously published work?”, and “Do you have any further comments related to the publication of overlapping material?” In addition, spaces were provided in which to write comments following each group of forced choice questions.

RESULTS
Surveys were completed by 72% (71/99) of editors and 65% (64/99) of authors. All but one of these respondents made a written comment on the survey. We also requested demographic information from non-respondents, and received replies from 39% (11/28) of editors and 26% (9/35) of authors (see table 1). The vast majority of all of those contacted were academicians with multiple roles in research, clinical care, and teaching. The most common reason given by non-respondents for not completing the survey was “no time”, stated by all authors (9/9) and the majority of editors (7/13).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Demographic information on authors and editors who completed the survey (respondents) or did not, but returned a postcard containing demographics (non-respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic category</td>
<td></td>
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<table>
<thead>
<tr>
<th></th>
<th>Editors</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>Non-respondents</td>
<td>Respondents</td>
</tr>
<tr>
<td>Age Mean (SD)</td>
<td>59 (9.2)*</td>
<td>61 (4.4)*</td>
</tr>
<tr>
<td>Gender Male</td>
<td>89%</td>
<td>63%*</td>
</tr>
<tr>
<td>Nationality†</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| English-speaking nation USA | 100% | 100% | 72% | 78% |
| Primary work activities‡ | 

| Research | 59% | 63%* | 94% | 88%* |
| Clinical care | 53% | 25%* | 73% | 75%* |
| Teaching | 70% | 63%* | 70% | 63%* |
| Personal publications, last 5 years | 23* | 9* | 20 | 15* |
| Median number | | | | |

*At least 10% of respondents did not answer the question.
†Nationality was based on the country listed as the mailing address of the author or editor. English-speaking nations in our sample included Australia, Canada, Great Britain, Ireland, New Zealand, and USA.
‡Respondents were asked to select all categories that applied.
Exposure to definitions of redundant publication: Editors reported that only 45% of their journals publish a definition of redundant publication, and authors that only 50% of them have read the Uniform Requirements definition.

Extent of redundancy: Editors estimated that a median of 1 in 250 manuscripts (range 0 to 1/13) and 1 in 810 published articles (range 0 to 1/40) are redundant. The majority of editors answering the question reported having had at least one case of a redundant manuscript (94%, 62/66) or published article (72%, 47/65). In reporting on their exposure to cases, 8% (5/64) of authors knew personally of a manuscript and 3% (2/64) of a published paper—either theirs or a colleague’s—that had been labelled as redundant.

Why redundant publications occur: Editors and authors were in consensus that redundant publications occur because authors feel pressure to publish (see table 2). While both strongly agreed that journals think the issue is a serious one, they also reached consensus that journals do not do enough to publicise, criticise, and punish cases. There was further consensus among authors, but not editors, that redundant publications occur because academic leaders do not publicly condemn the practice, because authors do not understand how redundant reporting distorts the aggregation of data—for example, meta-analyses—and because authors want to disseminate their research as widely as possible.

In written comments (summary data available upon request), 9% of authors went on to emphasise their disillusionment with academic leaders and editors. Examples included: “I am fed up with seeing some authors get away with redundant manuscripts! These same authors get away with it consistently and are on editorial boards”, and “I notified a senior editor of a fully redundant article that had been submitted to me for review—but he published it anyway”.

Whether overlapping papers are ever justified: Editors and authors agreed that most instances of overlapping articles are not justified (see table 3). Out of the entire survey, however, editors and authors disagreed most strongly about overlap between a journal article and an article in a non-peer reviewed symposia supplement. Sixty seven per cent of authors were in consensus that this practice is acceptable, whereas 69% of editors disagreed. Authors also reached consensus or near consensus that other forms of overlap are justified, specifically: two segmented (“salami sliced”) articles, a letter to the editor and a research article with the same outcome data, and two articles with outcome data that overlap by 10%. For both editors and authors, there was a trend

### Table 2 Why redundant publications occur

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage who agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editors (N=71)</td>
<td>Authors (N=64)</td>
</tr>
<tr>
<td>Journals: do not do enough to publicise, criticise, and punish cases</td>
<td>68*</td>
</tr>
<tr>
<td>do not do enough to identify cases during peer review</td>
<td>49*</td>
</tr>
<tr>
<td>do not publish a clear definition</td>
<td>34</td>
</tr>
<tr>
<td>do not think the issue is serious</td>
<td>6</td>
</tr>
<tr>
<td>Authors: feel pressure to amass publications</td>
<td>75</td>
</tr>
<tr>
<td>do not understand how cases distort the aggregation of data (for example, in systematic reviews or meta-analyses)</td>
<td>58</td>
</tr>
<tr>
<td>want to disseminate their research as widely as possible</td>
<td>54</td>
</tr>
<tr>
<td>do not think the issue is serious</td>
<td>51</td>
</tr>
<tr>
<td>Academic leaders: do not publicly condemn the practice</td>
<td>48</td>
</tr>
<tr>
<td>do not think the issue is serious</td>
<td>25</td>
</tr>
</tbody>
</table>

*The percentage of respondents who answered “don’t know” to the question was between 10% and 20%.

### Table 3 Whether overlapping papers are ever justified

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage who think both articles are justified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it justified to publish two similar articles if the second article is published in:</td>
<td></td>
</tr>
<tr>
<td>a symposium proceeding in a non-peer reviewed journal supplement</td>
<td>31</td>
</tr>
<tr>
<td>the internet, in a limited access area</td>
<td>31*</td>
</tr>
<tr>
<td>the internet, in a public access area</td>
<td>17*</td>
</tr>
<tr>
<td>a non-English language journal</td>
<td>30</td>
</tr>
<tr>
<td>a journal for a substantially different audience</td>
<td>15</td>
</tr>
<tr>
<td>Is it justified to publish two articles that have or are:</td>
<td></td>
</tr>
<tr>
<td>identical text</td>
<td>0</td>
</tr>
<tr>
<td>exact duplication of important findings</td>
<td>0</td>
</tr>
<tr>
<td>exact duplication of background information</td>
<td>14</td>
</tr>
<tr>
<td>segmented (“salami sliced”) articles</td>
<td>30</td>
</tr>
<tr>
<td>a letter to the editor and research article with the same outcome data</td>
<td>45</td>
</tr>
<tr>
<td>important findings that are similar and outcome data that overlap by . . .</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>39</td>
</tr>
<tr>
<td>50%</td>
<td>4</td>
</tr>
<tr>
<td>100%</td>
<td>1</td>
</tr>
<tr>
<td>important findings that are different and outcome data that overlap by . . .</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>51</td>
</tr>
<tr>
<td>50%</td>
<td>32</td>
</tr>
<tr>
<td>100%</td>
<td>23</td>
</tr>
</tbody>
</table>

*The percentage of respondents who answered “don’t know” to the question was between 10% and 20%.
suggesting that the publication of two overlapping articles with different conclusions is more justified than that of two with the same conclusions. Both groups also believed that dual publication becomes less justified as the overlap in data increases. Finally, questions regarding publication on the internet received the most ambiguous responses, with at least 10% of editors and authors answering “don’t know”.

In written comments, 16% (11/71) of editors and 14% (9/64) authors stated that overlapping papers are rarely or never justified (in 8% (20/250) of all comments made by both groups). Fifty-two per cent (131/250) of all comments, however, described cases of acceptable overlap. Fifteen per cent to 30% of both editors and authors felt that overlapping publications are justified when there is new information, the research methods are strengthened, or the research findings are in dispute. Furthermore, some of the most forceful comments opposed points of aggregate consensus in the forced choice questions: 16% (23/141) of comments by editors and 13% (14/109) of comments by authors supported overlapping or redundant publications when the audience is different or non-English speaking. For example, one author wrote: “Non-American authors must often publish in two languages. American ‘peers’ do not understand. There is a cultural problem.”

Prevention: There was consensus among editors and authors on a number of points of prevention (see table 4): that authors should sign statements for journals attesting that their manuscript does not overlap substantially with other of their articles (unless disclosed); that authors should submit with their manuscript copies of any overlapping articles, and that editors should ask peer reviewers to notify them about manuscripts that overlap with previously published work. On this latter item, only 17% (10/60) of authors who are also peer reviewers described ever having received a journal request that they notify the editor about potentially redundant manuscripts. Instead, 47% of these peer reviewers said they had notified editors on their own initiative. In their role as journal readers, 17% (11/64) of all authors reported having written a letter to the editor stating that a published article was redundant.

In written comments, a high proportion of all editors (28%) and authors (16%) emphasised that disclosure of previous work is essential to prevention. An editor summarised: “The key is whether the overlap is declared at the outset. Failure to declare the possibility of redundant publication is prima facie evidence [of guilt].” Another explained that journals need to standardise how they attempt to prevent cases: “This is a serious problem, but one that is currently not approached in a uniform manner by journals or editors”. While generally supportive of prevention strategies, however, 14% of editors were adamant that one such strategy, that of bibliographic searches, would be “much too labor intensive and costly” to implement.

Response to cases: Both editors and authors reached consensus or near consensus that journals should respond to redundant publications by notifying the authors, the journal that published the other article, and the reader (see table 4). However, only 67% (33/49) of editors who have had cases and answered the question report consistently publishing notices of redundant publication for readers. Furthermore, only 35% of these notices (18/33) are listed in the table of contents, and it is the only consistent means of papers that are indexed on Medline. The clearest difference of opinion between editors and authors regarded strict sanctions: there was consensus or near consensus among editors that journals should restrict future submissions from authors of papers deemed redundant, as well as inform their institutions—but most authors disagreed. On many topics of response, as well as prevention, at least 10% of both editors and authors answered “don’t know” to the question.

In written comments, 16% (11/71) of editors and 14% (9/64) of authors supported the role of journals and academic institutions in regulating and imposing sanctions on authors. They stressed, however, the need for careful deliberation—for example, “due process and “case by case decision making”. One author cautioned: “We have to be careful about journal editors becoming judge, jury, and executioner”.

DISCUSSION
There were many points of consensus between editors and authors. Both groups agreed that redundant publications occur because authors feel the pressure to publish and journals do not do enough to publicise, criticise, and punish cases. Both also felt that journals can help prevent cases by requiring that authors sign statements denying or disclosing overlap; that authors submit other papers that overlap, and that editors ask peer reviewers to notify them about manuscripts that overlap with previously published work. Editors and authors agreed as well that journals should respond to redundant publications by notifying the authors, the other journal, and readers. Finally, on forced choice questions, both groups opposed publication of most forms of overlapping articles. There were also, however, points of contention and ambiguity. Many more authors than editors believed that it is justified to publish certain types of overlapping articles—namely, a second article published in a non-peer reviewed symposia supplement or as a letter to the editor, two
segmented articles, or two articles that overlap in 10% of their outcome data. Written comments stressed many other exceptions: when there is a different or non-English speaking audience, new data, strengthened methods, or disputed findings. In response to a redundant publication, editors but not authors supported imposing restrictions on the author’s future submissions. Finally, editors and authors were equivocal regarding overlapping publication on the internet and a number of methods of prevention and response.

**Findings placed in the context of previous work**

The median estimate by editors of the rate of redundant publication (1 in 810) is far below the rates reported within specialty journals (1 in 4–10) or by meta-analysts. Possible reasons for this discrepancy are that the editors in our survey used a more stringent definition of redundancy in their calculations, recalled only the most egregious cases, or did not have the time or expertise to identify duplicates within their journals.

While most journals prohibit redundant publication, only 45% of editors in our study reported that they publish a definition to guide authors. Our finding that only 50% of authors have read the definition of redundant publication in the Uniform Requirements is similar to other findings regarding awareness and fulfillment of the Requirements’ authorship criteria.

It is perhaps not surprising that our respondents strongly believed that the pressure to publish contributes to redundant publication. Other studies describe how trainees and applicants for faculty positions have padded their resumes by claiming authorship on publications that were unverifiable or that did not list them as authors. Some funding agencies allocate financial support for an institution largely on the basis of its scientific publications. Academic leaders may not be doing enough to counteract such incentives to inflated curricula vitae, as 69% of our author respondents blamed them for not publicly condemning redundant publications.

Seventy percent of authors and 58% of editors also felt that redundant publications occur because authors do not understand how these distort the aggregation of data, as in meta-analyses. Again this is not unexpected, given the considerable evidence in the literature that duplicate publications go unrecognised. Gotzsche reported that 31 trials comparing non-steroidal, anti-inflammatory drugs had generated 75 articles, with the majority of duplicates published in English and within one year of each other, but without any subsequent notice of duplicate publication. Huston and Moher attempted to disentangle the source data of articles on the antipsychotic risperidone and ultimately concluded that data from a single North American multicentre trial had generated six articles but that the publication record was too confusing to determine how many articles had resulted from a similar European trial. Tramer et al described nine trials on the efficacy of the anti-emetic ondansetron had spawned 23 articles, without cross referencing, and that others had incorrectly cited the duplicate data alongside the original data in no less than four research articles, two review articles, a textbook, and a review article on the ethics of anti-emetic trials. While conducting a meta-analysis of anti-fungal agents, Johansen and Gotzsche found that one (and perhaps another) of 12 articles was a duplicate. If such double counting goes unrecognised, readers may be misled as to the strength, or even direction, of the evidence. Gotzsche found that of articles published on the same data, the later duplicates were more likely to contain favourable conclusions and side effect profiles. Similarly, Tramer et al concluded that a failure to exclude duplicates from their meta-analysis would have overestimated the treatment efficacy by 23%. Upon being contacted, authors of the original report, the duplicate report, or both, confirmed the duplication of five of the nine trials, suggesting that they felt little reticence about admitting to the overlap. This attitude may be partially explained by our findings that authors, much more than editors, support publication of some forms of overlapping papers.

Finally, authors and editors agreed that journals should do more to publicise and punish cases. Over 67% of editors supported imposing restrictions on the future submissions of authors of redundant publications, which corresponds to the practices of a number of journals, some of whom have formed joint agreements to this effect. Respectively, 79% and 66% of editors and authors in our study supported publishing a notice of redundant publication, just as others have found that 55% of academicians support printing a journal retraction in a similar scenario.

**Limitations**

Non-respondents may differ in demographics, opinions, and practices from those who completed the survey, limiting the generalisability of our findings. Recall or self report bias may have influenced the description of actual cases. Our findings also may not be generalisable to authors and editors of journals not included in the Index Medicus.

**Implications**

According to our study finding, editors and authors agree that most forms of redundant publication are unacceptable, even while they identify the motivations for their occurrence. They also concur on some means of prevention and response. Such points of consensus can help form the foundation for uniform policies on redundant publication. There are, however, areas in which differences of opinion leave room for continuing controversy. More authors than editors believe it is justified to publish certain types of overlapping articles, and they may have legitimate reasons for these beliefs. The important question is whether the overlap will be disclosed or whether duplicate data will continue to bias the literature. Given such stakes, and the areas of disagreement and ambiguity in our study, it would be prudent for editors, authors, and academic leaders to mediate their differences.

**Policy recommendations**

The time has come for editors, authors, and academic leaders to jointly clarify and enforce mutually acceptable standards on redundant publication. Journals should publish an explicit definition and notices of cases; require authors to deny or disclose overlap, and submit overlapping work for review, and involve peer reviewers in attempts to identify redundant work. If authors fail to disclose, based on our study sample, journals have the mandate to correct the record by exposing their redundant publication. Authors themselves should read and abide by published definitions of redundant publication and should fully disclose overlap to editors and readers. Finally, academic leaders, and the medical training institutions where they work, have a responsibility to promote ethical practices. Therefore, academic leaders and centres should examine their own practices, change them if necessary, and then clearly and publicly condemn redundant publications.

**Authors’ note**

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Veronica Yank conceived of and designed the study, designed and coordinated the survey, managed the data, analysed the data, wrote and revised the paper, and guarantees the integrity of the study. Deborah Barnes conceived of and designed the study, helped to revise the survey, analyse the data, and edit the paper, and guarantees the integrity of the study. Lisa Bero and Drummond Rennie gave feedback on the study design, survey, and paper.

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REFERENCES


