

# The New ICMJE Recommendations

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The International Committee of Medical Journal Editors (ICMJE) first published its Uniform Requirements for Manuscripts Submitted to Biomedical Journals in 1979 to establish a standardised approach for preparation of manuscripts and thereby help authors. Since then the Committee has made many changes to the document, including major revisions in 1997, 2003, and 2010.

The release of the most recent revision of the document is now available ([www.icmje.org](http://www.icmje.org)). To reflect its current content and purpose, we have renamed the document, "ICMJE Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals" ("ICMJE Recommendations"). In this editorial we discuss some of the most substantive revisions.

One of the most important changes in the document is the addition of a fourth criterion for authorship to emphasize each author's responsibility to stand by the integrity of the entire work.

Authorship requires:

1. Substantial contributions to: the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; *and*
2. Drafting the work or revising it critically for important intellectual content; *and*
3. Final approval of the version to be published; *and*
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Authorship involves not only credit for the work but also accountability. The addition of a fourth criterion was motivated by situations in which individual authors have responded to inquiries regarding scientific misconduct involving some aspect of the study or paper by denying responsibility ("I didn't participate in that part of the study or in writing that part of the paper; ask someone else").

Each author of a paper needs to understand the full scope of the work, know which co-authors are responsible for specific contributions, and have confidence in co-authors' ability and integrity. When questions arise regarding any aspect of a study or paper, the onus is on all authors to investigate and ensure resolution of the issue.

By accepting authorship of a paper, an author accepts that any problem related to that paper is, by definition, his or her problem. Given the specialized and myriad tasks frequently involved in research, most authors cannot participate directly in every aspect of the work.

Still, ICMJE holds that each author remains accountable for the work as a whole by knowing who did what, by refraining from collaborations with co-authors whose integrity or quality of work raises concerns, and by helping to resolve questions or concerns should they arise. For example, a clinician who merits authorship through design of a study and care of its participating patients should have full confidence in the work of co-authors with expertise in biostatistics, and must agree as a condition of authorship to ensure resolution of questions regarding the analysis should they arise.

This new criterion better balances credit with responsibility, and establishes the expectation that editors may engage all authors in helping to determine the integrity of the work.

The authorship criteria are not intended for use as a means to disqualify colleagues from authorship who otherwise meet authorship criteria by denying them the opportunity to meet criterion #s 2 or 3.

Therefore all individuals who meet the first criterion should have the opportunity to participate in the review, drafting, and final approval of the manuscript. As always the decision about who should be an author on a given article is the responsibility of the authors and not the editors of the journal to which the work has been submitted.

Group authorship has become more common, with variations in how individual authors and research group names are listed in the paper's byline (e.g., "Author AA, Author BB, Author CC *and* the Research Group," or "... Author CC *on behalf of* the Research Group").

It is important that all authors meet criteria for authorship, regardless of byline format. As noted in the revised ICMJE Recommendations, The National Library of Medicine has indicated that regardless of the byline's wording, it will index individual authors or contributors/ collaborators provided there is a note associated with the byline indicating that individual roles are listed elsewhere.

We recently updated the ICMJE uniform conflict of

## EDITORIAL

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interest disclosure form (available at [www.icmje.org](http://www.icmje.org)). The form now asks authors to list conflicts by entity, followed by the type of relationship. The time frame for reporting conflicts related to the submitted work now spans from the initial conception and planning to the present, which makes more sense than a specific number of years.

Relevant COIs outside the submitted work are to be reported for the 36 months prior to submission. Pilot testing indicates that authors find the new form easier to complete. It is also possible to generate a COI statement for each author from the form, which should help those journals that routinely publish such statements rather than linking readers to the actual forms as other journals choose to do.

Editors are encouraged to review the study protocol or separate statistical analysis plans during the review process, especially for large human interventional trials. This material should also, whenever possible, be made available for the peer reviewers, and editors should encourage authors to make these materials publicly available following publication. This can be done as a protocol article published earlier, or as additional files made available by the authors.

ICMJE previously noted that failure to submit or publish findings because of lack of statistical significance is an important cause of publication bias. The new recommendations more broadly recommend that editorial decisions be based on relevance of a manuscript and its originality, quality, and contribution to evidence about important questions, and not on commercial interests, personal relationships or agendas, or findings that are negative or that credibly challenge accepted wisdom.

Authors are encouraged to submit for publication or otherwise make publicly available, and editors are encouraged not to exclude from consideration for publication, studies with findings that are not statistically significant or that have inconclusive findings because such studies may provide evidence that combined with that from other studies through meta-analysis might still help answer important questions. A public record of such negative or inconclusive findings may prevent unwarranted replication of effort or otherwise be valuable for other researchers considering similar work.

We hope that the new ICMJE Recommendations will be helpful for authors, editors, reviewers, readers and publishers of scholarly work. We encourage your feedback at [www.icmje.org/cgi-bin/feedback](http://www.icmje.org/cgi-bin/feedback).

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The full recommendations can be found at [www.icmje.org](http://www.icmje.org) and is the version of record and the correct version to cite.