

EVMS Authorship Guidelines

Many medical schools, including Eastern Virginia Medical School, encourage the publication and dissemination of results from research and other scholarly activities in a manner that appropriately assigns responsibility and credit to individuals contributing to the intellectual work. The EVMS Authorship Guidelines follow the *Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (ICMJE Recommendations)* as detailed by the **International Committee of Medical Journal Editors (2016)** and establish the minimum requirements for authorship and acknowledgements involving EVMS faculty, students, staff, and collaborators. In addition to complying with EVMS guidelines, many journals have additional requirements for publication and authors should adhere to these requirements when manuscripts or abstracts are submitted.

The EVMS authorship guidelines, excerpted from the ICMJE Recommendations¹ (www.icmje.org), with certain provisions adapted from the policies at other institutions such as Yale University², Harvard Medical School³, Northwestern University⁴, and Washington University in St. Louis⁵, include:

1. Authorship

Authorship Discussions⁴

Since the establishment of authorship roles is often complex, delicate, and potentially controversial, EVMS encourages Principal Investigators to engage in authorship discussions with all members of their research groups, including students and research assistants. These discussions should clarify authorship related questions and potential sources of ambiguity and dispute, including the ordering of authors. To avoid conflict and confusion, these discussions should begin early in the development of any collaborative work and continue throughout the project and manuscript development.

Criteria for Authorship

An “author” is generally considered to be someone who has made substantive intellectual contributions to a published study, and biomedical authorship continues to have important academic, social, and financial implications. In the past, readers were rarely provided with information about contributions to studies from those listed as authors and in acknowledgments. Some journals now request and publish information about the contributions of each person named as having participated in a submitted study, at least for original research. Editors are strongly encouraged to develop and implement a contributorship policy, as well as a policy on identifying who is responsible for the integrity of the work as a whole.

While contributorship and guarantorship policies obviously remove much of the ambiguity surrounding contributions, it leaves unresolved the question of the quantity and quality of contribution that qualify for authorship. The International Committee of Medical Journal Editors has recommended the following criteria for authorship; these criteria are still appropriate for those journals that distinguish authors from other contributors:

- Authorship credit should be based on¹:
 1. Substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; AND
 2. Drafting the manuscript 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 ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

- All persons designated as authors should meet all 4 criteria for authorship for the specific study that is being reported in the manuscript, and all those who meet the 4 criteria should be identified as authors.

- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

- The criteria are not intended for use as a means to disqualify colleagues from authorship who otherwise meet the authorship criteria by denying them the opportunity to meet criterion # 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 manuscript¹.

- When a large, multi-center group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript, including approval of the final manuscript. These individuals should fully meet the criteria for authorship defined above, and they should be able to take public responsibility² for the work. When submitting a group author manuscript, the lead (or senior) author should clearly indicate the preferred citation and should clearly identify all individual authors as well as the group name. Journals will generally list other members of the group in the acknowledgements. The National Library of Medicine (MEDLINE) indexes the group name and the names of individuals the group has identified on the byline as being directly responsible for the manuscript¹. MEDLINE lists as authors whichever names appear on the byline. If the byline includes a group name, MEDLINE will list the names of individual group members who are authors or who are collaborators, sometimes called non-author contributors, if there is a note associated with the byline clearly stating that the individual names are elsewhere in the paper and whether those names are authors or collaborators¹.

- Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.

If agreement cannot be reached about who qualifies for authorship, the institution(s) where the work was performed, not the journal editor, should be asked to investigate¹.

Authorship Duties

Each individual is responsible for considering his or her role in the project and whether that role merits attribution of authorship⁴. In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work¹. Every co-author is responsible for the content of the manuscript⁴ and should have confidence in the accuracy and integrity of the contributions of their co-authors¹. Thus, all co-authors have the duty to review and approve the manuscript.

Authorship Order

The order of authorship on the byline should be a joint decision of the co-authors. Any arrangement of the order of authorship is appropriate, providing the authors agree in advance. Thus, issues regarding authorship are best discussed among all contributing individuals before the work has begun and should continue to be discussed on a regular basis as the work progresses toward forming a manuscript. All authors should be prepared to explain the order in which they are listed.

In some cases, the first author is the person who has performed the central experiments of the project², collects, analyzes, and interprets the data, and is often the person who has prepared the first draft of the manuscript. The first author is not necessarily the Principal Investigator or project leader⁵. The lab director/mentor, provided he or she qualifies as an author, is usually listed last.

Lead Author⁵

The lead author (and/or senior author), unless defined differently by the journal or discipline, is responsible for:

- Authorship
 - Ensuring the inclusion as co-authors all and only those individuals who meet the authorship criteria set forth in this policy
 - Preparing a concise, written description of all authors' contributions to the work, which has been approved by all authors³
- Approval
 - Providing the draft of the manuscript to each individual co-author for review
 - Obtaining from all co-authors their agreement to be designated as such and their approval of the manuscript. A journal may have specific requirements governing author review and consent, which must be followed.
- Integrity
 - Ensuring the integrity of the work as a whole, and that reasonable care and effort has been taken to determine that all the data are complete, accurate, and reasonably interpreted

2. Acknowledgments

In all scientific and scholarly publications and all manuscripts submitted for publication, authors should acknowledge the sources of support for all activities leading to and facilitating preparation of the publication or manuscript². However, individuals do not satisfy the criteria for authorship merely because they have made possible the conduct of the research and/or the

preparation of the manuscript. For example, heading a laboratory, research program, or department where the research takes place does not, by itself, warrant co-authorship of a scholarly paper² in the absence of the individual's intellectual contribution to the work. Consequently, all contributors who do not meet the four criteria for authorship should be listed in an acknowledgments section.

Examples of those who might be acknowledged include a person who assisted with acquisition of funding¹, provided financial or material support, technical services, general administrative support¹, referral of patients or participants for a study², writing assistance, technical or language editing or proofreading¹, or a department chair who provided only general support or supervision. All of these individuals can provide a valuable contribution⁵ to the research and publication effort and may not meet the criteria for authorship, but their contributions should still be acknowledged.

Likewise, groups of persons who have contributed materially to the paper but whose contributions do not justify authorship may be listed under a heading such as "clinical investigators" or "participating investigators," and their function or contribution should be described—for example, "served as scientific advisors," "critically reviewed the study proposal," "collected data," or "provided and cared for study patients."

Because readers may infer their endorsement of the data and conclusions, all persons must give written permission to be acknowledged.

3. "Guest", "Gift", and "Ghost" Authorship

The integrity of published articles of scholarly work depends on the validity of the science and honesty in authorship. Therefore, EVMS considers "guest"⁵, "gift"⁵, and "ghost" authorship to be dishonest and inconsistent with the definition of authorship, and consequently, a violation of this policy.

"Guest" (also known as "honorary"⁵, "political", "courtesy"⁵, or "prestige"⁵) authorship is defined as granting authorship, in the absence of the individual's intellectual contribution to the work, out of appreciation or respect for the individual⁵, or in the belief that expert standing of the guest will increase the likelihood of publication, credibility, or status of the work⁵. "Gift" authorship is credit, offered from a sense of obligation, tribute, or dependence⁵, to an individual who has not contributed intellectually to the work, within the context of an anticipated benefit. Although not qualifying as authors, individuals who assist the research and publication effort should be acknowledged in the completed manuscript.

"Ghost" authorship occurs in instances where someone has made substantial contributions to the writing of an article/manuscript and this role is NOT mentioned in the publication.

Moreover, in instances where "ghost" authors work on behalf of companies with a commercial interest in the published topic, the major purpose of the published article, namely to inform and educate the reader, is compromised as the major purpose of the article is to persuade readers to favor a special interest. This practice is also dishonest and unacceptable and thus EVMS faculty and students are prohibited from authoring articles written by a "ghost author".

4. Other Considerations

Conflict of Interest¹

A conflict of interest exists when professional judgement concerning a primary interest (such as patients' welfare or the validity of research) may be influenced by a secondary interest (such as financial gain). Perceptions of conflict of interest are as important as actual conflicts of interest.

Financial relationships (such as employment, consultancies, stock ownership or options, honoraria, patents, and paid expert testimony) are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, and of science itself. However, conflicts can occur for other reasons, such as personal relationships or rivalries, academic competition, and intellectual beliefs. Authors should avoid entering into agreements with study sponsors, both for-profit and non-profit, that interfere with authors' access to all of the study's data or that interfere with their ability to analyze and interpret the data and to prepare and publish manuscripts independently when and where they choose.

Disputes

Disputes over authorship should be resolved in a collegial manner by the individuals in the study. However, when matters of dispute cannot be resolved in this manner, the Department Chair/Program Director shall act as a neutral mediator to affect a resolution of authorship. If the Department Chair/Program Director is an individual in a dispute, a Chair from an involved Department should act as the neutral mediator. In certain cases, the Chair may request that the Dean appoint a committee of senior faculty to resolve disputes.

Authorship disputes, including disagreement about authorship order, do not constitute research misconduct⁵. Moreover, an authorship dispute in the absence of a manuscript is, by nature, a *research* dispute.

Predatory Journals¹

A growing number of entities are advertising themselves as "medical journals" yet do not function as such ("predatory journals"). Authors have a responsibility to evaluate the integrity, history, practices, and reputation of the journals to which they submit manuscripts. Further guidance is available at www.wame.org/about/principles-of-transparency-and-best-practice.

Multiple Submissions and Duplicate Publication¹

Authors should not submit the same manuscript, in the same or different languages, simultaneously to more than one journal. The possibility for conflict exists when two or more journals claim the right to publish a manuscript that has been submitted to them simultaneously, and the likelihood that two or more journals will unknowingly and unnecessarily undertake the work of peer review, edit the same manuscript, and publish the same article.

Duplicate publication is publication of a paper that overlaps substantially with one already published, without clear, visible reference to the previous publication. Prior publication may include release of information in the public domain. Even so, a journal may consider for publication a complete report that follows publication of a preliminary report, such as a letter to the editor, a preprint, or an abstract or poster displayed at a scientific meeting.

5. Violations of this Policy

Violations of this policy are considered a violation of the Code of Conduct and may subject the individual to corrective action or other sanctions as deemed appropriate by the institution. Disagreements regarding the order of authorship do not, in and of themselves, constitute Research Misconduct or a violation of this policy⁵.