



José Florencio F. Lapeña, Jr., MA, MD

Department of Otolaryngology - Head and Neck Surgery
College of Medicine, University of the Philippines Manila

Department of Otorhinolaryngology
Head and Neck Surgery
East Avenue Medical Center, Diliman, Quezon City

The Updated World Association of Medical Editors (WAME) Recommendations on Chatbots and Generative AI in Relation to Scholarly Publications and International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (May 2023)

On January 20, 2023, the World Association of Medical Editors published a policy statement on *Chatbots, ChatGPT, and Scholarly Manuscripts: WAME Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications*.¹ There were four recommendations, namely: 1. *Chatbots cannot be authors*; 2. *Authors should be transparent when chatbots are used and provide information about how they were used*; 3. *Authors are responsible for the work performed by a chatbot in their paper (including the accuracy of what is presented, and the absence of plagiarism) and for appropriate attribution of all sources (including for material produced by the chatbot)*; and 4. *Editors need appropriate tools to help them detect content generated or altered by AI and these tools must be available regardless of their ability to pay*.¹ This statement was spurred in part by some journals beginning to publish papers in which chatbots such as ChatGPT were listed as co-authors.²

First, **only humans can be authors**. Chatbots cannot be authors because they cannot meet authorship requirements “as they cannot understand the role of authors or take responsibility for the paper.”¹ In particular, they cannot meet the third and fourth ICMJE criteria for authorship, namely “Final approval of the version to be published” and “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.”^{1,3} Moreover, “a chatbot cannot understand a conflict of interest statement, or have the legal standing to sign (such a) statement,” nor can they “hold copyright.”¹ Because authors submitting a manuscript must ensure that all those named as authors meet ICMJE authorship criteria, chatbots clearly should not be included as authors.¹

Correspondence: Prof. Dr. José Florencio F. Lapeña, Jr.
Department of Otolaryngology - Head and Neck Surgery
Ward 10, Philippine General Hospital
Taft Avenue, Ermita, Manila 1000
Philippines
Phone: (632) 8554 8467
Telefax: (632) 8524 4455
Email: lapenajf@upm.edu.ph
jflapena@up.edu.ph

The author declared that this represents original material that is not being considered for publication or has not been published or accepted for publication elsewhere, in full or in part, in print or electronic media; that the manuscript has been read and approved by the author, that the requirements for authorship have been met by the author, and that the author believes that the manuscript represents honest work.



Creative Commons (CC BY-NC-ND 4.0)
Attribution - NonCommercial - NoDerivatives 4.0 International



Second, **authors should acknowledge the sources of their materials.** When chatbots are used, authors “should declare this fact and provide full technical specifications of the chatbot used (name, version, model, source) and method of application in the paper they are submitting (query structure, syntax),” “consistent with the ICMJE recommendation of acknowledging writing assistance.”^{1,4}

Third, **authors must take public responsibility for their work;** “Human authors of articles written with the help of a chatbot are responsible for the contributions made by chatbots, including their accuracy,” and “must be able to assert that there is no plagiarism in their paper, including in text produced by the chatbot.”¹ Consequently, authors must “ensure ... appropriate attribution of all quoted material, including full citations,” “seek and cite the sources that support,” as well as oppose (since chatbots can be designed to omit counterviews), the chatbot’s statements.¹

Fourth, to facilitate all this, **medical journal editors** (who “use manuscript evaluation approaches from the 20th century”) “**need appropriate (digital) tools ... that will help them evaluate ... 21st century ... content (generated or altered by AI) efficiently and accurately.**”¹

The “proliferation of chatbots and their expanding use in scholarly publishing over the last few months, as well as emerging concerns regarding lack of authenticity of content when using chatbots” prompted the issuance in May 2023 of a revised policy statement: **Chatbots, Generative AI, and Scholarly Manuscripts: WAME Recommendations on Chatbots and Generative Artificial Intelligence in Relation to Scholarly Publications.**⁵

A new recommendation has been added to the four original principal recommendations: **Editors and reviewers should specify, to authors and each other, any use of chatbots in evaluation of the manuscript and generation of reviews and correspondence. If they use chatbots in their communications with authors and each other, they should explain how they were used.**⁵ Journal “editors and reviewers are responsible for any content and citations generated by a chatbot, and should be aware that chatbots retain the prompts fed to them, including manuscript content, and supplying an author’s manuscript to a chatbot breaches confidentiality of the submitted manuscript.”⁵

In addition, the second recommendation (**Authors should be transparent when chatbots are used and provide information about how they were used**) has been expanded, with two sub-headings: **2.1. Authors submitting a paper in which a chatbot/AI was used to draft new text should note such use in the acknowledgment; all prompts used to generate new text, or to convert text or text prompts into tables or illustrations, should be specified;** and **2.2: When an AI tool such as a chatbot is used to carry out or generate analytical work, help report results (e.g., generating tables or figures), or write computer codes, this should be stated in the body of the paper, in both the Abstract and the Methods section. In the interests of enabling scientific scrutiny, including replication and identifying falsification, the full prompt used to generate the research results, the time and date of query, and the AI tool used and its version, should be provided.**⁵

The revised WAME recommendations also reflect the May 2023 updated ICMJE recommendations that added a new section (II.A.4) and revised other sections (II.C.3, III.D.2, IV.A.3.g) to provide guidance on how work conducted with the assistance of AI technology (including ChatGPT) should and should not be acknowledged.⁶ These updated recommendations have also been incorporated in the revised Instructions to Authors (<https://pjohns.pso-hns.org/index.php/pjohns/libraryFiles/downloadPublic/121>) and Author Forms (<https://pjohns.pso-hns.org/index.php/pjohns/libraryFiles/downloadPublic/123>) of the *Philippine Journal of Otolaryngology Head and Neck Surgery*.⁶ In particular, the sections on Requirements for Authorship, Acknowledgements, and References reflect the May 2023 ICMJE recommendations.^{6,7}

Insofar as authorship is concerned, the ICMJE revised criterion #2 from “Drafting the work or revising it critically for important intellectual content” to “Drafting the work or reviewing it critically for important intellectual content.”⁶ The ICMJE made this change “because some authors may interpret ‘revising’ to indicate the requirement to make changes to earlier versions of the manuscript (in order to qualify for authorship) even if authors agree with the content,” believing that “this new change more accurately captures the original intent of the criterion -- which is that all authors must at a minimum review the manuscript critically for important intellectual content AND have the opportunity to make changes if warranted.”⁶ In our context, this particularly calls out (mostly ‘senior’) co-authors who relegate the tasks of drafting and

revising the manuscript to the first (usually 'junior') author, failing to even review the manuscript as it undergoes revisions based on editor and reviewer comments, corrections, and recommendations.

Insofar as the peer review process is concerned, the ICMJE has replaced the terms "blinded" with "anonymized."⁶ This is not new to us, as the *Philipp J Otolaryngol Head Neck Surg* already made this transition in 2022.⁸ In addition, the ICMJE now encourages authors "to refer to the SAGER guidelines for reporting of sex and gender information in study design, data analyses, results, and interpretation of findings."⁹ Without officially adapting SAGER guidelines, the PJOHNS has long considered sex as pertaining to biological and gender as pertaining to psycho-socio-cultural differences between men, women, boys, girls, and gender-diverse people.

The bulk of changes in the new ICMJE recommendations concern the use of AI technology (including ChatGPT). These recommendations have all been incorporated in our journal.

Requirements for Authorship now state: "Artificial Intelligence (AI)-assisted technologies (such as Large Language Models [LLMs], chatbots or image creators) should not be listed or be cited as authors, because they cannot be responsible for the accuracy, integrity, and originality of the work, and these responsibilities are required for authorship."⁷

Acknowledgements now include: "Authors must disclose whether they used artificial intelligence (AI)-assisted technologies (such as Large Language Models [LLMs], chatbots or image creators) in the production of submitted work. Authors who use such technology should describe, in both the cover letter and the submitted work, how they used it. Humans are responsible for any submitted material that included the use of AI-assisted technologies. Authors should carefully review and edit the manuscript because AI can generate authoritative-sounding output that can be incorrect, incomplete or biased."⁷

References now instruct: "Do not cite references listing AI as an author, because AI cannot fulfill authorship criteria. Authors should be able to assert that there is no plagiarism in their paper, including in text and images produced by the AI. Humans must ensure there is appropriate attribution of all quoted material including full citations."⁷

The WAME Recommendations on Chatbots and Generative AI (including ChatGPT) in Relation to Scholarly Publications will continue to be modified as the software and its applications develop,⁵ and we can expect the ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals⁶ to be continuously updated also. As a Journal of a WAME Member Editor (<https://wame.org/journals-whose-editors-belong-to-wame#M-R>) and one stating that it follows the ICMJE Recommendations (<https://www.icmje.org/journals-following-the-icmje-recommendations/#P>), the *Philippine Journal of Otolaryngology Head and Neck Surgery* will update its policies and practice as well.

REFERENCES

- Zielinski C, Winker M, Aggarwal R, Ferris L, Heinemann M, Lapeña JF, Pai S, Ing E, Citrome L on behalf of the WAME Board. Chatbots, ChatGPT, and Scholarly Manuscripts: WAME Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications. January 20, 2023. World Association of Medical Editors. Available from: <https://wame.org/page3.php?id=110>; Republished as: Zielinski C, Winker M, Aggarwal R, Ferris L, Heinemann M, Lapeña, Jr JF, Pai S, Ing E, Citrome L. Chatbots, ChatGPT, and Scholarly Manuscripts: WAME Recommendations on ChatGPT and Chatbots in Relation to Scholarly Publications. *Open Access Maced J Med Sci*. 2023 Jan. 30;11(A):83-6. Available from: <https://oamjms.eu/index.php/mjms/article/view/11502>.
- Stokel-Walker C. ChatGPT listed as author on research papers: many scientists disapprove. *Nature* 2023 January 18; 613:620-621. DOI: 10.1038/d41586-023-00107-z; PubMed PMID: 36653617.
- International Committee of Medical Journal Editors (ICMJE). Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals. Updated May 2022. Who Is an Author? Defining the Role of Authors and Contributors. [cited 2023 January 18] Available from: <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>.
- International Committee of Medical Journal Editors (ICMJE). Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals. Updated May 2022. Non-Author Contributors, Defining the Role of Authors and Contributors. [cited 2023 January 18] Available from: <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>.
- Zielinski C, Winker MA, Aggarwal R, Ferris LE, Heinemann M, Lapeña JF, Pai S, Ing E, Citrome L, Alam M, Voight M, Habibzadeh F. on behalf of the WAME Board. Chatbots, Generative AI, and Scholarly Manuscripts: WAME Recommendations on Chatbots and Generative Artificial Intelligence in Relation to Scholarly Publications. World Association of Medical Editors. May 31, 2023. Available from: <https://wame.org/page3.php?id=106>.
- International Committee of Medical Journal Editors (ICMJE) [Homepage on the Internet]. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals. Updated May 2023. [cited 2023 May 29]. Available from: https://www.icmje.org/news-and-editorials/icmje-recommendations_annotated_may23.pdf.
- Philipp J Otolaryngol Head Neck Surg*. Official Publication of the Philippine Society of Otolaryngology - Head and Neck Surgery. [Homepage on the Internet; accessed 2023 May 29]. Available from: <https://pjohns.pso-hns.org/index.php/pjohns>.
- Lapeña JF. Truth and Transparency, Compromise and Climate Change. *Philipp J Otolaryngol Head Neck Surg*. 2022 Nov. 15;37(2):4-5. DOI: 10.32412/pjohns.v37i2.2015.
- Heidari S, Babor TF, De Castro P, Tort S, Curno M. Sex and Gender Equity in Research: rationale for the SAGER guidelines and recommended use. *Res Integr Peer Rev*. 2016 May 3;1:2. DOI: 10.1186/s41073-016-0007-6 PubMed PMID: 29451543 PubMed Central PMCID: PMC5793986.