**Editorial** **Open Access**

# Artificial Intelligence in Medical Writing – Understanding the Fine Line Between Assistance and Academic Misconduct

Iqbal Hussain Udaipurwala

**How to cite this Article:**
Udaipurwala IH, Artificial Intelligence in Medical Writing – Understanding the Fine Line Between Assistance and Academic Misconduct. J Bahria Uni Med Dental Coll. 2025;15(4):273-4 DOI: https://doi.org/10.51985/JBUMDC2025665



The explosion of artificial intelligence (AI) in biomedical research and clinical documentation heralds a new era in medical writing.[1,2,3] AI-driven tools, predominantly large language models (LLMs) like ChatGPT, GPT-4, DeepSeek, Scholar GPT and other natural language processing systems, have introduced unprecedented efficiency in generating, translating, summarizing, and editing medical content. Its significant capability to evaluate huge amount of data allows it to recapitulate medical text with great rationality and precision. The user-friendly interface of these LLMs have made it an ideal mean for medical and scinetific writing.[4] However, guidelines for AI bots are still under development, growth of Chat-GPT has surpassed its preliminary anticipations.[5] The newest version, GPT-5, exceeds ChatGPT in terms of innovative reasoning, text handling capability and image analysis, it even shows a higher level of creativity. These capabilities of AI bots raise pressing questions around fairness, equity, bias, authorship, and ethical implications of using AI in medical writing. Its fair use promise enhanced productivity and accessibility, while unfair use has risk of misinformation, academic misconduct and systemic bias replication. Its fair use can support human authorship, promote inclusivity and improve clarity without replacing critical thinking or scholarly rigor. Fair use of AI in medical writing may include language assistance for non-native speakers, manuscript formatting or grammar check, summarizing data-heavy report, automated translation and plagiarism detection. Conversely, unfair application may involve ghost-writing the entire manuscript, fabricating citations, bypassing peer review via AI-written submissions, misinformation propagation and biased amplification from training data. Such uses of AI will categorically undermine transparency, accountability, and trust in medical literature.

AI does not meet the criteria for authorship under the International Committee of Medical Journal Editors (ICMJE) guidelines. It cannot take responsibility for the integrity or accuracy of a study. From a legal point of view, AI has no status of a human being, making humans as the definitive duty conveyers. Unless AI contribution is disclosed, editorial board cannot assess whether scientific standards were met, leading to possible misconduct. Journals must enforce policies requiring transparency about AI tool usage, akin to declaring statistical software. There is a risk of unintentional plagiarism with the use of AI, as it creates manuscript based on the available facts and it may duplicate the same with different words and phrases. Medical and scientific literature often contains complex and context-specific material, which can be misinterpreted by LLMs leading to misinformation that can potentially dangerous in patient care and scientific understanding.[6] There is an in-built risk that investigators may depend on AI tools too much, weakening critical human judgment, which is essential to genuine and sometimes life-threatening medical discourse. Another important and pressing concern in the use of AI-generated medical writing is algorithmic bias. Training data, often sourced from western population which may fail to represent global health diversity, thereby encoding systemic inequalities. LLMs are also notorious for fabricating content that appears plausible but is false and it may include fake references, misquoted studies and invalid statistics. ChatGPT frequently creates citations to journals that did not exist in reality. In medical context, these inaccuracies could mislead practitioners or influence research directions based on invalid claims. If authors rely solely on AI without proper vetting, erroneous statements may be peer-reviewed and published, leading to downstream harms. Thus, mandatory verification of all AI-generated outputs is crucial for scientific validity. AI enables researchers from low-resource settings to meet publication standards and express complex ideas. On the other hand, access to premium AI tools is often gated behind paywalls or language barriers. If only elite institutions afford the best AI support, disparities in publication rates and visibility may widen. For AI to be used fairly, global access equity is essential, including open-source tools and multilingual capacities.[3]

Despite the amazing accomplishments of AI, there is still substantial hesitation regarding objectivity and prejudice in the field of medicine.[7] It is the topic of widespread research and discussion for the last many years in medical and health sciences.[8,9,10] AI tools trained on clinical data pose additional concerns regarding patient privacy issues.[11] It may gather and store information including medical and personal sensitive data that can be used later on in content generation.

**Iqbal Hussain Udaipurwala**
Senior Professor and Head Department of ENT,
Bahria University Health Sciences campus, Karachi
E-mail: iqbal.bumdc@bahria.edu.pk

Received: 01-08-2025
Accepted: 02-09-2025

Transparency in the usage of clinical information is very crucial and patient must be informed that his data could be used in AI bot.[12] Further patient must have chance to offer informed consent with strong and reasonable privacy policy. Moreover, copyright infringement emerges when AI reproduces protected text verbatim. Journals must define permissible boundaries and require authors to affirm that content does not violate patient rights. Peer review process is also not immune to AI transformation, as AI-assisted reviewers can expedite checks but at the same time pose risk of automation bias, lacking clinical nuance and bypassing plagiarism detection. As AI continue to reshape our technological landscape in medical writing, we should prepare ourselves to proactively face this challenge. To uphold fair usage and prevent misuse, the following policy measures are recommended:

- Ø Mandatory disclosure: Journals should require explicit declarations of any AI tool usage during submission, including its role, clearly mentioning the level of AI involvement ranging from proofreading to finally full manuscript writing. Secondly, also require to mention the human involvement throughout manuscript preparation including formatting, proofreading, revising, editing and authenticating AI generated information. Lastly also provide details about the AI tool used with name of software and version used etc. as we do for using statistical software.
- Ø Prohibited uses: Total AI authorship or citation generation should be explicitly disallowed without human verification.
- Ø AI Authorship Ban: AI systems must not be credited as authors.
- Ø Audit trails: Tools used must offer version tracking for accountability.
- Ø Bias auditing: Require authors to confirm that no bias was introduced through AI tool use.
- Ø Improve collaboration with AI developers, journal editors and researchers to formulate policies the can cater the need of all stakeholders. In addition, regularly assess the influence of AI on value and prejudices in medical writing as this utility is continuously evolving.
- Ø Training and education: Universities should integrate AI ethics into medical research curricula.
- Ø Global accessibility: Encourage open-source, equitable AI tool dissemination.

To conclude, artificial intelligence is neither inherently fair nor unfair, it reflects the intentions, inputs, and structures created by humans. In medical writing, its potential is immense enabling multilingual authorship, reducing clerical burden, and improving readability. Without ethical guidelines and critical oversight, AI risks eroding the trust and rigor of medical writing. As we stand at a technological inflection point, the medical research community must collaboratively define what constitutes responsible AI use. This means building policies, tools, and cultures that harness AI's strengths while safeguarding the integrity of medical knowledge. The future of medical writing depends not on AI's capability but on our accountability.

**Authors Contribution:**
**Iqbal Hussain Udaipurwala:** Conception, writing, literature search, proof reading

## REFERENCES

1. Wang C, Liu S, Yang H, Guo J, Wu Y, Liu J. Ethical Considerations of Using ChatGPT in Health Care. J Med Internet Res. 2023; 25: e48009. https://www.jmir.org/2023/1/e48009. DOI: 10.2196/48009.
2. Filippi CG, Stein JM, Wang Z, Bakas S, Liu Y, Chang PD, Lui Y, Hess C, Barboriak DP, Flanders AE, Wintermark M, Zaharchuk G, Wu O. Ethical Considerations and Fairness in the Use of Artificial Intelligence for Neuroradiology. AJNR Am J Neuroradiol. 2023; 44(11): 1242-1248. doi: 10.3174/ajnr.A7963.
3. Grzybowski A, Jin K, Wu H. Challenges of artificial intelligence in medicine and dermatology. Clin Dermatol. 2024; 42(3): 210-215. doi: 10.1016/j.clindermatol.2023.12.013.
4. Anders BA. Is using ChatGPT cheating, plagiarism, both, neither, or forward thinking? Patterns (N Y). 2023; 4(3): 100694. doi: 10.1016/j.patter.2023.100694.
5. Liebrenz M, Schleifer R, Buadze A, Bhugra D, Smith A. Generating scholarly content with ChatGPT: ethical challenges for medical publishing. Lancet Digit Health. 2023; 5(3): e105-e106. doi: 10.1016/S2589-7500(23)00019-5.
6. Hryciw BN, Seely AJE, Kyeremanteng K. Guiding principles and proposed classification system for the responsible adoption of artificial intelligence in scientific writing in medicine. Front Artif Intell. 2023; 6: 1283353. doi: 10.3389/frai.2023.1283353.
7. Yang Y, Lin M, Zhao H, Peng Y, Huang F, Lu Z. A survey of recent methods for addressing AI fairness and bias in biomedicine. J Biomed Inform. 2024; 154: 104646. doi: 10.1016/j.jbi.2024.104646.
8. Hanna MG, Pantanowitz L, Jackson B, Palmer O, Visweswaran S, Pantanowitz J, Deebajah M, Rashidi HH. Ethical and Bias Considerations in Artificial Intelligence/Machine Learning. Mod Pathol. 2025; 38(3): 100686. doi: 10.1016/j. modpat. 2024.100686.
9. Jeyaraman M, Ramasubramanian S, Balaji S, Jeyaraman N, Nallakumarasamy A, Sharma S. ChatGPT in action: Harnessing artificial intelligence potential and addressing ethical challenges in medicine, education, and scientific research. World J Methodol. 2023; 13(4): 170-178. doi: 10.5662/wjm.v13.i4.170.
10. Collins GS, Dhiman P, Andaur Navarro CL, et al. Protocol for development of a reporting guideline (TRIPOD-AI) and risk of bias tool (PROBAST-AI) for diagnostic and prognostic prediction model studies based on artificial intelligence. BMJ Open, 2021; 11: e048008. doi: 10.1136/bmjopen-2020-048008.
11. Naik N, Hameed BMZ, Shetty DK, Swain D, Shah M, Paul R, Aggarwal K, Ibrahim S, Patil V, Smriti K, Shetty S, Rai BP, Chlosta P, Somani BK. Legal and Ethical Consideration in Artificial Intelligence in Healthcare: Who Takes Responsibility? Front Surg. 2022; 9: 862322. doi: 10.3389/fsurg.2022.862322.
12. El Emam K, Jonker E, Arbuckle L, Malin B. A systematic review of re-identification attacks on health data. PLoS One. 2011; 6(12): e28071. doi: 10.1371/journal.pone.0028071.