



BMJ, London, UK  
Correspondence to: H Macdonald

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## Riding the whirlwind: BMJ's policy on artificial intelligence in scientific publishing

BMJ will consider content created with artificial intelligence only if the use is clearly described and reasonable

Helen Macdonald, Kamran Abbasi

Artificial intelligence (AI) can rival human knowledge, accuracy, speed, and choices when carrying out tasks. The latest generative AI tools are trained on large quantities of data and use machine learning techniques such as logical reasoning, knowledge representation, planning, and natural language processing. They can produce text, code, and other media such as graphics, images, audio, or video. Large language models (LLMs), which are a form of AI, are able to search, extract, generate, summarise, translate, and rewrite text or code rapidly. They can answer complex questions (called prompts) at search engine speeds that the human mind cannot match.

AI is transforming our world, and we are not yet fully able to comprehend or harness its power. It is a whirlwind sweeping up all before it. Availability of LLMs such as ChatGPT, and growing awareness of their capabilities, is challenging many industries, including academic publishing. The potential benefits for content creation are clear, such as the opportunity to overcome language barriers. However, there is also potential for harm: text produced by LLMs may be inaccurate, and references can be unreliable. Questions remain about the degree to which AI can be accountable and responsible for content, the originality and quality of content that is produced, and the potential for bias, misconduct, and misinformation.

### Ensuring transparency

BMJ group's policy on the use of AI in producing and disseminating content recognises the potential for both benefit and harm and aims primarily for transparency. The policy allows editors to judge the suitability of authors' use of AI within an overarching governance framework (<https://authors.bmj.com/policies/ai-use>). BMJ journals will consider content prepared using AI as long as use of the technology is declared and described in detail so that editors, reviewers, and readers can assess suitability and reasonableness. Where use of AI is not declared, we reserve the right to decline to publish submitted content or retract content.

With greater experience and understanding of AI, BMJ may specify circumstances in which particular uses are or are not appropriate. We appreciate that nothing stands still for long with AI; editing tasks enabled by AI embedded in word processing programmes or their extensions to improve language, grammar, and translation will become commonplace and are more likely to be acceptable than use of AI to complete tasks linked to authorship criteria.<sup>1</sup> These

tasks include contributing to the conception and design of the proposed content; acquisition, analysis, or interpretation of data; and drafting or critically reviewing the work.

BMJ's policy requires authors to declare all use of AI in the contributorship statement. AI cannot be an "author" as defined by BMJ, the International Committee of Medical Journal Editors (ICMJE), or the Committee on Publication Ethics (COPE) criteria, because it cannot be accountable for submitted work.<sup>1</sup> The guarantor or lead author remains responsible and accountable for content, whether or not AI was used.

BMJ's policy mirrors that of organisations such as the World Association of Medical Editors (WAME),<sup>2</sup> COPE,<sup>3</sup> and other publishers. All content will be held to the same standard, whether produced by external authors or by editors and staff linked to BMJ. Our policy on the use of AI for drafting peer review comments and any other advisory material is similar. All use must be declared, and editors will judge the appropriateness of that use. Importantly, reviewers may not enter unpublished manuscripts or information about them into publicly available AI tools.

It is imperative for journals and publishers to work with AI, learn from and evaluate new initiatives in a meaningful but pragmatic way, and devise or endorse policies for the use of AI in the publication process. UK's Science Technology and Medicine Integrity Hub (a membership organisation for the publishing industry which aims to advance trust in research)<sup>4</sup> outlined three main areas that could be improved by AI: supporting specific services, such as screening for substandard content, improving language, or translating or summarising content for diverse audiences; searching for and categorising content to enhance content tagging or labelling and the production of metadata; and improving user experience and dissemination through curating or recommending content.

BMJ will carefully assess the effect of AI on its broader business and will publicly report use where appropriate. New ideas for trialling AI within BMJ's publishing workflows will be assessed on an individual basis, and we will consider factors such as efficiency, transparency and accountability, quality and integrity, privacy and security, fairness, and sustainability.

AI presents publishers with serious and potentially existential challenges, but the opportunities are also

revolutionary. Journals and publishers must maximise these opportunities while limiting harms. We will continue to review our policy given the rapid and unpredictable evolution of AI technologies. AI is a whirlwind capable of destroying everything in its path. It can't be tamed, but our best hope is to learn how to ride the whirlwind and direct the storm.

Competing interests: We have read and understood BMJ policy on declaration of interests and have no interests to declare.

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- 1 ICMJE. Defining the role of authors and contributors. <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>
- 2 World Association of Medical Editors. Chatbots, generative ai, and scholarly manuscripts. <https://wame.org/page3.php?id=106>
- 3 COPE. Authorship and AI tools. <https://publicationethics.org/cope-position-statements/ai-author>
- 4 STM. AI ethics in scholarly communication. [https://www.stm-assoc.org/wp-content/uploads/2021\\_05\\_11\\_STM\\_AI\\_White\\_Paper\\_April2021-1.pdf](https://www.stm-assoc.org/wp-content/uploads/2021_05_11_STM_AI_White_Paper_April2021-1.pdf)