Generating scholarly content with ChatGPT: ethical challenges for medical publishing

The impact of generative artificial intelligence (AI) on medical publishing practices is currently unknown. However, as our experiences underline, generative AI could have substantial ethical implications.

ChatGPT (OpenAI, San Francisco, CA, USA) is an AI chatbot released in November, 2022.[1] Developed using human feedback and freely accessible, the platform has already attracted millions of interactions.[2] When presented with a query, ChatGPT will automatically generate a response, which is based on thousands of internet sources, often without further input from the user. Resultantly, individuals have reportedly used ChatGPT to formulate university essays and scholarly articles[3] and, if prompted, the system can deliver accompanying references. Given these accounts and its popular usage, we requested that ChatGPT write a Comment for *The Lancet Digital Health* about AI and medical publishing ethics. We then asked ChatGPT how the editorial team should address academic content produced by AI. The results make for interesting reading (appendix).

The functionality of ChatGPT highlights the growing necessity of implementing robust AI author guidelines in scholarly publishing. Ethical considerations abound concerning copyright, attribution, plagiarism, and authorship when AI produces academic text. These concerns are especially pertinent because whether copy is AI generated is currently imperceptible to human readers and anti-plagiarism software. Studies across various fields have already listed ChatGPT as an author,[4] but whether generative AI fulfils the International Committee of Medical Journal Editors' criteria for authorship is a point of debate: can a chatbot really provide approval for work and be accountable for its contents? The Committee on Publication Ethics has developed AI recommendations for editorial decision making[5] and the trade body for scholarly publishers, the International Association of Scientific, Technical, and Medical Publishers, produced a white paper on AI ethics.[6] As technologies become better tailored to user needs and more commonly adopted, we believe comprehensive discussions about authorship policies are urgent and essential. Elsevier, who publish the *Lancet* family of journals, alongside other major publishers, have stated that AI cannot be listed as an author and its use must be properly acknowledged.[7]

ChatGPT is available to use without cost.[1] However, OpenAI's leadership have affirmed that free use is temporary and the product will eventually be monetised.[8] One commercial option for the platform could conceivably involve some form of paywall, which might entrench existing international inequalities in scholarly publishing. Although institutions in socioeconomically advantaged areas could probably afford access, those in low-income and middle-income countries might not be able to, thus widening existing disparities in knowledge dissemination and scholarly publishing.

In our opinion, as the program remains freely available in the short term, ChatGPT's ease of use and accessibility could substantially increase scholarly output. ChatGPT might democratise the dissemination of knowledge since the chatbot can receive and produce copy in multiple languages, circumventing English-language requirements that can be a publishing barrier for speakers of other languages. Nonetheless, the functionality of ChatGPT has the capacity to cause harm by producing misleading or inaccurate content,[3] thereby eliciting concerns around scholarly misinformation. As the so-called COVID-19 infodemic shows, the potential spread of misinformation in medical publishing can entail significant societal hazards.[9] Listed by OpenAI as a limitation, "ChatGPT sometimes writes plausible-sounding but incorrect or nonsensical answers";[1] interestingly, the chatbot itself highlighted this possibility when responding to us (appendix).

The early rollout of ChatGPT will inevitably spawn competitors, potentially rendering this a far-reaching problem. Accordingly, per ChatGPT's response to our query, *The Lancet Digital Health* should "carefully consider the ethical implications of publishing articles produced by AI." We would go further: as pioneers of publishing ethics and academic standards, we call on *The Lancet Digital Health* and the *Lancet* family to initiate rigorous exchanges around the implications of AI-generated content within scholarly publishing, with a view to creating comprehensive guidance. ChatGPT's

See **Online** for appendix

burgeoning popularity and our experiences illustrate that the time for these conversations is now; after all, can you really be sure that what you are currently reading was written by human authors?

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*Michael Liebrenz, Roman Schleifer, Anna Buadze, Dinesh Bhugra, Alexander Smith
michael.liebrenz@unibe.ch

Department of Forensic Psychiatry, University of Bern, 3012 Bern, Switzerland (MS, RS, AS); Department of Psychiatry, Psychotherapy and Psychosomatics, Psychiatric Hospital, Specialized Outpatient Clinic for ADHD, University of Zurich, Zurich, Switzerland (AB); Dinesh Bhugra, Kings College London, London, UK (DB)

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