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# Cardiovascular publishing in the era of artificial intelligence: a double-edged sword

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**The Evolution**: Beyond integrating into clinical procedures and applications, artificial intelligence (AI) is also transforming how clinicians acquire knowledge, conduct research, and publish scientific work. The usage of AI in the cardiovascular (CV) publishing domain has evolved considerably in the past few years. Initially, machine-learning algorithms were primarily used for data processing, statistical analysis or pattern recognition. Later, specialized tools were introduced to support manuscript screening and improve the quality and scope of publications. The emergence of large language models (LLM) such as ChatGPT, marked a major turning point, transforming how articles are written, disseminated, and accessed. Today, AI tools assist authors in drafting, structuring, and refining manuscripts, while helping editors streamline administrative and technical assessments. Dedicated software identifies potential plagiarism, whereas AI-detection tools attempt to identify linguistic patterns associated with AI-generated text. AI can also facilitate language editing, reviewer identification, and the development of educational materials to disseminate research findings to broader audiences. Despite these benefits, increased AI usage raises important ethical and methodological concerns, including hallucinations, inaccurate information, fabricated references, and challenges related to transparency.[1-4]

**The Dual Reality**: Growing evidence highlights the dual role of AI. An Elsevier study of 3,234 researchers indicates that AI is most frequently used for literature summarization (61%) and review papers (51%), though 45% of respondents feel undertrained.[5] Uchmanowicz *et al* notes that ChatGPT can assist with literature synthesis and hypothesis formulation in cardiology; however, concerns regarding hallucinations, data privacy, and a lack of clinical judgment necessitate human oversight.[6] Kresoje *et al* reported that approximately 10% of all abstracts submitted to the German Cardiac Society Annual Congress received quality ratings identical to human-authored submissions, with reviewers failing to detect that any of the 136 abstracts were generated by ChatGPT-4o.[7] AI has also proven to be a valuable, complementary tool in peer review. In a comparison of 41 LLM-generated reviews and 77 human reviews across 40 manuscripts, agreement with the final editorial decision was statistically equivalent (67.5% for AI vs. 71.9% for human; p = 0.74).[8]

**Ethical Imperatives**: In accordance with the recommendations of the International Committee of Medical Journal Editors, CV journals are increasingly adopting policies governing AI use.[9] To ensure research integrity, authors are expected to use LLMs transparently; specifically, authors are required to disclose the use of generative AI and AI-assisted technologies in the writing process by specifying the model used and the purpose of its application. AI tools cannot be listed as authors, and human authors remain fully responsible for the accuracy, integrity, and originality of manuscripts.[9,10]

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