Publisher Perspectives on AI:
Empowering Medical Writers for the Future
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Artificial Intelligence: A Primer for Practical & Ethical Use

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Presentation Overview

Generative AI Publishing Policies

- Who has policies
- Key takeaways from policies
- Insights into T&F's AI policy

Real World Use in Publications

- Author use and disclosure
- Limiting risks and identifying AI text
- Examples of AI use and disclosure

What does the future hold?

- Research and publishing communities
- Government regulation
- trend insights from recent publications

About Taylor & Francis...

- **One of the top 5** research publishers globally
- Publishes:
  - **Over 2,700 scholarly journals**
  - **8,000 new books a year**, with over **145K books published**
- Partners with **more than 700 societies**
- Subject areas include humanities and social sciences, behavioral sciences, science and technology, engineering, and medicine and healthcare
- Brands include Routledge, CRC Press, F1000, Dove Medical Press, Expert Medicine (formerly Future Science Group), and PeerJ.

Publishing Policy Landscape

Artificial Intelligence: A Primer for Practical & Ethical Use

Publisher Policies: Who has generative AI policies?

Other Journals with Policies (journals published by a publisher that is not listed above)

Information from the ISMPP Publication Ethics & Standards Committee's database of AI guidelines and policies for authors, editors, and peer reviewers.

Publisher & Journal Policy Highlights

ALL: **Generative AI CANNOT be listed as an author.**

ALL: **Use of generative AI must be disclosed.**

Can AI-generated text and images be used by authors?

✅ **YES:** *BMJ*, Elsevier, Emerald, Springer (only text), *JAMA* (discourages use for images), *N Engl J Med*, *PLOS One*

❌ **NO:** Cambridge U Press, Frontiers, Karger, MDPI, Sage, T&F, Wiley

❓ **Not addressed:** *Ann Intern Med*

Information from the ISMPP Publication Ethics & Standards Committee's database of AI guidelines and policies for authors, editors, and peer reviewers.

Organization Policies: Who has generative AI policies?

ALL: Generative AI CANNOT be listed as an author.

ALL: Use of generative AI must be disclosed.

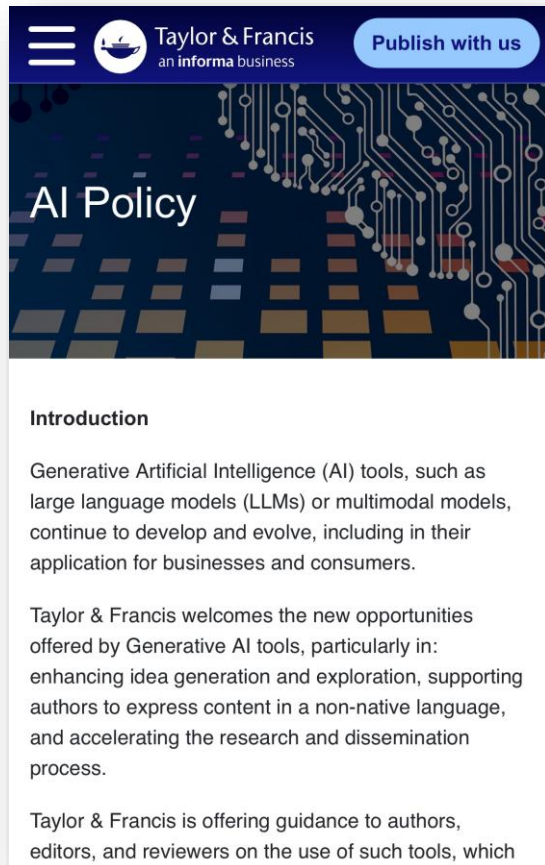**AMWA:** Author guidance references COPE, WAME, and JAMA policies.

EMWA: AI Working Group supports educating medical writers, monitoring and classifying AI tools, and collaborating with experts.

Information from the ISMPP Publication Ethics & Standards Committee's database of AI guidelines and policies for authors, editors, and peer reviewers.

Publisher & Organization Policy Highlights

- Some publishers **differentiate AI assistance** from generative AI:
  "AI tools that make suggestions to improve or enhance your own work, such as **tools to improve language, grammar or structure**, are considered assistive AI tools and do not require disclosure by authors or reviewers."

- Several publisher policies note that **individual journals may have more specific guidance** on use of generative AI.

- Many policies include **guidance for editors and peer reviewers** in addition to authors.

- **Authors are responsible for the originality, validity, and integrity of the content** of their manuscript, including any material contributed by AI or AI-assisted tools.

Information from the ISMPP Publication Ethics & Standards Committee's database of AI guidelines and policies for authors, editors, and peer reviewers.
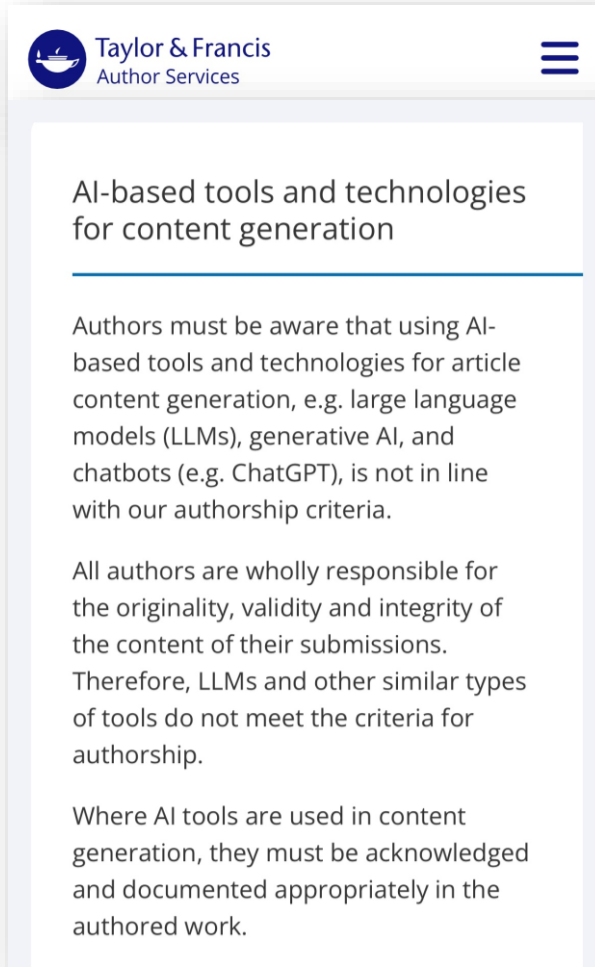
T&F's Generative AI Policy

Expanded guidance released in **June 2024**

- **Authorship**
  Generative AI tools must not be listed as an author.

- **Transparency**
  Authors must clearly acknowledge any use of Generative AI tools.

- **Confidentiality, data security, and intellectual property rights.**
  Editors and peer reviewers must not upload files, images or information from unpublished manuscripts into Generative AI tools.

- **Identifies risks and appropriate/inappropriate author use** of Generative AI.

- **Provides guidance on author disclosure** of Generative AI use.

https://taylorandfrancis.com/our-policies/ai-policy/

AI Guidance for Authors, Editors, and Peer Reviewers

AI-based tools and technologies for content generation

Authors must be aware that using AI-based tools and technologies for article content generation, e.g. large language models (LLMs), generative AI, and chatbots (e.g. ChatGPT), is not in line with our authorship criteria.

All authors are wholly responsible for the originality, validity and integrity of the content of their submissions. Therefore, LLMs and other similar types of tools do not meet the criteria for authorship.

Where AI tools are used in content generation, they must be acknowledged and documented appropriately in the authored work.

Author Services
- **Defining Authorship in Your Research Paper**

Editor Resources
- **Ethics for Journal Editors**
- **Journal Editor Code of Conduct**

  Do not upload files, images or information from unpublished manuscripts into databases or tools that do not guarantee confidentiality, are accessible by the public and/or may store or use this information for their own purposes (for example, generative AI tools like ChatGPT).

Peer Reviewer Resources
- **Guidelines for Peer Reviewers**

  Reviewers must not use artificial intelligence tools to generate manuscript review reports, including LLM based tools like ChatGPT.

Real World Use in Publications

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Taylor & Francis Group
an **informa** business

Appropriate Use of Generative AI by Authors*

- **Idea generation** and idea exploration[5,6]

- **Language improvement**[1,5]

- **Interactive online search** with LLM-enhanced search engines[5]

- **Literature classification**[5]

- **Coding assistance**[5]

- **Aid in analysis of data**[1,2]

- **CAREFUL:** Production or editing of written or visual content[3]; generating references, text, images, or any other form of content[4]

* Please refer to each publisher's policy to confirm how AI tools can be used.

1. Elsevier; 2. Emerald; 3. Frontiers; 4. Sage; 5. T&F; 6. Wiley

Disclosure of Generative AI Use

- Disclose in Methods, Acknowledgements, and/or Cover Letter*

- What should be disclosed?
  - ✓ Content created or modified[1]
  - ✓ Name and version of the AI tool used[1,4,5,6]
  - ✓ How the accuracy of any generative AI-based output was verified[3]
  - ✓ How the AI tool was used[4,5,6,7]
  - ✓ Reason for AI tool use[5,6]

- Authors are encouraged to include the original input prompts and outputs from the tools used in the submission[5] or as supplementary material.[2,3]

* Please refer to each publisher's policy for specific guidance about when and where AI tool use should be disclosed.

1. Emerald; 2. Frontiers; 3. Karger; 4. MDPI; 5. Sage; 6. T&F; 7. Wiley

Example #1. Disclosure in Acknowledgements

Open access

Special Report

Mindfulness as a therapeutic option for obsessive-compulsive disorder

Acknowledgments

In compliance with the International Committee of Medical Journal Editors (ICMJE) recommendations, the authors provide the following disclosure regarding the utilization of AI services in this work: the authors of this article used the Large Language Model GPT-3.5 by OpenAI exclusively for minor translations and grammatical corrections in this work. All sentences revised by GPT-3.5 were reviewed and verified by the authors. No content was generated by the GPT-3.5 or any other AI service.

Expert Review of Neurotherapeutics

https://www.tandfonline.com/doi/full/10.1080/14737175.2024.2365945

Example 2. Disclosure outside of Acknowledgements

Open access

Original Research

Medical device similarity analysis: a promising approach to medical device equivalence regulation

Author contributions statement

All authors have substantially contributed to the conceptualization of this work, writing the code, interpretation of the relevant literature, as well as in drafting, writing or critically reviewing this paper.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author(s) used ChatGPT and DeepL to rephrase a handful of sentences and aid with grammar and spelling. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Expert Review of Medical Devices

https://www.tandfonline.com/doi/full/10.1080/17434440.2024.2402027

Example 3. Disclosure in Abstract & Acknowledgements

Original Research

Enhancing readability of USFDA patient communications through large language models: a proof-of-concept study

ABSTRACT

Methods

➜ We analyzed the latest DSCs and MGs, using ChatGPT 4.0© and Gemini© to simplify them to a sixth-grade reading level. Outputs were evaluated for readability, technical accuracy, and content inclusiveness.

Acknowledgement

➜ We acknowledge the use of ChatGPT for correcting grammar in the manuscript.

Expert Review of Medical Devices

https://www.tandfonline.com/doi/full/10.1080/17434440.2024.2402027

Example 3. Disclosure in Methods, *continued*

Original Research

Enhancing readability of USFDA patient communications through large language models: a proof-of-concept study

2. Methods

2.2. Study procedure

⟶ 2.2.1. Large language models assessed in this study

- ChatGPT 4.0© [24]: Developed by OpenAI©, it is designed to generate text-based responses, with an ability to interpret complex questions and problem-solving capabilities. This LLM is trained on 175 billion datasets, it has 1.6 trillion parameters with the latest update in April 2023.

- Gemini© [25]: Developed by Google©, it is based on transformer neural networks, it has 1.5 trillion parameters with an ability to process and generate text, translate languages, and provide responses in an informative way.

⟶ The complete details of the DSCs fed into the LLMs are mentioned in the Electronic Supplementary File

Example 3. Disclosure in Methods, *continued*

Original Research

Enhancing readability of USFDA patient communications through large language models: a proof-of-concept study

→ 2.2.2.3. Prompts

Prompt: 'Reformulate the following paragraph into a sixth-grade reading level. Retain all the messages that emerge from the following paragraph. Retain the question or the header (wherever appropriate) in the paragraph.' At the end of this query, the relevant text portion was pasted.

Two prompt types were used:

- Multiple prompts: Every query/header and the text portion underneath were posted separately.

- Single prompt: The entire communication containing all the questions, headers and the text portions were pasted in the query together.

Two authors independently evaluated the LLM outputs on the domains of technical accuracy (are the texts free from any mistakes and technically accurate?) and inclusiveness (are the key messages stated in the original communication listed?) and verified them with the respective contents of the USFDA DSCs and MGs. The responses were classified as binary: technical accuracy (accurate or inaccurate) and for inclusiveness (complete or incomplete). Tables 1 and 2 list the expected key responses for DSCs and MGs, respectively. Any disagreements were resolved through discussion. We adhered to the sixth-grade level of readability in alignment with the recommendations from the National Institute of Health and the Center for Disease Control and Prevention [28,29].

How to Limit Risks Associated with AI Use

Risk	Generative AI Tools...	Limit Risk
Inaccuracy & bias	**Can introduce inaccuracies and falsities** (so-called "hallucinations").	**Always double check the information** provided by AI tools.
Lack of attribution	**Often do not correctly and precisely attribute** ideas, quotes, or citations.	**Do not copy and paste from AI tools**—get inspired and write.
Confidentiality and intellectual property risks	On third-party platforms **may not offer sufficient standards of confidentiality, data security, or copyright protection**.	**Only use private, company-approved AI platforms.** Do not feed any confidential, sensitive, and/or proprietary information into third-party platforms.
Unintended uses	And **providers may reuse input or output data** from user interactions, potentially infringing on author and publisher rights, among others.	

Based on Taylor & Francis AI Policy: https://taylorandfrancis.com/our-policies/ai-policy/

When to suspect AI-generated text?

- Use of tortured phrases, complex words, and non-scientific language:
  "This strategic integration serves two crucial purposes: strengthening the immune system's response to neoplastic entities and concurrently thwarting the immunosuppressive tactics orchestrated by malignant forces."

- Repetitive writing, such as repetitive phrases and ideas.

- Surface level discussion of scientific issues without critique or opinion included (review articles).

- Generic conclusion that doesn't reference any points previously made.

- Written in a different style than author's emails and comments to reviewers.

- Paragraphs written as lists with semicolons at the start of each point.

- Defining an abbreviation every time it is used.

REMEMBER: The above are also seen in human-written text and do not confirm use of generative AI.

"As the use and capabilities of generative AI tools evolve, it is of importance that **any assistance from such tools for content generation must be clearly stated within the article**. While authors are responsible for ensuring the validity, originality and integrity of their article content, the **ultimate decision of what constitutes acceptable use of generative AI tools within scholarly publishing lies with the journal editor and publisher**, to ensure these are aligned with our editorial policies and key principles of publishing ethics."

Sabina Alam, Director of Publishing Ethics & Integrity, Taylor & Francis

How will use of Generative AI evolve?

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2025. Taylor & Francis

Review and potentially update AI policy to ensure that the policy is meeting the needs of our stakeholders.

Along with other publishers, **continue using of the PaperPal tool** (Cactus Communications) for language editing and manuscript evaluation support.

Continued **development of Knowledge Centre web pages**, which use smart searches to find related books and journals; then use an LLM to create a summary. This summary and its sources:
- Help readers quickly understand a topic and find relevant resources.
- Increase discoverability of content by supporting SEO.

Analysis of AI-created content, such as Plain Language Summaries, systematic reviews, and book-to-video course conversion.

Publishers can **lead the way in inclusivity and fairness** by transforming the Version of Record (final article) into content that can be used by any scholar.

2025. Publishing

Continued growth in the sophisticated usage of AI by authors, editors, and publishers, with both positive and negative ramifications.

- **Positive:** Greater proliferation of high-quality content that can be used in new and exciting ways.
- **Negative:** If LLMs are built on false or biased information, the expansion of scientific research will be negatively impacted.

Launch of new tools and platforms that find, analyze, and create information/content, as well as license content for use by AI.

Creation of new business models that (1) help ensure users can leverage medical content with AI and (2) train AI easily and effectively while ensuring attribution, remuneration, and preservation of the long-term value of published content.

NEEDED from PUBLISHERS. Better information and training, with clear and detailed guidance, on how researchers, authors, and medical publication professionals, among others, can use AI in connection with their content.

LLM = large language model

2025. Government

EU AI Act. One of the first bills that provides legal framework for GAI usage.
- Provides risk-based approach for categorizing AI into risk tiers 1–4
- Use of copyrighted content requires the authorization of the rightsholder unless an exception applies.

US. Expected to provide a bipartisan list of AI recommendations after the election and legislative action can be potentially taken in 2025.

UK. Now that the government has been established, they have indicated that AI is a high priority in 2025.

Scientific Research

Specialized LLMs and SLMs are being trained for specific purposes, such as drug development and hypothesis generation.

GAI is being applied—upstream and downstream—of R&D in competitive intelligence/strategy and post market development and monitoring.

2025. ISMPP

- **AI initiatives will be member driven** (by all ISMPP members) rather than via the ISMPP AI Task Force (created by appointment of members).

- **AI policy.** No major changes in terms of guidance provided.

- Expectations:
  - Overview of current state of copyright and licensing.
  - Statement on ethical use of AI to help solve peer review challenges.

- Additional interests:
  - What will publishing space likely adopt in 2025/2026.
  - Private platforms that facilitate safe, secure environments that protect intellectual property and confidentiality.

EU Artificial Intelligence Act: https://artificialintelligenceact.eu/

GAI = generative artificial intelligence; LLM = large language model;
R&D = research & development; SLM = small language model

RESOURCES & ACKNOWLEDGEMENTS

Artificial Intelligence: A Primer
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RESOURCES: Publisher AI Policies & Guidance

- Cambridge University Press. https://www.cambridge.org/core/services/publishing-ethics/authorship-and-contributorship-journals

- Elsevier. https://www.elsevier.com/en-gb/about/policies-and-standards/publishing-ethics

- Emerald. https://www.emeraldgrouppublishing.com/publish-with-us/ethics-integrity/research-publishing-ethics

- Frontiers. https://www.frontiersin.org/journals/artificial-intelligence/for-authors/author-guidelines

- Karger. https://karger.com/pages/publication-ethics

- MDPI. https://www.mdpi.com/ethics#_bookmark3

- Sage. https://us.sagepub.com/en-us/nam/artificial-intelligence-policy

- Springer. https://www.springer.com/gp/editorial-policies/artificial-intelligence--ai-/25428500

- Taylor & Francis. https://taylorandfrancis.com/our-policies/ai-policy/

- Wiley. https://authorservices.wiley.com/ethics-guidelines/index.html#22

RESOURCES. Organization AI Policies & Guidance

- COPE. https://publicationethics.org/cope-position-statements/ai-author

- ICMJE. https://www.icmje.org/recommendations/

- ISMPP. https://www.tandfonline.com/doi/full/10.1080/03007995.2023.2273139

- WAME. https://wame.org/page3.php?id=106

Guidance on Protecting Your Data

WIRED

How to Stop Your Data From Being Used to Train AI

Some companies let you opt out of allowing your content to be used for generative AI models and other tools. Here's how to take back (at least a little) control from ChatGPT, Google's Gemini, and more.

https://www.wired.com/story/how-to-stop-your-data-from-being-used-to-train-ai/

Publisher Policies on AI Use: Is it time for change?

"In a recent <u>article</u> for <u>The Scholarly Kitchen</u>, Avi Staiman expresses his concerns about the lack of adequate <u>publisher policies on AI use</u> and sets out what publishers could do to step up their game…

Staiman suggests formulating an 'AI risk register' that assigns AI tools a level of regulation that matches both the potential risk inherent in that tool and the way it is being used in research. He also recommends 8 practical actions for publishers:

1. **Develop** standardized guidelines
2. **Update** guidelines continuously
3. **Establish** transparent and inclusive governance
4. **Boost** learning on AI within individual organizations
5. **Assign** different risk levels to AI tools
6. **Classify** AI tools based on the type of use level of verification required
7. **Define** clear roles for authors and AI
8. **Consider** how to monitor and enforce AI policies".

How Generative AI Could Transform Scholarly Publishing

- **Accelerated mapping of GAI services** that support the workflows of readers, authors, and editorial staff (by publishing organizations).

- **Incorporating generative AI into peer review** without impacting the knowledge and human element reviewers bring to the process.

- **Changing business environment** as big tech companies continue introducing and improving tools and platforms that impact research and its publication.

- **GAI's evolving role as the investigator** ("scientist"), introducing "a new phase of scholarship in which a human researcher may be the respondent of new avenues of inquiry".

- **Provision of detailed guidance from publishers** about acceptable and appropriate use of GAI to bolster transparency and research integrity.

- **Need for organizations and individuals to "more deeply" understand GAI**, supported by cross-sector collaboration that facilitates the "critical and ongoing work of adopting ethical usage of generative AI to advance the ideals of scholarly communication".

GAI = generative artificial intelligence

Bergstrom T, Ruediger D. How Generative AI Could Transform Scholarly Publishing: Themes and Reflections from Interviews with Industry Leaders. The Scholarly Kitchen; Oct 30, 2024. Accessed Nov 3, 2024; available at https://scholarlykitchen.sspnet.org/2024/10/30/gen-ai-transform-scholarly-publishing/

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Thank You

Please reach out if you have any questions or comments

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