Exploring the Role of Artificial Intelligence (AI) in the Future of Enhanced Publication Content

Natasha Thomas[a], Caroline Munro[a], Sarah Brown[b], Catriona Marshall[b]
[a]Avalere Health, Knutsford, Cheshire, UK
[b]Avalere Health, Abingdon, Oxfordshire, UK

Avalere Health™

17

Presented at the 2025 European Meeting of ISMPP, 27–29 January 2025, London, United Kingdom

Current Situation

- The integration of artificial intelligence (AI) in scientific publishing is gaining traction, with the potential to facilitate and increase the creation of enhanced publication content (EPC) for medical publications.
- EPC offers innovative ways to present research findings beyond traditional formats, but there are limited data on the perception of whether AI should be used routinely for this purpose, and whether there is value in different EPC for all manuscripts published.

Aim

- This study aimed to assess the perspectives of healthcare professionals (HCPs) and publishers on using AI for generating EPC and identify which EPC formats are deemed most impactful.

Conclusions

- The study highlights a strong endorsement from publishing professionals for the integration of AI in generating EPC, reflecting a readiness to embrace technological advancements in scientific publishing.
- While HCPs show a moderate trend towards accepting AI's role, their preferences for specific EPC formats like infographics and plain language summaries indicate areas where AI-generated content can be most impactful.
- Addressing knowledge gaps about AI capabilities and potential applications could further facilitate its adoption across various publication types, enhancing the overall utility and effectiveness of scientific communication.

Methods

Participants

US- and UK-based HCPs, across a range of specialties (n=141)

- Pulmonology, n=50
- Dermatology, n=43
- Oncology, n=11
- Allergy and immunology, n=10
- Infectious disease, n=10
- Neurology, n=10
- Hepatology, n=7

Publishing professionals (n=8)

Survey Design

- The EPC preferences and AI surveys were conducted in September 2023 and September 2024, respectively.
- Participants rated statements on a scale from 1 (strongly disagree/not at all useful) to 7 (strongly agree/extremely useful), and a Net Promoter Score was (NPS) calculated to determine trends in opinions.

NPS Calculation:

- NPS=% of promoters – % of detractors.
- Respondents scoring **5, 6 or 7** were considered **"promoters"**.
- Respondents scoring **1, 2 or 3** were considered **"detractors"**.
- A **score of 4** was considered **neutral** and not included in the calculation.
- The resulting NPS ranged from -100 to +100, indicating overall sentiment towards each statement (**Table 1**).

Key Areas Explored

- Publisher policies and attitudes towards AI involvement.
- Routine use of AI in generating EPC.
- HCP preferences for specific types of EPC.

Table 1. Interpretation of NPS Values

Score	Interpretation	
	Attitudes on AI	Attitudes on EPC
<-70	Disagree	Not at all useful
-70 to -51	Trend towards disagree	Not useful
-50 to -26	Small trend towards disagree	Trend towards not useful
-25 to +25	No consensus	No consensus
+26 to +50	Small trend towards agree	Trend towards useful
+51 to +70	Trend towards agree	Useful
>+70	Agree	Extremely useful

Results

Attitudes Towards AI in Publication Content

Findings:
Seven out of eight publishing professionals indicated their publisher had a policy in place on the use of AI in developing publications.

While publishing professionals showed a trend to disagree that publication content should be generated only by authors and should not involve AI (NPS=-62.5), there was no consensus on this point amongst HCPs (NPS=12).

AI and EPC:

- Publishing professionals showed strong agreement that pharma and medical communications companies should be able to involve AI in generating EPC (NPS=100), whereas for HCPs there was a small trend towards agreement (NPS=34).
- HCPs exhibited a moderate trend towards agreeing that AI could routinely support EPC generation (NPS=56), but with no consensus amongst publishing professionals (NPS=13).
- Publishing professionals agreed, and HCPs showed a trend towards agreement, that AI could be useful for tailoring publications to different audiences and reading levels (NPS=75 and 63, respectively).
- HCPs and publishing professionals indicated that a lack of knowledge on what AI can be used for may be a potential barrier to the uptake and use of AI in the generation of publication content (NPS=46 and 62.5, respectively) (**Figure 1**).

EPC Preferences Among HCPs:

- Infographics and plain language summaries were preferred formats (NPS=66 and 46, respectively).
- Audio files and podcasts were considered least useful (NPS=-30 and -3, respectively) (**Figure 2**).

HCP Preferences for EPC by Study Type

- HCPs most commonly wanted to see EPC or would find EPC most useful for (**Figure 3**):

Literature reviews 79% of respondents

Real-world studies 78% of respondents

Figure 1: HCP (n=94) and Publisher (n=8) Perspectives on AI Use in Publications

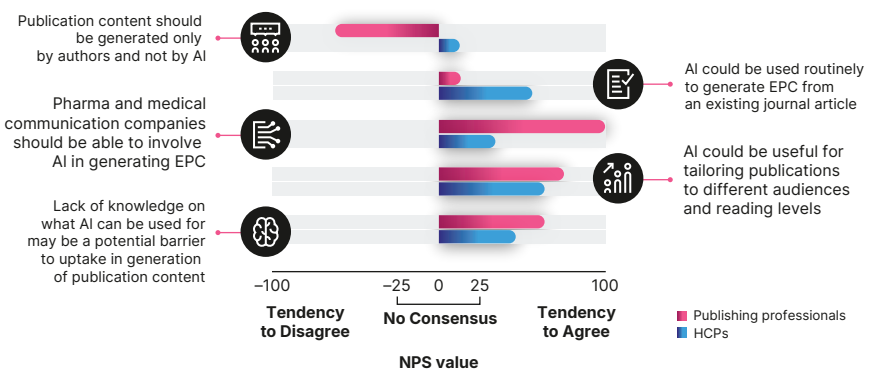


Figure 2: Preferences for EPC Formats Among HCPs (n=90)

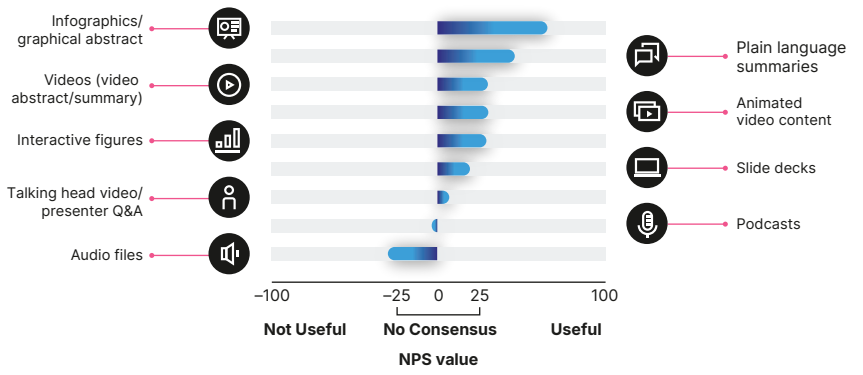
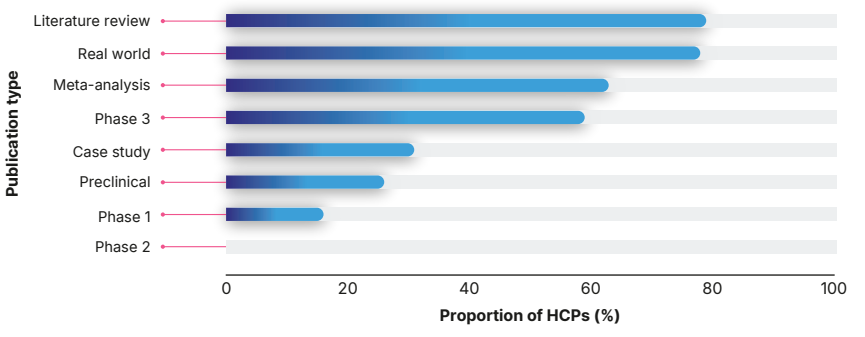


Figure 3. HCP (n=90) Perspectives on Where EPC may be Useful in Publications



Discussion

Key Insights:

AI Integration in EPC Generation
There is a **strong endorsement from publishing professionals for the involvement of AI** in generating EPC, highlighting a shift towards embracing technological advancements in publication processes.

HCPs show a moderate trend towards agreement on the routine use of AI for EPC, indicating openness but also potential reservations that need to be addressed.

Format Preferences and Utility
Infographics and plain language summaries are favoured by HCPs, suggesting these formats effectively enhance comprehension and engagement with scientific content.

The lower utility scores for audio files and podcasts suggest these formats may not meet the current needs or preferences of HCPs, possibly due to accessibility or lack of familiarity with these newer alternative formats.

Barriers to AI Adoption
Both HCPs and publishing professionals **recognise a lack of knowledge about AI capabilities** as a barrier, underscoring the need for educational initiatives to facilitate broader acceptance and effective use of AI in publications.

EPC Application by Study Type
The **preference for using EPC** in real-world studies and literature reviews indicates that these areas could benefit most from enhanced formats, potentially improving data interpretation and application in clinical settings.

Limitations and Future Directions

- **Sample size:** The small number of publishing professionals surveyed limits the generalisability of findings across the industry.
- **Scope:** The study focused on specific types of EPC; future research should explore additional formats and their impact on diverse audiences.
- **Educational initiatives:** Developing targeted educational programs to increase understanding of AI capabilities could mitigate barriers to adoption.
- **Longitudinal studies:** Further research is needed to assess long-term impacts on content quality, accuracy and trustworthiness when using AI-generated materials.

Acknowledgments: Avalere Health's generative AI-assisted technology, Sense / AI, was used in generating the initial draft of poster content. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the poster. The authors thank Elena Garonna for her valuable input in the poster development.