Letters to the Editor

ChatGPT versus Radiology Institutional Websites: What Is the Patients' Point of View?

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Editor:

We found the article by Dr Jankowski and colleagues (1), published in June 2024 in *Radiology*, both interesting and innovative. In their study, Dr Jankowski and colleagues showed that ChatGPT and radiology institutional websites performed equally well in scientific adequacy and public comprehension for answering questions related to radiation protection posed by patients. Moreover, the 12 expert participants who scored the human- and ChatGPT-generated texts reported similar overall satisfaction with the answers.

However, the raters were able to easily distinguish between human- and ChatGPT-generated answers. The authors concluded that ChatGPT could be employed in the waiting rooms of radiology departments, allowing patients to access more detailed information on radiation protection for the examination they will undergo, with artificial intelligence (AI) used as a complement to communication between health care providers and patients.

Although the conclusion may seem straightforward, the authors themselves underline that communication about radiation protection is often shrouded in complex language that prevents health care professionals from easily transferring information to patients (2). Additionally, patients have a limited understanding of the basics of radiation protection, which causes them to be less confident in making informed decisions (3).

The authors chose among the 12 readers radiologists, medical physicists, and radiographers, but no patients were enrolled to blindly evaluate the scientific adequacy, public comprehension, and overall satisfaction of the human- and AI-generated answers. Hence, we think that the real absence in the study is the patient, since the patient would be the primary user of this information and should be clearly informed about the risks and advantages of a radiologic examination.

In the literature, there are various studies showing that patients have little awareness of the modalities of x-ray use and how they can better understand exposure information (3–5). Moreover, these studies underline a pressing need to inform patients about their radiation exposure and a lack of communication between health care professionals and patients on this topic (5).

We cannot exclude that a difference might have emerged between the human- and AI-generated answers if patients had been included as raters, who at this point are the missing part of the puzzle.

As health care professionals, we must keep in mind that the patient is the center of our work. Otherwise, we risk becoming self-referential as radiation protection experts.

Acknowledgment: We used ChatGPT-4o (OpenAI; *https://openai.com*; accessed on July 1, 2024) to check the grammar of this letter.

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Response

From
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We greatly appreciate your valuable comments on our study (1). We believe that you have identified a critical limitation of the majority of the studies involving ChatGPT in medicine, including our own, namely, the lack of inclusion of the patient's perspective. As in similar studies, the potential for patient communication was judged by experts instead of by the patients themselves. We share your concern. However, our choice was conscious. These large language models draw unverified data from the web, potentially providing inaccurate or even misleading information. Since to date it is unclear what the reliability and scientific adequacy of the information provided is, it was mandatory to first assess the correctness of the information provided by ChatGPT. To this end, in Appendix S1 of our article we highlighted that radiology professionals "constantly communicate with patients, and their clinical experience qualifies them to provide a relevant subjective assessment of public comprehension" (1).

Patient perception is under investigation. A recent study involving 17 rheumatology patients reported that AI-generated responses were rated similarly to physician-generated responses in terms of comprehensiveness, readability, and overall preference (2). At least four additional studies in 2024 yielded comparable results. Conversely, Kim et al (3) found a negative perception of AI technology, with unmet needs for disease understanding, particularly among patients with lower education levels.

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A recent study highlighted the difficulties of patient-physician interaction during consultation and the potential support of generative AI in providing information to patients (4). Patients often turn to online sources for additional information; however, they are sometimes skeptical and distrust online forums. Since ChatGPT is a relatively new tool, there is a need to gauge patients' expectations.

As health care professionals, we have a duty to investigate all the available tools that can aid patient care, including whether large language models can play a role in communicating radiation protection information to the general public. In our study, the evaluations by the radiology professionals suggested that ChatGPT has the potential to be a valuable tool in this setting. Building on these results, we are currently evaluating patients' assessments of AI-generated information on radiation protection, as well as exploring the additional questions and needs that arise from using large language models.

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