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Teaching tools in critical care: chatGPT



Herramientas docentes en medicina intensiva: chatGPT

Dear Editor:

Artificial intelligence (AI) is increasingly present in the medical world, having been used for antibiotic treatment recommendations,¹ the possibility of writing scientific articles,² or proceeding with hospital discharges in patients with good progression.³

We want to highlight the potential role of AI from an education standpoint. We understand that education involves the translation of theoretical concepts into practice. Practice can be developed through simulation by allowing repeated exposure to clinical challenges. However, the effective communication of theoretical concepts is hindered by time or organizational problems, workload, or scientific tasks.

The addition of theoretical foundations has changed: access to a plethora of scientific medical journals through the internet, applications that systematically address medical topics (such as UpToDate), and the emergence of online resources (such as Free Open Access Medicine [FOAM]). In all of these, individuals have to look for answers, thus wasting time and not necessarily getting to solutions to the problem. This access to information is a common thing, but not a natural thing as curiosity has always been demonstrated by asking questions to someone capable of providing the necessary information (parents-children, attending physician-resident).

Perhaps the current circumstances of theoretical study can be overcome thanks to AI systems based on natural language models (NLM). ChatGPT⁴ is a NLM that introduces numerous innovations the most significant one being the adaptation of responses to questions in real-time, minimizing the search time, and allowing more study time. It enables guided learning based on the answers we need so that the

student becomes more actively engaged compared to traditional methods.

These could be the limitations of ChatGPT:

- The quality of the response depends on the type of question. Better questions yield better answers.
- ChatGPT has accumulated knowledge up until 2021.
- It should be considered as a complement rather than a substitute for conventional techniques, as it is still in a testing stage.
- It is a useful tool for developing theoretical concepts but may be less effective for decision-making processes.

We present examples of information searches that a young resident interested in learning on traumatic disease might undertake (see supplementary data).

In our usage, we have seen the following:

- 1) The interaction with the bibliography is interesting including article selection, article synthesis, other references, and critiques.
- 2) It allows online simulation, serving as a guide to explore different clinical settings.
- 3) ChatGPT exhibits caution and provides inconclusive answers regarding ethical, cultural, or organizational aspects.
- 4) We found discrepancies in the responses it offers for complex scenarios. While it can suggest a re-sequencing of early care, it does not adequately address traumatic cardiac arrest.
- 5) We also found that it is a non-confrontational AI, which diminishes its teaching capabilities.

AI will change the way we search for information, leading to educational opportunities that we must investigate.

Authors' contributions

All the authors were involved in the drafting of this manuscript and interacted with the artificial intelligence chatGPT.

Conflicts of interest

None reported.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.medine.2023.04.006>.

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