The Use of AI in Medical Education: Opportunities and Challenges

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Most students currently make use of tools such as OpenAI's ChatGPT, which can be an advantage, if used as another resource, to facilitate the tasks, the understanding of the topics, for example, with Chatbots that can explain in a simple way topics that could be complicated in medicine, or ask them to summarize information, even to give us an exam or feedback on the topic we are studying, etc. This way of using it could help us to grow as students, however, we must maintain critical thinking, because not all the information produced by the AI is correct, In an article published by the journal JAMA in 2023, where it was shown that not all the answers, in the medical field, provided by Chatbots are correct, in some cases there were information biases or errors, therefore, the information generated should be continuously verified in reliable sources. (1)

Another disadvantage of the use of these large language models (LLM) such as ChatGPT is that as they are quick information search tools they can be used to cheat in exams, which would generate a loss in academic performance, in addition to a deficient knowledge of future medical professionals. Moreover, being deep learning models trained to generate human-like texts, they have been used in cases of academic fraud, where published articles turned out to be authored by AI such as ChatGPT, which makes this situation more worrying, because the texts generated by AI usually go unnoticed, however these texts have clear errors, because Open AI creates texts using all the content in its database without an understanding of the real world, so you should not make use of these texts in their entirety, but rather use AI as an assistant not as another author.

Considering this, the use of these tools are effective but also counterproductive, because they can facilitate many tasks, nonetheless as healthcare students, we must maintain critical and analytical thinking, without replacing our skills just because AI makes it easier, consequently, this would make us dependent on these tools preventing us from improving as students and acquiring the skills that in the future will make us good doctors.

Not all students know enough information about AI functioning, a very clear example is the quick searches of information through Chatbots, because it is easier than researching in more reliable sources such as books, Pubmed or Medline, this can be a great advantage because most of the time it provides correct information but responds as well as the user makes the request, this emphasizes the importance and sensitivity of the indications, and the need to train students in AI indication literacy and engineering so that the request is formulated correctly and the quality of the answers is not

affected, this point is very important because it can not only be used in medical education but in the future in practice we could consult the AI to guide our medical diagnosis, of course it can't replace our critical thinking, but it strengthens our ability as clinicians.

Therefore, training to understand the fundamentals of AI deep learning could be a valuable tool, furthermore this knowledge could be included into the curriculum, for proper use of these technologies and understanding the potential of AI in medical education and healthcare. The limitation here is that we as medical students aren't familiar with the basics of AI such as data science or the ethical and legal issues that may arise in its use, therefore, this knowledge can't be carried from physician to student, unless the physician is familiar with these technologies. I think that to understand these issues, the student should have access to AI training from a subject matter expert. So, it would be beneficial to have an ongoing conversation about humans working with AI.

In addition to the lack of knowledge in this field, there could be a distinct disadvantage for those healthcare students who do not have the resources to use AI, creating an inequality between students and future professionals in the field.

Despite the limitations that exist regarding the use of AI in medical education, the advantages are clear, as a "guide" in decision making, learning resources, for example, diagnostic simulators or to access medical information more quickly, among other applications. However, inappropriate use is still the protagonist, hence the need to integrate this knowledge into universities and make the student community avoid over-dependence on these technologies, encouraging their use to complement our ideas and streamline workflow.

In conclusion, AI as a study tool can be valuable and as an assistant to strengthen our capacity, without replacing our intellectual capacity, but as a complement to reinforce our learning and professional performance. Therefore, developing skills to use AI in a critical way would benefit us not only in the academic field, but also in the future in the professional field and educational institutions must lead to this change in the way we learn, incorporating the responsible use of AI in the curricula and promoting equity in access to these technologies.