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Medical Student Perspectives on the Recommended Considerations for Interacting With ChatGPT as Part of Learning and Working With Patients

DISCUSSION STARTER

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ABSTRACT

ChatGPT, an artificial intelligence chatbot developed by OpenAI, has prompted significant interest in medical education. Its ability to generate fast, context-specific responses can improve efficiency in learning, but concerns about over-reliance, misinformation, and privacy risks remain. While educators have begun examining the impact of ChatGPT, there has been less exploration of the learner perspective. This piece reflects on the authors' experiences as medical students and proposes a Code of Practice to guide the responsible use of ChatGPT in both education and patient-facing contexts. With clear guidelines, AI tools like ChatGPT could be safely integrated into the medical curriculum and clinical training.

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INTRODUCTION: A NEW TOOL IN MEDICAL LEARNING

When ChatGPT was launched by OpenAI in November 2022, its impact on medicine and education was immediate: the chatbot's ability to produce detailed, conversational responses to questions has led students and professionals alike to explore its utility. (1, 2) Unlike traditional search engines that retrieve existing content, ChatGPT constructs responses by synthesising information based on patterns in its training data. (3, 4) This is both its strength and, potentially, its greatest risk. (5) There are two publicly known versions of ChatGPT: GPT-3.5 (free) and GPT-4 (subscription-based). GPT-3.5 has been shown to pass the United States Medical Licensing Examination (USMLE) with around 60% accuracy—statistically impressive, but still below human proficiency. (6) GPT-4 performed even better when evaluated on 40 clinical cases, solving each within two suggested diagnoses. (7)

CONVENIENCE MEETS CAUTION: CHATGPT IN DAY-TO-DAY LEARNING

For medical students, ChatGPT offers convenience and speed, allowing them to summarise complex content, generate quick explanations, and prepare for assessments. Rather than sifting through multiple sources, we can ask specific questions and receive relevant responses. This is a key reason for its popularity among medical students. (1, 8) The ability to tailor prompts for desired depth further enhances its utility. (9) This accessibility, however, can lead to over-reliance. When used as a shortcut rather than a learning companion, students may bypass the effortful processes required to develop critical thinking. Though ChatGPT can reduce time spent searching, it risks replacing deep engagement with superficial understanding. (10) Beyond the student experience, ChatGPT has also been proposed as a support tool for doctors' ongoing education, such as staying informed about developments in their fields. (11) However, because models like GPT-3.5 are trained only on data up to 2021 and are not currently connected to real-time databases, users must remain cautious about the accuracy and relevance of information, particularly regarding updated clinical guidelines. (8)

HALLUCINATIONS AND MISINFORMATION: RISKS FOR DEVELOPING LEARNERS

While ChatGPT offers significant potential, it remains prone to errors, including the well-documented phenomenon of artificial hallucination - where it confidently generates incorrect or nonsensical responses. (12) When one of the authors queried ChatGPT about myopia, the response incorrectly stated that the distance between the lens and retina is shorter than normal, when in fact myopia is associated with an increased axial length of the eye (see Fig. 1). This is particularly problematic for learners who may not yet have the knowledge to critically evaluate such misinformation.
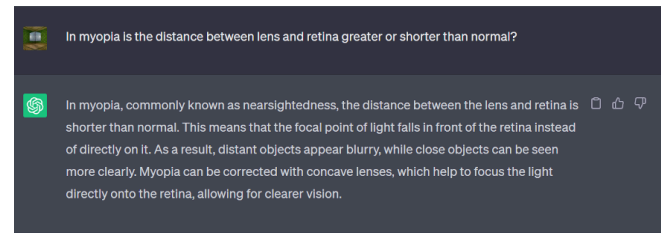

Figure 1: An example of ChatGPT hallucinating is in the first sentence.

Studies have shown that ChatGPT has delivered incorrect or incomplete answers in domains like drug-related queries, with significant clinical implications. (13) Its confident tone can be misleading, and its tendency to sound plausible may increase the risk of internalising inaccuracies. (10) Left unchecked, this can propagate misunderstandings and create educational blind spots. (14) Over time, unchecked reliance on such tools may also undermine students' development of independent thought and clinical reasoning. (15, 16) On the other hand, when used with oversight, ChatGPT can support metacognition by providing instant feedback and allowing learners to test ideas in a low-stakes environment. (17, 18) The distinction lies in how it is used.

USED RIGHT, IT'S A COMPLEMENT, NOT A SHORTCUT

ChatGPT has the capacity to free up cognitive load and support active learning when students understand its limits, but this awareness is not yet systematically embedded in medical education. Many students are unaware of how to use ChatGPT effectively or safely, particularly in clinical contexts. Educators have a role to play in normalising its strengths and cautioning against its misuse.

Medical educators themselves are experimenting with ChatGPT to create teaching resources. Anecdotally, some lecturers at Aston Medical School have used it to generate example cases or supplemental materials for tutorials. While formal evaluation is pending, anecdotal feedback from students has been positive. Similar uses have been documented internationally, with chatbots showing improved engagement and learning outcomes compared to traditional methods in areas like tutorials, clinical reasoning and health literacy. (19, 20, 21)

FROM CLASSROOM TO CLINIC: EXPANDING THE SCOPE OF CHATGPT

While widely used in education, ChatGPT is also being explored for applications in patient care, including generating draft letters, summarising consultations, and assisting in triage and diagnosis. However, these uses come with ethical and professional challenges. (22)

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ChatGPT currently lacks the contextual understanding required for safe clinical decision-making. As such, students and clinicians must understand that any AI-assisted decisions must be reviewed by qualified professionals. Furthermore, patients may not be comfortable with AI involvement unless they are explicitly informed. Transparency and consent are essential.

PRIVACY AND ETHICS: PROTECTING PATIENT DATA

Safeguarding patient data is a critical challenge, as ChatGPT's infrastructure is not designed for handling confidential health information. Recent incidents, including leaks of chat history and lawsuits related to unauthorised data scraping underscore the risks. (23, 24) AI tools such as ChatGPT may collect and store input data in ways that are opaque to users. (25) As future clinicians, we must be taught to safeguard patient data rigorously and to avoid uploading any identifiable information into these platforms. The ethical landscape also includes questions about fairness, bias, and liability, issues that are often under-addressed in current curricula. (11, 26)

TOWARD A CODE OF PRACTICE: SAFE USE BY STUDENTS AND EDUCATORS

Given the educational opportunities and challenges associated with ChatGPT in medical training, we present key considerations for its responsible use in medical education (see Fig. 2). These guiding principles are drawn from existing literature, professional standards, and firsthand experiences using AI tools as medical students. Rather than prescribing rigid policies, this Code of Practice serves as a discussion starter, offering insights into how AI can support learning while ensuring ethical and transparent engagement in academic environments.

1. *Verification by a healthcare professional educator*

In medical education, AI-generated content can help students critically engage with diagnostic reasoning and management strategies, but it must never replace professional oversight. Concerns over AI-generated hallucinated medical content reinforce the necessity for students to verify information against validated medical sources. (12, 13) AI should be leveraged for educational discussions, teaching students how to evaluate reliability, identify biases, and refine their clinical judgment, aligning with NHS England's stance that accountability remains with healthcare professionals. (27)

2. *Clear guidelines from medical schools*

Medical schools should establish clear educational policies on AI, guiding students in its appropriate use for study, assessments, and placements.

Research highlights uncertainty among students and faculty regarding AI's academic role, (28) emphasising the need for structured learning frameworks. AI should be positioned as a study-enhancement tool, helping students develop critical thinking and analytical skills rather than serving as a substitute for rigorous learning.

3. *Confidentiality safeguards (no identifiable data)*

Medical education must reinforce principles of data privacy and ethical AI engagement, ensuring students understand the risks associated with entering identifiable patient information into AI models. General Data Protection Regulation and General Medical Council guidelines prohibit unauthorised data sharing, and real-world incidents of AI-based privacy breaches highlight the importance of ethical AI use within educational settings. (23, 24, 29) AI should be integrated into simulated learning environments, where students can safely explore its potential without violating confidentiality standards.

4. *Transparency and accountability*

Students must develop a strong awareness of AI's limitations, ensuring that AI-generated academic content is clearly labelled and appropriately verified. Broader AI governance frameworks stress the dangers of untraceable content and misinformation, (30) reinforcing the need for academic transparency. Within medical education, students should critically assess AI outputs, ensuring their work maintains academic integrity and adherence to ethical research principles.
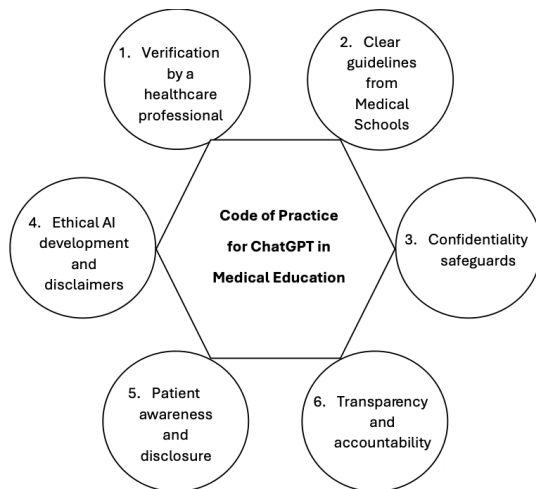
5. *Patient awareness and disclosure*

Future medical professionals must be trained to navigate ethical concerns surrounding AI-generated patient communication. Studies on digital health ethics highlight the importance of disclosing AI-assisted content in healthcare interactions, (28) stressing the role of transparency in fostering trust. Medical students should engage in debates on the implications of AI-driven patient education, understanding how AI transparency can shape future healthcare conversations and consent processes.

6. *Ethical AI development and disclaimers*

AI developers must integrate clear educational disclaimers in medical applications, guiding students toward critical engagement with AI-generated content rather than passive reliance. AI safety literature highlights concern about bias and overconfidence in AI-driven medical data, reinforcing the importance of educational discussions on model limitations. (29) Medical students should be encouraged to question AI-generated health information, assessing its credibility while understanding the ethical responsibilities of AI development.

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Figure 2: A proposed Code of Practice for the responsible use of ChatGPT in medical education and healthcare. The six guiding principles aim to maximise educational benefit while mitigating risks to patient safety, data protection, and learner development.

CONCLUSION: STUDENTS MUST SHAPE THE AI CONVERSATION

The integration of artificial intelligence into healthcare is advancing rapidly, influencing medical education and clinical practice. As medical students, we are excited by ChatGPT's possibilities but equally aware of its limitations. The responsibility to use it wisely—and to educate others on its proper use—should not fall solely on developers or institutions. Students, as active users, must be included in shaping how these technologies are integrated into learning and care. We believe that a clear, accessible Code of Practice, developed collaboratively by learners and educators, will allow ChatGPT to become a complement to, not a substitute for, medical education.

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