Academic Psychiatry (2023) 47:587–588
https://doi.org/10.1007/s40596-023-01874-7

THE LEARNER'S VOICE

Artificial Intelligence in Psychiatry: Threat or Blessing?

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Received: 9 July 2023 / Accepted: 18 September 2023 / Published online: 28 September 2023

In early 2023, we read the news that ChatGPT had passed the United States Medical Licensing Exam (USMLE) [1]. The news hit one of us (CMH) hard:

> I had taken Step 2 6 months earlier, a feat that took me hundreds of hours of study, managing my stress for weeks, and a toll on my waistline. Even though I had scored higher than ChatGPT, I felt a sense of dread that it had achieved this in real-time without specialized training. Could my expertise and effort be equaled or even trivialized in the future? Even so, I felt excited about the potential of artificial intelligence (AI) specialized for the field of medicine and psychiatry.

The advances in AI, particularly with large language models (LLM) like ChatGPT, have captivated and terrified the public, including us trainees. As trainees, we are concerned and enthralled by what the field of psychiatry will become, as breakthroughs in AI force us to reassess our training.

A textbook definition of a psychiatrist is a physician who specializes in diagnosing and treating mental illness. This profession requires medical knowledge, therapeutic rapport, and empathy, all of which ChatGPT could potentially demonstrate in the future. ChatGPT was able to accurately answer medical board questions and deliver therapy, and its responses were rated more empathic than physician responses to medical questions on public social media [1–3]. While speculative, our fear is that advanced AI will replace psychiatrists. LLM AI still has deficiencies, such as difficulty distinguishing between inputs that are fact or fiction [2]. It is easy to imagine that with further advances, these deficiencies could soon be minimal, especially as AI is trained with curated data, and LLM is specialized for medical fields. Even if AI does not replace psychiatry, we could theoretically see how AI will change the practice of psychiatry.

Given the shortage of psychiatrists, one could reason that AI will not decrease the demand for psychiatrists. That said, AI may change expectations of how psychiatry is practiced, for example, technologies such as the electronic medical record have transformed how patient information is gathered and documented. AI may also enhance the output and efficacy of advanced practice professionals, meaning that from a cost-and-value proposition, care by psychiatrists may be disincentivized in health care systems. Nation-wide, health care systems have cut back on psychiatric access and availability, and AI could both fuel and mask this crisis if it is seen as a cost-effective alternative to specialized psychiatric care [4], the drawback being that if AI is effective in only certain aspects of mental health care, such as algorithmic or pattern-based decision-making, its limited effectiveness could further exacerbate the lack of access and availability of higher-level care that relies on experience and holistic decision-making.

AI in psychiatry also brings hope, especially in assisting with critical challenges such as mental health care access, efficacy, and equity. With a national shortage of psychiatrists, many people struggle to receive psychiatric care. AI can facilitate mental health care by expediting administrative tasks, aiding in self-reporting and history taking, and triaging patients. AI could be the ideal medical aide and increase both the reach and grasp of psychiatrists, especially as part of an interprofessional team. In particular, underserved communities would benefit significantly from these advancements. For example, AI can be employed in therapy, medical management, and symptom screening, stratifying for patients to be seen by advanced practice professionals or primary care physicians. Paradoxically, LLM AI has the potential to fill niches where the human element could be a detriment. For example, AI can reach those who are hesitant to be treated by a clinician. There is the hurdle of anxiety

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that comes from disclosing your history to a stranger, especially when what is said to a health care worker can have you involuntarily committed. Patients may be more honest with a system that they perceive as non-judgmental, especially if such a system is designed to minimize bias.

As with any transformative technology, AI comes with fear and hope, and it will likely change the practice of medicine. Psychiatry has some breathing room compared to other specialties, as 80% of US adults would not want an AI chatbot when seeking mental health support [5]. This finding contrasts with 59% of US adults who would not want AI-powered robots to be used in their surgery, and 35% of US adults who would not want AI to be used in their skin cancer screening [5]. AI may further exacerbate a trend in medicine toward cost-cutting in lieu of sustainable, long-term care. We are at a critical point in our field to channel AI to improve the quality and access to psychiatric care, but likewise, it is our responsibility to advocate for the delivery of appropriate care for our patients.

The rapid advancement of AI has raised many concerns about how it will affect the future of psychiatry. As clinicians, we may understand that medicine is transitioning, but given the nature of our training, we may not be able to prepare for it until after it has happened, which can result in feelings of doubt, inadequacy, and frustration, with no actionable options as to how to address these. Therefore, it is important to consider the necessary skills in a future intertwined with advanced AI and to adapt our training accordingly. In more practical terms, training programs could adopt technology topics in their didactics, highlight faculty who have an interest in AI, and encourage trainees to explore projects in AI during training. For individual trainees, AI may further underscore the importance of being a lifelong learner, as AI technology may require regular actualization via academic journals, training in new software, and awareness of new standard practices.

Acknowledgements We thank Dr. Teri Thomsen and Dr. Adam Brenner for their feedback on our paper. We did not use ChatGPT or other Large Language Models to generate our paper. We used Google's search engine, which is powered by artificial intelligence.

Funding None.

Data Availability Not applicable.

Declarations

Disclosures Carter has received a funding award for the 2023 Summer Medical Student Program from the American Psychiatric Association—Substance Abuse and Mental Health Services Administration. On behalf of all authors, the corresponding author states that there is no other conflict of interest.

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