

# ChatGPT — The New Source for Inaccurate Drug Information



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**PRACTICING PHARMACISTS ARE** already all too familiar with inaccurate drug information being presented to their patients. Whether patients are viewing misleading social media posts or reading other patients' responses in online forums, pharmacists have become adept at challenging their patients on this misinformation. Now, another source of inaccurate information is popping up: ChatGPT. In November 2022, OpenAI launched its artificial intelligence chatbot, ChatGPT, which produces responses when given input from users. This technology is believed to have a potential impact on the healthcare industry. Since its launch, there have been several studies assessing ChatGPT's ability to answer and provide resources for medication-related questions.

The first study examined was conducted by a group of drug information specialists from Long Island University and compared ChatGPT's drug information question responses to their own answers following a literature search. The investigators found that responses from ChatGPT lacked completeness, accuracy, and reliable references. Only 10 of the 39 questions asked had satisfactory answers, and 11 of the 29 unsatisfactory responses had no responses at all. While ChatGPT did list references for eight of its responses, none of them were found to exist.

In the second study, a group of investigators from Japan's Iwate Medical University asked ChatGPT the question, "What are the most common side effects of x drug?" The researchers asked ChatGPT about 30 medications and compared the ChatGPT-provided side effects to Lexicomp's listed side effects with at least 1% frequency. Only two of the 30 medication responses were completely accurate. An additional two responses were partially accurate but missed some of the side effects listed in Lexicomp. On a positive note, ChatGPT did respond to questions at a basic level that was easy for patients to understand, and it recommended discussing the answers with a healthcare professional for more guidance.

## CAUTION ADVISED

Overall, healthcare professionals and consumers should be cautious of using ChatGPT for drug information questions. Instead, pharmacists should use and direct their patients to more controlled and monitored sources of drug information. Below are some resources for both providers and patients when searching for drug information.

INFORMATION FOR PROVIDERS	INFORMATION FOR PATIENTS
• Lexicomp	• Mayo Clinic
• Micromedex	• MedlinePlus
• UpToDate	• Drugs.com
• Clinical Pharmacology	
• Food and Drug Administration (FDA)	
• PubMed	
• DailyMed	

Artificial intelligence (AI) is the latest buzzword in pharmacy and in healthcare in general. As David Sellars discussed at the American Society for Automation

in Pharmacy 2024 Annual Conference, AI has improved the way that e-prescriptions are translated to pharmacy dispensing software systems, helping to automate the data entry workflow process and ensure claim accuracy. Although more examples of the positive use of AI in healthcare exist, an equal number of negative AI stories have recently emerged. For example, some insurers are now facing lawsuits alleging that AI software programs are inappropriately denying prior authorizations for products that would have been covered, had a medical professional been reviewing the claim information.

Despite the conflicting opinions on the use of AI in healthcare, it is clear that patient-facing ChatGPT apps are not yet at a level that can be relied upon to provide accurate drug information to patients. While ChatGPT may evolve in the future, at this time, pharmacists still remain the leading source of accurate drug information for patients. **PTMR** Ann Johnson, Pharm.D., is president and partner at Pharmacy Healthcare Solutions, LLC. Sydney Stawarz is a 2024 Pharm.D. candidate. You can reach Ann at [ajohnson@phsrx.com](mailto:ajohnson@phsrx.com).