

## ChatGPT – A Revolution in Dentistry

Ramsha Ayub<sup>1</sup>, Hira Ayub<sup>2</sup>

**Citation:** Ayub R, Ayub H. ChatGPT- A Revolution in Dentistry [Online]. Annals ASH & KMDC; 28(2)

Dear Editor,

We would like to draw your attention to the emerging topic, ChatGPT and its significance in dentistry. The rapid development of artificial intelligence furnishes medical care experts with various benefits for diagnosing, preventing, and managing various diseases. The artificial intelligence chatbot, Chat Generative Pre-training Transformer (ChatGPT), developed by OpenAI in San Francisco, USA, is one of the most well-known AI-powered chatbots<sup>1</sup> and one of the pioneering Large Language Models (LLMs). Because of their impressive abilities in natural language processing tasks, LLMs have sparked a lot of interest among dental practitioners.

ChatGPT is an invaluable tool for providing data and resolving questions in a range of professions, including dentistry. Starting with patient communication, ChatGPT can be used to construct chatbots that can answer typical patient questions, provide details about dental treatments, and assist patients in scheduling appointments<sup>2</sup>. Patients can inquire about their oral health, receive advice on how to care for their teeth, and learn more about various dental procedures. According to Eggmann et al., ChatGPT has made it easier to get prompt answers to queries without opening different websites, which is quite appealing for the users<sup>3</sup>. In dental education, it can be used to build chatbots or virtual assistants that teach dental and medical students about various concepts. This is essential for online education and distance learning<sup>4</sup>.

Because ChatGPT allows students access to a wealth of knowledge about various facets of dentistry that can aid in training and professional development, it has the potential to be utilized as a teaching tool. In the field of research, ChatGPT can compile data, help with literature searches, and provide a rough outline that the medical writer can build upon. It offers the potential to automate the editing and reviewing processes, enabling several reviewers to provide real-time feedback and comments on a document and so increasing the effectiveness of collaboration<sup>5</sup>.

Like everything else, ChatGPT has its limitations. For diagnosis and treatment planning, we cannot rely on ChatGPT because every patient has different demands, and it might not yet be able to develop a treatment plan specific to every other patient. Students may misuse it to create plagiarized content. It is critical to recognize its limitations and enhance its use with other resources. In our humble view, the adoption of ChatGPT in dentistry, and its impact on education, diagnosis, and therapeutics, is progressing and will be beneficial soon.

### References

1. Kim SG. Using ChatGPT for language editing in scientific articles. *Maxillofacial Plastic and Reconstructive Surgery* 2023;45(1):13. [DOI:10.1186/s40902-023-00381-x]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9992464/>. Accessed on 17<sup>th</sup> May 2023.
2. Pahadia M. ChatGPT in dentistry: Is it worth the hype? *BDJ In Practice* 2023;36(4):5–5. Available from: <https://www.nature.com/articles/s41404-023-1944-7>. Accessed on 17<sup>th</sup> May 2023.
3. Eggmann F, Weiger R, Zitzmann NU, Blatz MB. Implications of large language models such as ChatGPT for dental medicine. *Journal of Esthetic and Restorative Dentistry* 2023;1-5. [DOI:10.1111/

<sup>1-2</sup> Karachi Medical and Dental College

**Correspondence:** Ramsha Ayub  
Karachi Medical and Dental College  
**Email:** ramshaayub174@gmail.com  
**Date of Submission:** 3rd May 2023  
**Date of Acceptance:** 29th May 2023

- jerd.13046]. Available from: <https://online.library.wiley.com/doi/full/10.1111/jerd.13046>. Accessed on 17<sup>th</sup> May 2023.
4. Thurzo A, Strunga M, Urban R, Surovková J, Afrashtehfar KI. Impact of Artificial Intelligence on Dental Education: A Review and Guide for Curriculum Update. *Education Sciences*. 2023;13(2):150. [DOI: 10.3390/educsci13020150]. Available from: <https://www.mdpi.com/2227-7102/13/2/150>. Accessed on 17<sup>th</sup> May 2023.
  5. Biswas S. ChatGPT and the future of medical writing. *Radiology*. 2023;223312. [DOI:10.1148/radiol.223312]. Available from: <https://pubs.rsna.org/doi/abs/10.1148/radiol.223312> Accessed on 17<sup>th</sup> May 2023.



This open-access article distributed under the terms of the Creative Commons Attribution NonCommercial 4.0 License (CC BY-NC 4.0). To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/>