

# Using ChatGPT in Simulation Design: Saving Time, Generating Learning

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## Background

- Fully immersive simulation requires high levels of physical and conceptual fidelity of the clinical case (1), the development of which is labour and time intensive.
- In December 2022, the world saw the advent of freely available, generative AI software, most famously ChatGPT (2), triggering apprehensions surrounding its use in medical education (3)
- However, ChatGPT's ability to rapidly generate large volumes of text for educational content has the potential to revolutionise the simulation design process.

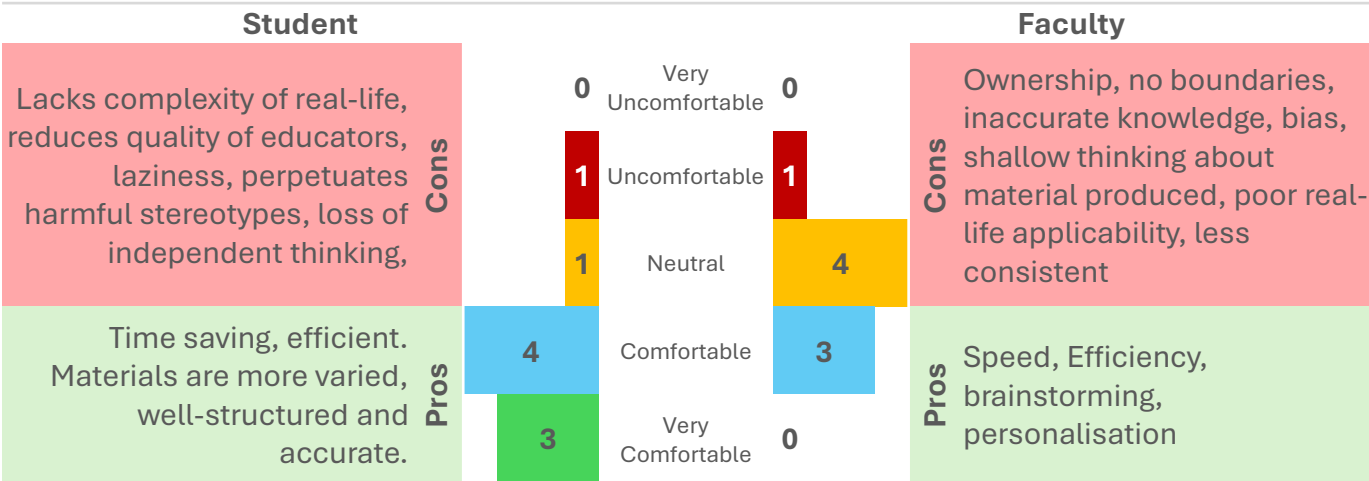
## Method

- Final year medical students in a London teaching hospital, in their Transition To F1 block, participated in an emergency bleep holder simulation, covering a ward of 10 simulated patients. Each scenario had a different combination of patients from the ward.
- The scenario had a student assessing a sick patient, having a challenging conversation with a different patient, and managing multiple bleeps. A large amount of content was created (patient notes, role player scripts) ChatGPT was utilized in the content generation.
- Pre and post course feedback was collated evaluating the teaching experience. The materials were provided to faculty and students to scrutinise, and additional survey data was taken on their perception ChatGPT use in the teaching and medical education

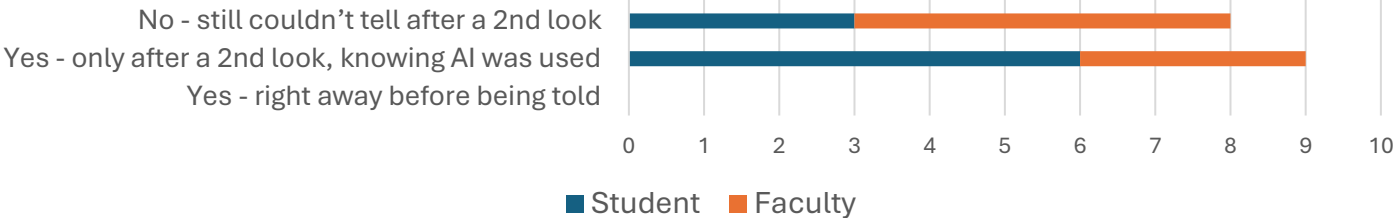
## Results

22 students participated in the course between April and June 2024. Their confidence and understanding of F1 bleep holder duties increased through the teaching. Students praised the range of scenarios, the relevance to clinical practice, and the opportunity to prioritise a whole ward of patients, rather than 1 or 2 at a time. Survey on ChatGPT use was completed by 17 respondents: 47% faculty, 53% students.

How comfortable do you feel about generative AI being used in Med Ed?



Were you able to tell that some of the materials were made using AI?



Have your feelings changed about the teaching, knowing about the involvement of ChatGPT?

No (S = 7, F = 6) - materials were useful and good quality, the prep. from educators was adequate and AI was not used to avoid this.

Positively (S = 1, F = 1)- good the tutor had 'help' when planning, relieves pressure on one person designing everything, saves time to invest better into LOs and useful teaching

Very positively (S = 1, F = 1)- Shows that the teacher is open minded and willing to use tools at the cutting edge to make progress

**Conclusion** - ChatGPT can act as a useful adjunct for educators in simulation scenario design that maintains fidelity and does not compromise learning. Students and faculty have similar opinions regarding the pros and cons of using ChatGPT in Med Ed, and neither group were negatively swayed by the knowledge of its use.

**Future Avenues** - Explore ChatGPT use in further simulation, teaching on proper review of patient notes. Continue to be transparent with ChatGPT's use with students and faculty, and ensure always used only as an adjunct

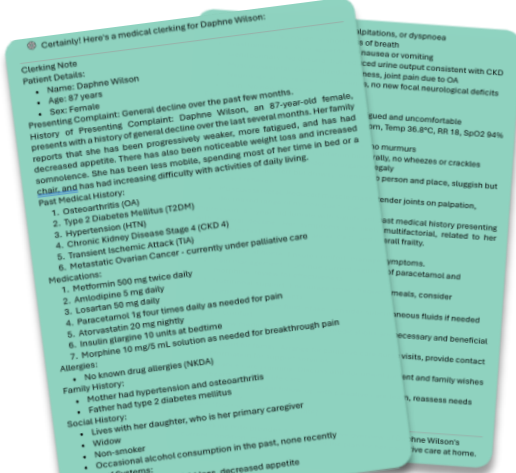
## Aim

To evaluate the ability of ChatGPT to aid with the design and delivery of high-fidelity simulation for medical students

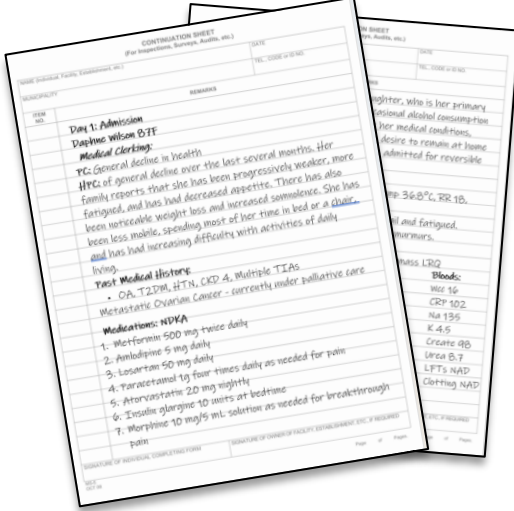
Enter prompt into ChatGPT. Eg:

"Please write a medical clerking for Daphne Wilson 87 year old lady who has had general decline, plan for palliation at home PMH- OA, T2DM, HTN, CKD 4, TIA, metastatic ovarian cancer, under pal care, Please embellish with realistic details"

Detailed notes generated by ChatGPT:



Revised for brevity and acceptability:



## References

- Carey JM, Rossler K. The How When Why of High Fidelity Simulation. [Updated 2023 May 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559313/>
- Nagi F, Salih R, Alzubaidi M, Shah H, Alam T, Shah Z, Househ M. Applications of Artificial Intelligence (AI) in Medical Education: A Scoping Review. Stud Health Technol Inform. 2023 Jun 29;305:648-651. doi: 10.3233/SHTI230581. PMID: 37387115.
- Sallam M. ChatGPT Utility in Healthcare Education, Research, and Practice: Systematic Review on the Promising Perspectives and Valid Concerns. Healthcare. 2023; 11(6):887. <https://doi.org/10.3390/healthcare11060887>