Can Large Language Model tools provide useful information for learners?

Maria D. Patrocinio, MD; Samantha L. Armstrong,BS; Yunping Li, MD; Philip E. Hess, MD

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Background

- Active learning techniques and large language models (LLM) are shifting resident trainee education.
- Within the Anesthesia field, LLM have reduced accuracy.

Aim

- To evaluate whether LLM-generated learning summaries validly provide a novice resident with knowledge that will aid their ability to learn accurate information.

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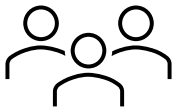
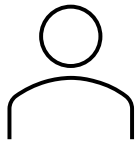
Study design & Methods

Inclusion criteria



Exclusion criteria



Statements

Survey

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Results

- Significant grading differences in scoring ($P<0.01$)
- Significant high reliability for the experts (Cronback's alpha 0.92) and good reliability for the LLM (Cronback's alpha 0.84).
- Residents were unable to distinguish whether the statements were written by an expert or LLM.
- LLM statements favored for anesthetic complications and expert statements for hypertensive disorders.

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Conclusions

- Expert statements were highly reliable, but of similar quality to LLM.
- LLM was less favored for a complex topic due to lack of specificity,
- Residents were not able to differentiate LLM- vs expert-written statements.
- At this time, LLM can be used to gather quick knowledge, but should be used carefully for detailed information, specifically for individualized and direct patient care.