

Basil room
3.30-3.55pm

Development of mobile gaming application for teaching patient safety modules for medical students

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Patient safety involves knowledge and skills that are integrated in all areas of medicine and it requires good communications among healthcare workers and effective system management.

- ❖ Our team at the Department of Surgery at the Yong Loo Lin School of Medicine (YLLSoM), National University of Singapore (NUS) created an innovative iPad game to train medical students on the concepts of patient safety in Singapore.
- ❖ This study aims to evaluate the initial outcome of this game in teaching patient safety in the undergraduate medical curriculum at YLLSoM.

Methods

A 10-scenario interactive iPad game was created by the Undergraduate Education Team in the Department of Surgery at YLLSoM. The scenarios explored the concepts of patient safety in 3 main areas:

- **Group A:** Interpretation of critical investigation results;
- **Group B:** Identifying correct tools and equipment in administering critical medications;
- **Group C:** Prioritisation of multiple tasks or communications with healthcare workers in critical situations.

Phase III medical students at YLLSoM, who were doing Surgery rotations, attended the patient safety teaching on Week 7 of the rotation. They played the game for 30 minutes, which consisted of scenarios and situations involving patients in the ward. (Some of the questions are time-sensitive, with extra bonus marks awarded if the student answered correctly within 10 seconds. Students could re-attempt the questions if they got a wrong answer on their first attempt. However, this would result in demerit points. The total score sheet would be given at the end of the game.

Results

A total of 221 third year medical students responded to the survey during the Patient Safety in Surgical Education (PASSED) session. Majority of the students felt that the PASSED game had trained them to understand processes of medical error ($p < 0.001$), that their understanding of patient safety issues improved ($p = 0.007$) and the training prepared them to prevent medical errors ($p < 0.001$). Many students also recognised the importance of error reporting, where they felt comfortable reporting errors committed by themselves ($p < 0.001$) or by other people ($p < 0.001$). They also felt comfortable discussing these medical errors with the supervisor ($p < 0.001$). Students responded that better teamwork will reduce medical errors ($p = 0.003$) and teaching teamwork skills will also reduce medical errors ($p = 0.002$). After the PASSED session, students felt that patients could play an important role in preventing medical errors ($p < 0.001$). They felt that patient safety should be emphasised in undergraduate medical training ($p = 0.024$).

The level of understanding about concepts of patient safety was also found to improve progressively from the 2nd posting to the 5th posting for both pre-PASSED and post-PASSED interventions. The pre-PASSED scores for Posting 2 (3.59 ± 1.931), Posting 3 (4.11 ± 1.833), Posting 4 (4.84 ± 1.653), and Posting 5 (4.88 ± 1.642) were significantly higher than the post-PASSED scores for Posting 2 (4.46 ± 2.020), Posting 3 (5.17 ± 1.845), Posting 4 (5.88 ± 1.843), and Posting 5 (5.80 ± 1.843) respectively ($p < 0.001$).

Conclusion

Using iPad game (PASSED) to enhance the patient safety teaching has successfully improved the awareness and understanding of patient safety in clinical practice. It is hoped that this training model can be used to teach more senior medical students at YLLSoM on the complexity of patient safety issues in medicine.

Note

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