

Didactic lecture is the traditional approach for knowledge transfer in academic fields, including Medicine. However, the change in teaching theory, limitation in teaching time, improvement in audiovisual and IT system had supported the development of e-learning to replace the traditional teaching approach. As we all agreed, medicine is one of the most knowledge demanding subjects. An effective learning approach will not only improve the academic achievement of the students, but also maintain the quality of care of thousands of patients. Therefore, adequate evidence on the effectiveness of new teaching model is needed before we adopting them. Otherwise, the potential serious problems might happen. However, the effectiveness of knowledge transfer by e-learning, in form of micromodules, in medicine was uncertain. As a result we have planned a pilot study to compare the efficacy of e-learning, compared to traditional didactic lectures, in urology teaching for medical students.

In this study, we focused on the knowledge acquired for the management of male lower urinary tract symptom or haematuria. A 45-minute didactic lecture was recorded first. Then two specially prepared micromodules on approach to the two symptoms were prepared. Forty-five students, who had not exposed to final year urology teaching were recruited for the study. They were randomized to see either the didactic lecture or the two micromodules.

A comprehensive approach was used to compare the learning outcomes of the students. Before watching of videos, students were asked to fill in a set of MCQ to assess their baseline knowledges and they would also ask to self-rate their level of knowledge on the topic (baseline self-assessment of confidence level). Then after video-viewing, same set of MCQ and self-rating were done to assess the Pre-/post- knowledge changes.

Two to three weeks later, the students were gathered in our outpatient clinic. They were asked to repeat the MCQ question again to test the knowledge retain after their learning. Then they were asked to clerk a clinical patient with either lower urinary tract symptom or haematuria. A nurse, presented as a chaperon during the patient assessment, would also observe the level of professionalism of the students during clerking . The student would then present the case to a urologist, who would assess the information obtained by the student, basing on a standardized marking scheme. A separate impression mark would also be given by the urologist on the overall quality of the adequacy of the information obtained by the student in related to their patients.

From our results, the two approaches of teaching provided similar outcomes, in term of knowledge improvement, knowledge retain, nurse and physician assessments. Basing on our result, micromodules provided similar effectiveness in knowledge transfer to students, as compared to didactic lecture. This information provided some evidences to support the further development of e-learning for medical training.