

LETTER TO THE EDITOR

## Assessing clinical competency without patients during COVID-19 pandemic

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Dear Editor,

Surgery is a core curriculum in medical education. During the surgery clerkship in the clinical years, students are expected to acquire sequentially the skill of history taking and physical examination, selecting and interpreting investigations, and choosing the appropriate management for common surgical problems. These skills are the foundation for future medical practice. Such skills will be tested at the end of each clerkship in the surgical ward on real patients. Due to the COVID-19 outbreak, students are forbidden from entering hospital premises. The major problem with this arrangement was - how to assess student's clinical competency outside the hospital?

To solve this problem, the examination format was modified for our final year surgery clerkship students. Two sets of documents were prepared before the examination - one set for the student with a history, and the other for the examiner with the history, physical findings, investigations performed, management options, and suggested questions. The questions were composed with a modified "adaptive design" used in online learning - the questions would be changed according to the answer given by a student. The examination was held in a clinical skill and simulation training centre in the university medical campus. Since these students have already acquired the skill of taking history during their earlier years, they were each given a printed history to read before entering the examination room. Each student was tested by two examiners and was first asked to summarize the history and provide differential diagnoses in a professional manner. Each was then asked to describe the essential steps of physical examination and the signs to be elicited. Photos with typical physical findings were shown for interpretation. Knowledge on the appropriate choice and interpretation of investigations as well as management options would then be evaluated. Relevant clinical materials such as laboratory reports, radiological images, endoscopic pictures, and operative specimens were shown. A structured marking scheme was used to provide a platform for objective assessment.

All students who took part in the examination were able to understand the instructions clearly. We received no complaint from students. Positive comments were received from the examiners, who were able to have an objective assessment of students' ability in formulating a surgical diagnosis, selecting and interpreting investigations, and suggesting management. Although the examination venue was not hospital-based, having the exam in a simulation ward furnished with medical equipment made the environment resemble the hospital setting. The printed history contained irrelevant surplus information so that each student needed to digest and present a relevant summary to the examiners. Examiners could therefore have a more objective evaluation of the students' ability to pick up important history items.

The obvious limitation of this examination format is a lack of assessment of hands-on physical examination skills. However, these were final year students with their physical examination skills tested during their two earlier clerkships. Therefore, the focus on this part of examination was the assessment of their ability to interpret physical signs. The rest of the examination actually mimicked the former bedside examination, namely the selection and interpretation of investigations, and the suggestion of management options. Relevant clinical materials were prepared for elucidation and discussion. The current examination format is similar to the simulation-based educational assessment, which has become a global trend in medical training.<sup>1</sup>

In conclusion, under the influence of COVID-19, an adapted bedside examination format was carried out to evaluate the clinical skills of medical students. With an increasing number of countries being affected, we believe more medical schools will be facing similar problem and it is not limited to surgical curriculum. In a non-clinical setting, this examination format places more emphasis on the clinical reasoning rather than the actual hands-on skills. Provision of a standardized clinical scenario eliminates biases due to different patient or examiner. Nevertheless, the inability to assess bedside manner and doctor-patient relationship is an inadequacy of this examination format.

## REFERENCE

- ✓ 1 Brydges R, Hatala R, Zendejas B, Erwin PJ, Cook DA. Linking simulation-based educational assessments and patient-related outcomes: a systematic review and meta-analysis. *Acad Med*. 2015;90(2):246-256.