



LETTER TO THE EDITOR

COVID-19 Pandemic & Undergraduate Surgical Education- Challenges and Solutions

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Two salient features of life in the COVID era are the constant evolution of “new-norms” and the uncertainty surrounding the end of the pandemic. These features informed Royal College of Surgeons in Ireland – Medical University of Bahrain’s efforts in creating a flexible, long-term strategy to ensure the continuation of high-quality medical education in the face of the challenges posed by the pandemic.

At the surgical department’s level, several initiatives were implemented to enable students to build a solid knowledge base in surgical topics, sharpen their clinical judgement in the pre- and post-operative management of surgical patients, and develop competency in the performance of skills. At the core of these initiatives is the overarching priority of preserving student and patient safety, and the aim to compensate students for lost clinical access.

Rather than simply utilizing online platforms to deliver didactic lectures, e-learning activities have been designed in a flipped classroom format to allow active student participation in tutor and peer-led topic and case discussions. Several studies have correlated this approach with improved learning outcomes and student satisfaction.^{1,2}

Furthermore, via online platforms, students can develop case recording and telehealth competencies through sessions involving standardized and real patients and receive immediate feedback from patients and educators. A large group of students

are able to observe these sessions, hence increasing the impact of each session on the collective learning experience. Most recently, students have participated in pilot sessions of virtual rounds, which integrate case history recording with case management and topic discussions with senior academics.

To ensure the quality of the online learning experience, resources were made available to lecturers to hone their online teaching skills. Additionally, a cross university initiative sought to ensure that educators and students are equipped with a good internet connection, which represents the commonest barrier to effective online learning.^{3,4} Another limitation of e-learning when compared to face-to-face learning is the difficulty to confirm learners’ comprehension, which in a face-to-face setting is facilitated by reading facial gestures. Additionally, ensuring class-wide participation is also challenging to achieve online. To tackle both limitations, the majority of online sessions are conducted in small groups, with real-time polling employed to assess comprehension and encourage participation.

In order to promote the acquisition of technical skills, and bolster teamwork and professionalism competencies, the surgical department increased its utilization of advanced high-fidelity simulation equipment and techniques. This included increasing both the frequency and realism of simulation

scenarios. As demonstrated in the literature this is strongly associated with improved performance both in clinical practice and in examinations.^{5,6}

Furthermore, through collaboration with our partners in King Hamad University Hospital, Bahrain Defense Force Hospital, Salmaniya Medical Complex and American Mission Hospital, RCSI students have been able to resume their clinical rotations, albeit on a limited scale to further enable their interactions with authentic patients and their involvement in patient management. Additionally, students are now able to observe the processes and workflow of different specialties, thus supporting them in making realistic decisions on suitable career paths.

Implementation of these initiatives was only made possible through multilevel inter-departmental collaboration within RCSI and the tireless efforts of all staff members. As the situation continues to evolve the implemented framework and initiatives will allow us to dynamically respond in a way that champions our priorities of delivering high quality medical education and promoting student and patient safety.

Competing interests

The authors declare that they have no competing interests

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