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## Commentary

## A commentary on “The coronavirus (COVID-19) pandemic: Adaptations in medical education”



## ARTICLE INFO

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## Dear editor,

We provide a medical students' commentary on the correspondence by Alsafi et al. [1]. Their letter reports the changes in assessments that have been implemented across UK medical schools during the COVID-19 pandemic. Our commentary explores not only the changes in assessments, but the wider implications of altered teaching methods on student competency and whether standards are being met. We will also discuss the role of online learning in the future of medical education, specifically within surgical and knowledge-based teaching.

Alsafi et al. highlights that there have been huge inconsistencies between medical school assessments across the UK [1]. With some universities postponing exams, others moving to online platforms and a few cancelling them altogether, we have identified no objective moderation in the way that students' competencies are assessed. Although there have always been discrepancies between medical school examinations, the absence of uniformity will alter the standards of each cohort proceeding to the next year of study. This raises the issue of whether patient safety will be compromised due to inadequate assessment of students in the current academic year.

Changes have also been observed in the delivery of medical education. Clinical placements and on-site teaching were cancelled from March until August, hence medical schools have implemented online live and pre-recorded lectures, tutorials, and group discussions for both pre-clinical and clinical years. In the document 'Promoting excellence: standards for medical education and training', the General Medical Council (GMC) outlines the requirements for all stages of medical education and training [2]. We believe that with no access to on-site facilities and clinical placements between March and August, many, if not, all medical schools may not have met the GMC standards. Although clinical placements have now resumed, with the uncertainty of the pandemic and future social restrictions, it is pertinent to consider the

effect this will have on the knowledge and skills of current and future cohorts of medical students.

However, in the face of adversity comes opportunity. Although online teaching does not compare to clinical placements or on-site teaching, it does have advantages. As students, we have observed that for surgical and knowledge-based teaching, online methods have been very effective and well received by students. From our experience, online surgical teaching has been, in some ways, more beneficial than attending surgery. In theatres, students often find themselves struggling to obtain a clear view of the procedure or identifying the internal structures being operated on. This can be due to overcrowding in theatres or because clinicians do not have sufficient time to teach whilst operating. Using surgical videos via live platforms allows the lecturers to indicate anatomical structures and explain procedures in-depth whilst the operation is being performed. This can provide a rich, more engaging, learning experience for large groups of students simultaneously.

Traditionally, knowledge-based teaching has been delivered via in-person lectures or tutorials. During the pandemic, these were conducted online via live video platforms, incorporating more interactive aspects, such as polls and asking questions. Online platforms allow students to type questions throughout the lecture, enabling lecturers to identify areas of concern amongst students that they can address more promptly. We have also found that students contribute to group discussions more frequently and actively via online platforms than they do in-person, further reinforcing the effectiveness of online learning.

Systematic reviews and meta-analysis have demonstrated that students and professionals worldwide benefit from learning online, including video teaching and simulations, e-learning, and massive open online courses (MOOCs) [3–5]. It has been reported in several studies that online teaching can reap better test results than offline teaching [3].

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One analysis identified that the changes in anatomy teaching during the pandemic, for example the use of digitized cadaveric resources and 3D anatomy platforms, have presented opportunities to develop new online resources [4]. The effective use of MOOCs during the pandemic have also proved that online education offers the flexibility to update teaching material based on the changing course of COVID-19 and learners' needs [5]. Despite online teaching having some major benefits, the importance of social interactions cannot be underestimated. We believe that a blended learning approach, including traditional face-to-face and online teaching, is the most effective method of medical education.

The COVID-19 pandemic has revolutionised the way medical teaching is delivered, however careful consideration must be given to the impact of these changes on the clinical competency of current students. Looking forward, with an emphasis on blended learning, we must explore online teaching modalities and their role in the future of medical education.

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#### Author contribution

Leah Naglik: conceptualisation, roles/writing- original draft, writing-review and editing. Pahalavi Ravindran: conceptualisation, roles/writing- original draft, writing-review and editing.

#### Guarantor

Leah Naglik.  
Pahalavi Ravindran.

#### Declaration of competing interest

No conflicts of interest to declare.

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