

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

FISEVIER

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu



Correspondence

The coronavirus (COVID-19) pandemic: Adaptations in medical education



Dear Editor.

Since December 2019, the Novel Coronavirus (COVID-19) has reached a pandemic status, with over 2 million individuals worldwide being infected, which has resulted in over 100,000 deaths [1]. Given the risks to healthcare workers of nosocomial infection, one area of particular difficulty has been the adaptations required in medical education, particularly for the incoming and junior doctors.

Understaffing in the United Kingdom's (UK) National Health Service (NHS) has been an issue which predates the COVID-19 pandemic [2]. The added pressure has increased the urgency to ensure that medical students are appropriately trained to strengthen the workforce reserve.

On 3rd March, the UK Government published the UK National strategy to address the pandemic by using the CDRM approach: to Contain, Delay, Research and Mitigate the effects of the virus [3]. The mitigation stage has had to encompass medical education to ensure standards of training and patient safety are not compromised.

Between the 2019–2020 academic year, approximately 6000 medical students across the UK are due to undertake their final year examinations. These typically consist of written examinations, and clinical assessments which require physical contact and examination of actors or patients. These would ordinarily signify completion of the medical degree.

Significant and unprecedented changes to assessment methods have been made, given the risk of students undertaking examinations in close proximity to other students and patients. However, there has been a heterogeneous approach adopted by medical schools. Some have delayed or expedited examinations, while some have opted to cancel them entirely and use previous summative and formative performance to enable award of the medical degree. To prevent spread to potentially vulnerable patient volunteers, examinations on real patients have been replaced with screen-based assessments; video footage of physical signs were played to candidates for them to identify and interpret. Some medical schools have also opted to remove written assessments and replaced these with remote online, open book assessments for both clinical and preclinical medical students [4]. To further mitigate the risk to patients and students alike, clinical placements and ward-based teaching have been suspended until further notice for all other year groups. Students have also had their elective placements cancelled due to international travel restrictions, and several medical schools have removed the elective program as a prerequisite in obtaining the medical degree.

Drastic measures have been put into place to tackle the surge in healthcare demand across the UK; medical students have been invited to volunteer or have been temporarily employed within their local hospitals, to provide support [5]. Additionally, the Foundation programme, typically a 2-year hospital and community-based internship, has required substantial adaptation. Rotating between specialities involves several logistical challenges such as familiarising one's self with new teams, protocols and computerised systems. For this reason, many deaneries across the UK have informed doctors that the normal changeover of specialities in April will not occur, and some specialty trainees have been redeployed to cover medical COVID-19 wards.

These are uncertain times and all healthcare professionals, including medical students, have a role to play in tackling this pandemic. However, with added responsibility placed on junior doctors and students, necessary measures need to be put into place to ensure patient safety, and to ensure that adequate training is being provided at all levels, from medical student volunteers to qualified doctors and other healthcare professionals.

Ethical approval

No ethical approval required.

Sources of funding

No funding received.

Author contribution

ZA, ARA, AH and MAA: Conceptualization, Writing original draft, Editing drafts and Approval of final article.

Guarantor

Dr Zaid Alsafi.

Provenance and peer review

Not Commissioned, internally reviewed.

Declaration of competing interest

No conflicts of interest to declare.

References

- World Health Organisation, Coronavirus disease (COVID-2019) situation reports, (2020) Available from: https://www.who.int/emergencies/diseases/novelcoronavirus-2019/situation-reports.
- [2] C. Sohrabi, Z. Alsafi, N. O'Neill, M. Khan, A. Kerwan, A. Al-Jabir, et al., World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19), Int J Surg 76 (2020 Apr) 71–76.
- [3] Department of Health and Social Care, Coronavirus: action plan. A guide to what you can expect across the UK, (2020) Available from: https://www.gov.uk/government/

- publications/coronavirus-action-plan.
- [4] The Guardian, Medical students take final exams online for first time, despite student concern, (2020) Available from: https://www.theguardian.com/education/2020/ mar/22/coronavirus-forces-medical-students-sit-final-exams-online.
- [5] British Medical Association, COVID-19: medical students requested to work in the NHS, (2020) Available from: https://beta.bma.org.uk/advice-and-support/covid-19/ your-contract/covid-19-medical-students-requested-to-work-in-the-nhs.

Zaid Alsafi**, Abdul-Rahman Abbas, Aimen Hassan UCL Medical School, University College London, UK E-mail address: zaid@ijspg.com (Z. Alsafi).

Mohamed Adam Ali
Public Health England, UK

^{*} Corresponding author. Gower St, Bloomsbury, London, WC1E 6BT, UK