

Impact of COVID-19 on medical students in the United Kingdom

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Abstract

Medical student training in the United Kingdom has undoubtedly been impacted by the COVID-19 pandemic. Most notably, there have been disruptions to teaching, cancellation of exams and clinical electives and the abandonment of research projects. In response, medical education has been reshaped to facilitate the continuation of studies, such as the online deliverance of course material, digital examinations and implementing welfare and financial support systems. There has also been a surge in student volunteers, often playing critical roles in primary and secondary care to support National Health Service (NHS) staff working on the frontlines. This opinion piece will aim to address the effects of COVID-19 on medical students and their training, and further evaluate how well medical schools responded to the challenges presented by the pandemic. This should highlight aspects requiring improvement and will allow medical schools to be better prepared to tackle similar dilemmas in the future.

Keywords COVID-19, medical student, medical education.

Introduction

By the end of July 2020, COVID-19 was responsible for approximately 46,000 deaths in the United Kingdom (UK).¹ Curbing the spread of the virus meant the implementation of drastic measures here in the UK and globally, ultimately creating vast social and economic changes to an extent never seen before. In the UK, the first two identified cases of COVID-19 were recorded on 31st January 2020. However, by the time a nationwide lockdown was brought into place on the 23rd of March, there were 6650 confirmed cases and 359 deaths.¹ Britons were advised to only go outside for food, to exercise once a day, or to go to work if unable to work remotely. Other measures included closure of non-essential

shops, shutting down schools and universities and restrictions on social gatherings.

The National Health Service (NHS) has faced immense pressure in recent months, consequently producing a challenging environment for various healthcare professionals. In particular, medical students have faced disruptions to their training, with most clinical teaching attachments being cancelled and a large demand for student volunteers to assist on the frontline. This piece will aim to outline in more detail how the COVID-19 pandemic has specifically affected medical students training in the UK, and further critique the response of medical schools in adapting to challenges presented by the pandemic.

How are medical students in the UK currently affected?

COVID-19 prompted UK medical schools to deliver all teaching online where possible, but further prohibited students in their clinical years from attending hospital and general practice (GP)-based attachments. All clinically orientated exams were also cancelled, but many theoretical or written-based exams went ahead using an online 'open-book' format. For MBBS students intercalating in a BSc or MSc, COVID-19 also prevented completion of various clinical and lab-based projects. Unfortunately for students in their final year of training, the worldwide travel-

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ban further led to cancellation of their organised medical electives in Spring/Summer 2020. Instead these final year students were pushed through graduation prematurely to commence work as junior doctors on the frontline of the COVID-19 pandemic.

In light of the pandemic, the accelerated transition from final year medical student to junior doctor was necessary to allow the NHS to cope with an increased demand. Many students would typically feel apprehensive about starting life as a junior doctor under normal circumstances, generally owing to longer working hours, being in a position of responsibility and dealing with death, which are just a few examples.² However, the greater workload, large death toll and fear of contracting the virus during the pandemic will have undoubtedly produced a more heightened sense of anxiety and stress in these newly qualified doctors.³ There is currently an ongoing prospective cohort study named 'SPICE-19' using online questionnaires to determine the psychological effect of COVID-19 on UK medical students. Some of the measured variables will include changes in mood and uptake of mental health services offered by universities and the NHS.⁴ This study is set to be completed in August 2020, and the forthcoming data will provide interesting insights into the psychological well-being of students during this uncertain time, and whether there are perhaps improvements to be made in how they are supported.

Unfortunately, medical students completing clinical or laboratory-based research as part of an intercalated BSc, MSc or PhD were forced to abandon projects since only necessary research was permitted to continue during the pandemic. Often, intercalating in a BSc or MSc is the only opportunity for medical students to gain research experience owing to the high demands of the main MBBS degree. The practical research skills that students would normally learn during these projects often broadens their skill sets, but also provides a good starting point for developing a career in academic medicine. Moreover, research and clinical audit opportunities in various specialities have largely been put on hold for students attending clinical placements, along

with most national and international medical conferences being cancelled. Therefore, the struggle for students to obtain research/audit experience and opportunities to present their work this year may disadvantage them in the future when applying for professional research positions, such as the Academic Foundation Programme.⁵

While the use of online materials and platforms is often extensively utilised by universities and other educational institutions, it has dominated the way in which teaching was delivered over the last few months and may become more mainstream in the future. Imperial College London was one of the first universities to go fully remote, quickly being followed by many other UK medical schools. Lectures, tutorials and even exams are now being given live via online platforms such as Zoom or Microsoft Teams, which have features allowing universities to record live-streams and also permit students to fully engage in sessions by having Q&A and chat-box functions. The obvious advantage of going remote is making learning resources more distributable with lower costs, and studies have shown that often the exam performance of students taught via online methods versus traditional face-to-face teaching is similar.⁶

However, online based methods of teaching and exams have certain limitations. A key element of medical training is developing interpersonal and practical skills, something that is learnt through on-site clinical attachments. Therefore, digital learning is not a sufficient substitute for acquiring these attributes fundamental to being a doctor. Additionally, setting up online lectures and resources demands certain technological skills to ensure deliverance of course content. This will require universities to employ more technical support staff, train its current staff in using these new platforms and purchase equipment needed to give their online courses. Alongside this, it will be crucial for universities to offer financial support to those students who have limited accessibility to these virtual materials from home. Furthermore, students living in different time zones also face the problem of receiving teaching or completing exams at unsociable hours. This will be an

important consideration for medical schools with a high international student population wishing to continue online teaching into the 2020/21 academic year.

The role of the student volunteer

In response to the public health crisis, medical students across the UK volunteered in hospitals and GPs to support the community. Several universities in London, Bristol, Edinburgh and others have set up schemes to provide students with volunteering opportunities. Our own medical school initiated the Imperial College School of Medicine - Volunteering (ICSM-V) programme, enabling students from pre-clinical to final years to volunteer across 8 hospitals and 46 GP practices in north west London. Students often engaged in a variety of non-clinical duties such as delivering medications and food to vulnerable groups, keeping regular contact with high-risk patients and dealing with administrative tasks, for example updating patient notes. More specific clinical responsibilities were undertaken by older years with experience in day-to-day patient management like taking bloods, inserting cannulas and catheters, wound care and monitoring vital signs. Guidance on what is to be expected from a medical student was published by the Medical Schools Council in late March, aimed at supporting student volunteers by highlighting certain professional requirements.⁷ This covered several areas such as avoiding disruption to their education, not undertaking tasks beyond their competency, and ensuring medical schools and the NHS are sufficiently assisting in their efforts.

COVID-19 has put an unprecedented pressure on the NHS, an organisation that was already rife with staff shortages and lack of equipment. The reassignment of staff and diversion of resources towards combatting COVID-19 resulted in widespread disruptions to other areas in medicine including most non-emergency services and elective surgeries.⁸ Therefore, the involvement of medical students with varying levels of clinical experience offers an excellent opportunity to fill the gap created by this shortfall and ease the burden on healthcare

professionals. Furthermore, this will provide valuable clinical experience for these students in a real-world setting, helping prepare the next generation of doctors.

However, student volunteers are at an increased risk of coming into contact with infected patients and as such should be appropriately protected. Not doing so will severely undermine their capacity to help efficiently and put them at unnecessary risk. To ensure safety, our medical school provided webinar sessions aimed at outlining the roles and responsibilities of its volunteers, whilst also providing training on infection control and personal protective equipment (PPE). Furthermore, each student was allocated an online clinical supervisor and their volunteering activity was reported on a weekly basis. But despite these measures, it was still challenging for proper supervision to occur on-site. This may have led to students performing tasks beyond their capabilities and potentially putting their patients or themselves at risk. Whilst this is partly unavoidable due to the strain on human resources, future programmes will need to work on building a support system between universities and clinical sites to account for these volunteers, and setting up welfare frameworks to assist them in their medical volunteering efforts.

Impact on future education

COVID-19 has dramatically changed the landscape for medical education and may potentially have long-lasting effects. Notably, there has been a shift in the attitude towards infection control, with growing emphasis on hygienic practice at an individual and institutional level. For instance, Imperial College has now introduced compulsory PPE training for all students beginning their clinical placements. It will be necessary for all medical schools to implement new safety policies like this for routine clinical attachments and student volunteers to reinforce on general infection control and hygiene, something that is often poorly practiced by students. A review of the curriculum will also be necessary to include teaching on COVID-19, since current medical students may be treating patients in the future

suffering from associated chronic co-morbidities, data for which is currently being gathered in the post-hospitalisation COVID-19 (PHOSP-COVID) study.⁹

The necessity of online teaching during the pandemic may also become more mainstream in future. While this form of schooling cannot replace face-to-face clinical skill sessions, it does provide a relatively inexpensive and flexible means of lecturing students on core content. Additionally, small group tutorials and meetings have also proven to be effective on these platforms. If medical schools opt to continue online teaching into the 2020/2021 academic year, we recommend implementation of an academic/welfare support framework to ensure that students are coping with the content and are not disadvantaged by receiving their teaching online. This will prevent feelings of isolation and lack of guidance when away from teaching sites.

Certainly, medical schools in the UK have responded well to the disruptions brought about by the COVID-19 pandemic. The swift adoption of remote teaching has ensured the continuation of training necessary to become a safe and competent doctor. However, the relevant institutions must ensure emphasis on mental health services and the way in which their students who are volunteering in high-risk-environments are protected. Reflecting on the challenges presented by the pandemic will hopefully allow medical schools to be better prepared for a potential second wave of COVID-19¹⁰ and other significant health crises in the future.

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