Medical students as health workers during the COVID-19 pandemic

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ABSTRACT
Background: We describe efforts at one tertiary university teaching hospital to rapidly recruit, train and deploy medical students into paid clinical support worker roles during the COVID-19 pandemic.

Methods: Recruitment was conducted by means of a single email outlining the emergent clinical situation and specifying role descriptions, terms and conditions, and temporary staff enrolment paperwork. Applicants could begin work provided they were in good standing and received departmental orientation. Student representatives liaised with teaching faculty and participating departments. Roles were modified in response to student and departmental feedback.

Results: Between 25 December 2020 and 9 March 2021, 189 students contributed 1335 shifts, providing 10651 hours of clinical care in total. The median number of shifts worked per student was 6 (mean: 7; range: 1–35). Departmental leaders attested that the student workers eased the burden on hospital nursing teams.

Conclusion: Medical students contributed usefully and safely to the provision of healthcare within well-defined and supervised clinical support worker roles. We propose a model of working which could be adapted in the event of future pandemics or major incidents. The pedagogical value to medical students of working in clinical support roles warrants closer evaluation.

INTRODUCTION
The Royal Free Hospital is a 630-bed tertiary-referral hospital in Hampstead, London, UK. The hospital delivers a wide range of medical and surgical services and is equipped with a high-security infectious diseases unit. It is the base for 240 year 4 and year 5 medical students from University College London (UCL) Medical School.

The Royal Free Hospital experienced a significant rise in COVID-19 cases in winter 2020/2021, during which time it served as a surge centre receiving patients from district hospitals across North London. By early January, the Royal Free Hospital was among the busiest hospitals in England in terms of COVID-19 hospital activity. The intensive care unit rapidly expanded from 34 beds to 96 beds across 3 floors and the exponential increase in demand on the acute service precipitated an urgent need for additional nursing staff.

Medical students have contributed to the pandemic response in clinical and non-clinical capacities. Involvement in patient care has varied between and within countries.
hospital and teaching faculty so questions and emergent problems could be addressed promptly. Three student representatives were appointed on the basis of their past involvement as volunteers earlier in the pandemic and were responsible for liaising with teaching faculty, hospital clinicians and participating departments. Weekly online meetings with hospital management, UCL Medical School faculty and student representatives were used to plan ahead and modify roles in response to student and departmental feedback and the evolving epidemiological situation.

RESULTS
Eighty-five medical students were recruited within the first 24 hours and a total of 189 medical students signed up to support nursing teams within 2 weeks.

Between 23 November and 18 February, the Royal Free Hospital managed 1821 confirmed cases of COVID-19. This compares to 899 patients managed during the 1st wave of the pandemic (27 February 2020–20 April 2020). At the peak of the surge, there were 334 patients who were COVID positive in the hospital, 96 of whom were managed in the intensive care unit (ICU). From 25 December 2020 to 9 March 2021, 189 medical students worked 1335 shifts (10651 hours in total). The median number of shifts worked per student was 6 (mean: 7; range: 1–35).

Student representatives conducted a survey of their peers in early January (online supplemental appendix 3). Forty three of 79 respondents reported having encountered challenges in their roles. Students were unsure how to balance supporting the hospital during 12-hour shifts with attending clinical placements and maintaining personal study. Many reported wanting to do as much as possible to help the hospital but were concerned that their roles were not a substitute for normal clinical placements. Nevertheless, students found their experiences to be valuable. They described having developed clinical skills related to their curriculum learning outcomes and others they would carry forward into their medical careers stating, for example, that working in formal healthcare roles had: ‘significantly improved [my] communication skills and practical procedures more than my first term on the wards’ and ‘I think I’ve learnt more in a couple of days work than I have in most of my placements’.

DISCUSSION
The COVID-19 pandemic disrupted workflow across the NHS, necessitating a rapid redeployment of the clinical workforce and wrought many changes in the delivery of medical education. Medical students have contributed to the COVID-19 response worldwide, but their impact has yet to be fully evaluated.

At the Royal Free Hospital, the priority throughout was to minimise harm to patients, to our acute services, and to the well-being and training of our clinical teams. The extent to which this was achieved was substantially contributed to by the medical student health workers. ICU matrons described the student health workers as ‘instrumental’ to their response. They found students to be ‘keen, willing and always up to a challenge’ and were able to work safely and effectively under supervision from trained ICU nurses, appropriately identifying acutely ill patients and reporting changes to nursing staff. Their presence ‘helped to boost nursing team morale’ (ICU matron) and provided ‘much needed fresh energy going in to the second surge’ (renal physician), which ‘eased the burden on overworked nurses and healthcare assistants’ (renal physician). Departments were asked to identify any challenges they encountered with the student health workers, but no specific concerns were reported. The renal department matron summarised her experience of the student health workers: ‘Their input was invaluable. Without them the patients would have got less optimal care. We were always short of staff and having the students on the ward was a great help … they were all enthusiastic, intelligent and knew their limitations … They worked hard and truly cared for patients. I am grateful for their help’.

The addition of the student health workers eased the burden on hospital nursing teams by providing over 10 000 hours of additional labour. Students gained clinical exposure during a time when onward placement opportunities were limited. Students worked in roles that challenged them and made use of their skillset. They gained an alternative point of view, improved interprofessional skills and many were able to improve their practical skills. Student feedback was broadly positive. One wrote: ‘It is the first time in my medical training that I have felt of value or that 100% of my time is being used to maximum efficiency. I am constantly learning and working within the team to ensure patient care is centre—exactly what I joined med school for’.

Another noted: ‘This has been amazing, humbling and draining … if anything this experience has increased my drive for our profession’. This is consistent with other accounts of clinical exposure during the pandemic being important driver in developing students’ resilience and professional identity formation.

Hospitals should consider the use of medical students in paid roles in the event of future pandemics or major incidents, and potentially also under more normal circumstances. Many medical students already work in part-time jobs alongside their degrees, often in roles which do not directly complement their education. Hospitals may seek to create bespoke job plans for medical students to ensure their skills are developed and used to the benefit of patients and clinical services. The British Medical Association has published guidance for medical students on employment contracts and good practice related to COVID-19, which describes a standard of practice NHS trusts should abide by.

Our single-centre study may not be generalisable to other hospitals or to non-pandemic-related unmet healthcare workforce needs. Holloway believes such efforts create a tension between medical students as consumers of education and as providers of healthcare, while at Imperial College London, students wrote an open letter demanding an end to compulsory unpaid assignment to healthcare assistant work citing concerns over well-being and arguing that learning opportunities did not align with their assessments. Much depends on factors of institutional culture and leadership. Our success was predicated on close collaboration between medical student representatives, faculty, clinicians and hospital management. The fast, flexible response delivered significant support to acute services and to staff morale. One senior hospital manager commented at the time: ‘It is like the cavalry arriving to save the day. They are all so welcome’.

Medical schools should consider promoting exposure to clinical management. While leadership roles are available at universities through student societies, there is generally little direct exposure to healthcare management. Effective clinical leadership has helped the NHS to endure this pandemic; we must develop leaders who will navigate the challenges to come.

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References