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 online 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.2 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.2–5 Involvement in patient care has varied between and within countries.5–9

METHODS

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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 liaison 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
Appendix 1:
Recruitment communication (Email): Wednesday December 23, 2020 – 21:57

Dear all UCL Royal Free Hospital Medical Students,

This is an urgent email sent on behalf of Dr Dilworth by Adam Boggon, Clinical Teaching Fellow, concerning the opportunity for you to contribute to the Royal Free Hospital’s response to a significant deterioration in the pandemic.

There is a specific, urgent need for medical students willing to undertake paid work in the hospital in Band 3 Health Care Assistant (HCA) roles across medicine, the emergency department, the renal unit, the renal dialysis service, and in intensive care.

You will already have received the options available and many of you have put your names forward.
• If you have already put your name forward please consider signing up for shifts over the holiday period
• If you have not yet decided we are re-attaching the roles available and inviting you to let us know either if you can contribute immediately or in the near future. In this case please state your preferences ordered 1-3 by email as soon as you can.

If you have not attended an induction, there is an opportunity to attend a MS Teams-based induction led by Maggie Maxfield’s nursing team 10:30-12:30 on Christmas Eve - tomorrow morning. You are welcome to attend this induction whether or not your application has been processed by the staff bank. Attending the induction session does not commit you to working but it may help you make an informed decision about this choice. During the course of this induction meeting Dr Dilworth and I will be present where possible to answer any questions you may have about this.

You may access the session here: [Microsoft Teams Link]

Ashley Poole, Year 5 MBBS, has provided this clarification of the intensive care unit role which will apply across all roles:
‘We are put on the nursing rota as Category C which is a HCA role within the ICU setting and must make sure that we are fulfilling those specific needs within the department. We are not a part of the medical team and we are being relied upon to fill large gaps in the nursing rota so while helping with medical jobs here and there, it is our job to be a member of the nursing team. Having experienced shifts in this role there is often a shortage of people able to do Category B roles such as measuring observations, helping with drugs, taking blood and monitoring patients while been over seen by an ICU nurse. We have had confirmation from the medical school and the relevant people in the trust that as long as we are comfortable and most importantly are competent in doing so then going above what is written on the task card is acceptable. However, you must speak up if you feel like you are being given too much responsibility and we mustn’t take blood/perform specific tasks unless we have been signed off on our placements. These are unprecedented circumstances but the need to be responsible and safe medical professionals is still of the upmost importance. This is a good opportunity to prepare us for the professional requirements of FY1 and being able to recognise our limits in difficult situations. I encourage you to offer your help where it is most needed on your shifts and to learn from the incredible ICU nurses so that we can offer them the support they need’. Ashley states that she will have access to her emails over Christmas so if you have any questions, or want to discuss anything, or wonder if it’s right for you then please don’t hesitate to message her: XXXXX

We would not write to you in this fashion at this late hour at this time of year unless there was no other way. You need not be reminded what the National Health Service and the Royal Free Hospital in particular have contributed to this city and this country. This hospital has never closed its doors to those in need and will continue to act as a surge centre accepting patients from across North London as required. Yet healthcare is provided by human beings, not by hospitals. We are asking you if you will come.

Adam

Dr Adam Boggon BSc(Hons) MBChB DTM&H PGCertMED
Clinical Teaching Fellow, Royal Free Hospital
Honorary Clinical Lecturer, UCL Medical School
Appendix 2:
Medical Student Clinical Support Worker Role Description – Medicine/A&E

Outline
The description of the role across medicine and A&E is derived from the job summary for a health care assistant, for which there exists a pressing need at this time.

There is a clear understanding between the Sub-Dean and the Director of Nursing that the medical student worker role is primarily to provide nursing support in the first instance.

Please read this description carefully. Your contribution would be invaluable but it is important for you to understand what the role will involve.

Job Summary
The health care assistant is a member of the team appointed to support Registered Nurses in the delivery of direct patient care. The post holder will undertake a range of activities under the supervision of a registered nurse. The post holder may be required to work anywhere within the hospital (especially in medical wards and A&E). Shift patterns and rotas will be developed in collaboration with the medical and A&E teams directly. It is likely that both medicine and A&E may encourage and be able to support medical students during twilight/evening shifts as this may match well both with times of acute clinical need and align with your placements and ongoing clinical education.

Responsibilities
1. Support the registered nurse in implementation of an agreed plan of care with the patient and in accordance with instructions and training received.
2. Talk with patients and communicate any changes in condition to the supervising registered nurse.
3. Obtain demographic details and social history from patients/visitors to assist on the admission process.
4. Deliver personal care to patients including bathing and toileting.
5. Support of patients in managing incontinence and promotion of continence.
6. Assist the patients in dressing where required.
7. Assist the Registered Nurse in the moving, handling and positioning of patients to meet clinical need, adhering to the Trust moving and handling policy at all times.
8. General bed making/making up of clean beds in readiness for new admissions.
9. Clear and clean vacated bed spaces and prepare ready for use according to the ward/departmental protocol.
10. Prepare used linen bags for collection and ensure an adequate supply of linen bags/skips ready to use.
11. Provide comfort, reassurance and support to patients and/or their relatives/visitors/carers if anxious or distressed.
12. Prepare patients for treatments, investigations or procedures.
13. Ensure due regard is given to customs, values and spiritual beliefs of patients and carers.
14. Observations (including temperature, pulse, blood pressure, respiratory rate, oxygen saturation and peak flow)
15. Blood glucose monitoring
16. Best practice in infection prevention and control
17. Obtaining specimens
18. Collection of blood products from the laboratory as requested
19. Removal of cannulae, catheters and nasogastric tubes
20. Pressure area care
21. Assess pain levels and request pain relieving medication on patient’s behalf.
22. Assist patients with eating and drinking as necessary.
23. Serving of patients’ meals, drinks and snacks.
24. Recording of patients’ dietary intake when indicated in the patient’s plan of care.
25. Recording of a patients’ fluid intake and output using fluid balance charts.
26. Chaperoning and escorting stable patients between wards and departments.
27. Assist the registered nurse in performing last offices.
28. Initiate basic life support techniques as appropriate.
29. MRSA screening
30. Phlebotomy
31. Taking an ECG
32. Dressing non-complex wounds in conjunction with a plan of care (following appropriate training)
33. To update and keep accurate records (electronic and written) and ensure that entries are countersigned.
34. Provide a verbal handover of patient’s care under the direct supervision of a registered nurse.
35. Contribute to the management of aggressive and abusive behaviour.
36. Promote and ensure safe handling of valuables and patients property as per Trust policy
37. Assist in the maintenance of stock levels.
38. Assist in the maintenance of ward/departmental cleanliness/tidiness.
39. Safe disposal of clinical waste and sharps as per Trust policy.
40. Prepare and maintain environments for clinical treatments and investigations.
Appendix 3: Student Health Worker Survey Form

1. Which area of the hospital were you allocated to?
2. How many shifts have you done so far?
3. How useful have you felt in your allocated area?
4. How welcoming have the team been?
5. How supported have you felt whilst volunteering?
6. Have you ever felt out of your depth whilst volunteering? (Please tell us more if you have felt out of your depth.)
7. How important do you feel volunteering is right now?
8. How important do you feel placements are right now?
9. How many hours a week do you plan to volunteer alongside placement?
10. How many hours a week would you volunteer if placements were cancelled?
11. How many hours a week would you volunteer if placements were part-time?
12. What is your opinion on the importance of volunteering vs. placement during the month of January with the situation as it is?
13. How do you think we could encourage people to continue volunteering?
14. How could we encourage people to work night shifts?
15. Any other feedback you think is relevant or any final thoughts?