Received: 24 November 2022 | Accepted: 1 August 2023

DOI: 10.1111/tct.13650

RESEARCH ARTICLE

THE CLINICAL TEACHER

COVIDAssist: Exploring the perspectives on student assistance during the COVID-19 pandemic

InciSioN UK Collaborative | The Royal Society of Medicine Students Section Collaborative | MedEd Collaborative

Correspondence
Vigneshwar Raj Veerappan, Hull York Medical School, University Rd, Heslington, York, YO10 5DD, UK.
Email: vigneshwarraj@hotmail.com

Funding information
This research has received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Abstract

Introduction: COVID-19 resulted in medical students volunteering to join the health care workforce. Our study aimed to evaluate the perception of clinical staff on the benefit of students' pandemic response. The secondary aims were to (i) evaluate medical students' team working skills, (ii) identify specialties where medical students were most effective, and (iii) identify areas for further training.

Methods: We conducted a national survey of doctors and nurses. This was conducted in line with a pre-specified protocol by the International Student Surgical Network UK (Incision UK), with support from The Royal Society of Medicine Students Section Collaborative and MedEd Collaborative. A questionnaire was developed and disseminated following AMEE guidance. Survey responses were quantitatively and qualitatively analysed.

Results: Of the recorded responses (n = 283), the largest group of respondents was junior doctors, (n = 110, 38.9%), and medicine was the most reported specialty (n = 76, 26.9%) of respondents, followed by primary care, with the lowest responses coming from surgery (n = 25, 8.8%). Of the total responses (n = 283), 76.8% of respondents reported that the student response had a positive impact during the pandemic. Four themes were identified: (i) impact on health care service, (ii) impact on health care staff and patients, (iii) student's professional development and (iv) additional training that students require.

Conclusion: Students were an effective part of the pandemic. However, without appropriate definition of their role within a clinical setting, students may be forced to balance learning and service provision. Providing students with dedicated clinical support roles and ward-based learning roles with a competency-based approach holds potential to be both a powerful learning tool and strengthen health care systems to face future crises.

1 | INTRODUCTION

The COVID-19 pandemic caused an unprecedented disruption in health care systems worldwide, stretching the already overworked health care workforce.[1–4] Several countries utilised medical students to address the increased health care burden.[5–7] In the United Kingdom, the graduation of final year medical students was fast-tracked, and they were redeployed as 'doctor's assistant' and 'Interim Foundation Year' roles to fill

in the deficit in workforce and tackle missed teaching opportunities.[8] Non-final year medical students were also asked to aid the National Health Service (NHS).[9–11]

The COVID-19 pandemic caused an unprecedented disruption in health care systems worldwide, stretching the already overworked health care workforce.

However, several challenges were identified within the student response such as concerns about students being forced to work outside their competencies,[12,13] the additional supervision that students require[14] and the lack of uniformity and guidance in response[15,16] to name a few.[17–19] These challenges may have inadvertently resulted in an increased workforce burden. Hence, the true effectiveness of student response in alleviating the workforce burden remains unclear in the current literature. Most of the articles that have analysed student response during the pandemic have done so from a student perspective,[17–19] potentially introducing a sample bias.

The dearth of data on the perspective of health care staff (doctors and nurses) who worked alongside students poses a crucial gap in the literature, as their perspectives can provide a less biased perspective whether the student response was able to meet the requirements of the workforce and, if not, how this could be better met. Assessing the effectiveness of student response during the pandemic and identifying areas where students performed well or vice versa can provide important insights into how service delivery can be better adapted in future health care crises. Moreover, analysing student response during the pandemic provides an opportunity to explore the shortcomings of current medical education. We hypothesised that student response was largely beneficial for the workforce during the pandemic, but postulated certain pitfalls based on the available literature.

Thus, the primary aim was to evaluate the perception of clinical staff on the benefit of student assistance during the pandemic. The secondary aims were to (i) evaluate medical students' team working skills outlined by General Medical Council (GMC) outcomes for graduates,[20] (ii) identify specific health care specialties in which medical students were most effective, and (iii) identify areas for further training for medical students. The results of the study and their implications were discussed using a competency-based approach, an approach that enables learners to be more independent and autonomous over their learning.[21] This approach was better suited to analyse the intersection between service delivery and medical education.

The primary aim was to evaluate the perception of clinical staff on the benefit of student assistance during the pandemic.

2 | METHODS

2.1 | Research approach

This research was conducted within the paradigm of pragmatism.[22] Given the current study is investigating the experiences of doctors and nurses in working with medical students during the pandemic, we aimed to develop a methodology that captured both quantitative and qualitative data to generate a rich and wide range of data.

2.2 | Study design

We conducted a national, multi-centre, cross-sectional survey of doctors and nurses. This was conducted in-line with a pre-specified protocol through InciSioN UK (International Student Surgical Network UK). InciSioN UK is a student and junior-doctor organisation promoting global surgery via research, education and advocacy.[23] All health care workers employed within National Health Service (NHS) trusts and general practitioner (GP) practices, who worked alongside medical students were eligible to participate.

We conducted a national, multi-centre, cross-sectional survey of doctors and nurses.

2.3 | Questionnaire design

The survey was designed following AMEE guidance on questionnaire design.[24] A scoping review of current literature on medical student pandemic response was used to develop a preliminary questionnaire. This questionnaire was disseminated to medical students within the Incision UK student network who took part in the student response during the

pandemic, and students were asked to provide feedback on aspects of the questionnaire such as question structure, form and content. This pilot questionnaire and feedback from respondents helped refine the questionnaire and establish face, response and construct validity. Based on the response and feedback collected, a final questionnaire was developed with key items from the General Medical Council (GMC) outcomes for graduates (GMC outcome 1 'professional values and behaviours' and GMC outcome 2 'professional skills') integrated into it. The study was validated by members of Incision UK, The Royal Society of Medicine Students Section and medical educationalists who had no part in the inception and write up of the questionnaire.

The questionnaire comprises three main sections: demographic and background information of respondent (section 1), behavioural (section 2) and performance (section 3) questions with Likert scaled-response and behavioural questions with Likert-scaled response, free text questions to investigate scope for improvement in exposure of pandemic response amongst medical students. Cronbach alpha test for the behavioural section (section 2) and performance section (section 3) of the survey showed high reliability with a score of 0.97 and 0.96, respectively.

2.4 | Questionnaire distribution

The study questionnaire was hosted on the Qualtrics platform, and the link to the questionnaire was delivered by a collaborative of medical students according to a previously used model.[25] Collaborators' dissemination and recruitment were regularly monitored through weekly meetings to ensure the responses collected were representative of a national population. Furthermore, the link was also disseminated through social media channels of the three research collaboratives that led the study. Data collection was between 22 February 2021 and 8 June 2021.

2.5 | Data analysis

Quantitative and qualitative data analysis was used for this study. Quantitative analysis involved converting the Likert scale responses to numerical value (*strongly disagree*, 1; *somewhat disagree*, 2; *neither agree nor disagree*, 3; *somewhat agree*, 4; *strongly agree*, 5). Quantitative data analysis was done on R 4.1.2, and descriptive statistics were reported.[26] A Kruskal–Wallis test was applied to test for correlation between specialty that respondent worked in and the questions of section two which consisted of behavioural questions.

Qualitative data coding, management and analysis was conducted. Qualitative analysis used Braun and Clarke's reflexive thematic analysis approach.[27] Two authors (VV and BH) familiarised themselves with the data and independently generated initial codes through an inductive process. Any differences in interpretation were discussed and agreed by mutual agreement. Respondent data were interpreted and summarised. Codes of similar information were merged leading to a series of phenomena that appeared increasingly representative of the respondent's perspectives. To reduce researcher bias and refine the synthesis of the result, regular team discussions occurred to maintain an awareness of preconceptions and constantly link the emergent themes to the interview data. Priority was given to fairly representing all the different perspectives about the phenomena under investigation to produce a respectful and balanced judgement of the themes from the quotes of the respondents. The research team consisted of authors from a wide spectrum of medical professionals that were representative of the areas where medical students were working. Where respondents indicated a preference to not answer, responses were removed.

2.5.1 | Reflexivity

The authorship team comprised a mixture of medical students who were volunteers and non-volunteers, junior doctors and medical educationalists across multiple institutions and varied backgrounds. The diversity in perspective of the authorship team allowed a well-balanced and critical analysis and interpretation of the data.

3 | RESULTS

3.1 | Demographics

There were 283 responses recorded (Table 1). The largest group of respondents was junior doctors, regardless of their grade (n = 110, 38.9.%), followed by consultants working in a hospital setting (n = 69, 24.4%), nurses (n = 60, 21.2%), GPs (n = 34, 12.0%) and ward matrons (n = 6, 2.1%). Self-reported speciality was diverse across the cohort of respondents, with 'medical specialities' being the most reported (n = 76, 26.9%), followed by primary care (n = 55, 19.4%).

TABLE 1 Demographic of respondents.

Characteristic		n = 283	%
Role (n = 283)	Junior doctor	110	38.9
	Consultant (hospital)	69	24.4
	Nurse	60	21.2
	GP	38	13.4
	Ward matron	6	2.1
Speciality (n = 283)	Medicine	76	26.9
	Primary care	55	19.4
	Other	54	19.1
	Anaesthetics/ITU	41	14.5
	Academic	31	11.0
	Surgery	25	8.8
Responsible for coordination of student response (n = 36)	Hospital level	15	41.7
	Ward level	21	58.3

Abbreviations: GP, general practitioner; ITU, intensive therapy unit.

The largest group of respondents were junior doctors. Self-reported speciality was diverse across the cohort of respondents, with 'medical specialities' being the most reported.

A total of 12.7% of respondents (n = 36) reported that they were responsible for coordinating the recruitment and deployment of medical students. Of the 36 respondents, 41.7% (n = 15) was responsible for this coordination at a hospital level, while the remainder were responsible for the coordination at a ward level.

Fourth year students were mostly observed volunteering (n = 120, 22.7%), followed by fifth year students (n = 115, 21.8%) (Table 2). Early years students (year 1 and year 2) were observed to be involved in volunteering less often, with 8.9% and 11.2%, respectively. Students were observed to most commonly be asked to act as newly formed interim foundation year 1 doctors (n = 91, 17.3%), health care assistants (HCAs, n = 84, 16.0%) or doctor's assistants (n = 70, 13.3%).

Fourth year students were mostly observed volunteering (n = 120, 22.7%), followed by fifth year students (n = 115, 21.8%).

TABLE 2 Observed student demographics as reported by study respondents.

	Number of respondents who observed students	
Student year groups	**Number**	**Percentage (%)**
Year 1	47	16.6
Year 2	59	20.8
Year 3	94	33.2
Year 4	121	42.8
Year 5	115	40.6
Interim Foundation year doctor	87	30.7
Don't know	43	15.2

3.2 | Recruitment and deployment of students

The medical student volunteering process was not often formalised, with only 36.4% respondents (n = 103) reporting a structured process at their hospital/primary care practice. Fourteen (38.9%) of the 36 respondents who were responsible for coordinating the student response *somewhat agreed* or *strongly agreed* to having a nationally coordinated student recruitment and deployment.

3.3 | Evaluating student competencies

Most respondents either agreed or strongly agreed that students were competent in communication (median 4, IQR [interquartile range] 4–5), escalating (median 4, IQR 4–5), and donning and doffing of PPE (median 4, IQR 4–5). Overall positive responses were also present for being able to admit to making mistakes (median 4, IQR 4–5) and politeness towards patients (median 5, IQR 4–5). Most respondents agreed or strongly agreed to the questions 'I felt students were competent performing the roles they were given' (78.9%, n = 187) (Figure 1).

There were six questions in section 2 of the questionnaire that focussed on the overall impact of student response, with all responses being recorded in Likert scales. Most respondents agreed or strongly agreed to the question 'I felt students had a positive impact on the healthcare teams during the pandemic' (76.8%, n = 250) (median 4, IQR 4–5). This offers a key insight into the positive impact students had during the pandemic and the potential they hold in future pandemic type scenarios, which will be focussed on more in the discussion section.

Most respondents disagreed or strongly disagreed with the question 'I felt patient safety was compromised by student volunteers' (79.7%, n = 237) (median 1, IQR 1–2). A breakdown of the responses to all the questions is shown in Figure 2.

An independent-samples Kruskal–Wallis test comparing how respondents from different specialties (primary care, medicine, surgery, anaesthetic/ITU, academic, surgery and other) responded to the questions in sections 2 and 3 revealed no meaningful correlation, suggesting that students were generally useful across all specialties.

3.4 | Qualitative analysis of responses

The questionnaire had three free text questions as follows:

- What positive effects did students have in the roles you observed above? Specify any particular roles where students had a positive impact, to a maximum of 3 roles.
- What negative effects did students have in the roles you observed above? Specify any particular roles where students had a negative impact, to a maximum of 3 roles.

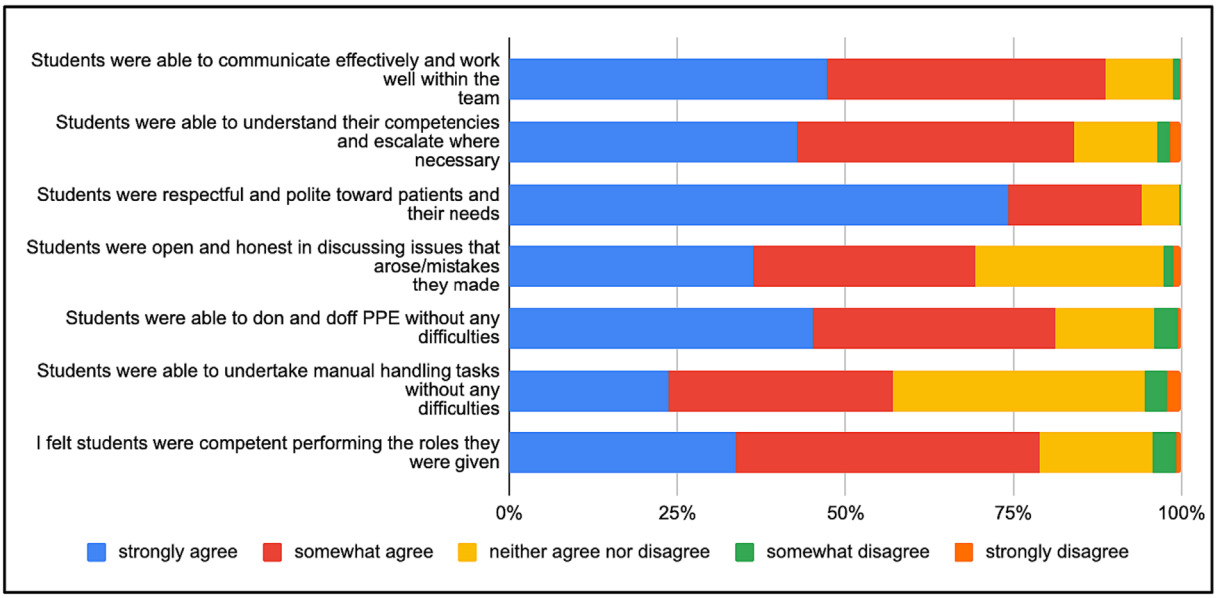

FIGURE 1 Likert scale responses to section 3 questions on skills of students (based on GMC outcome for graduates and specific pandemic related skills).

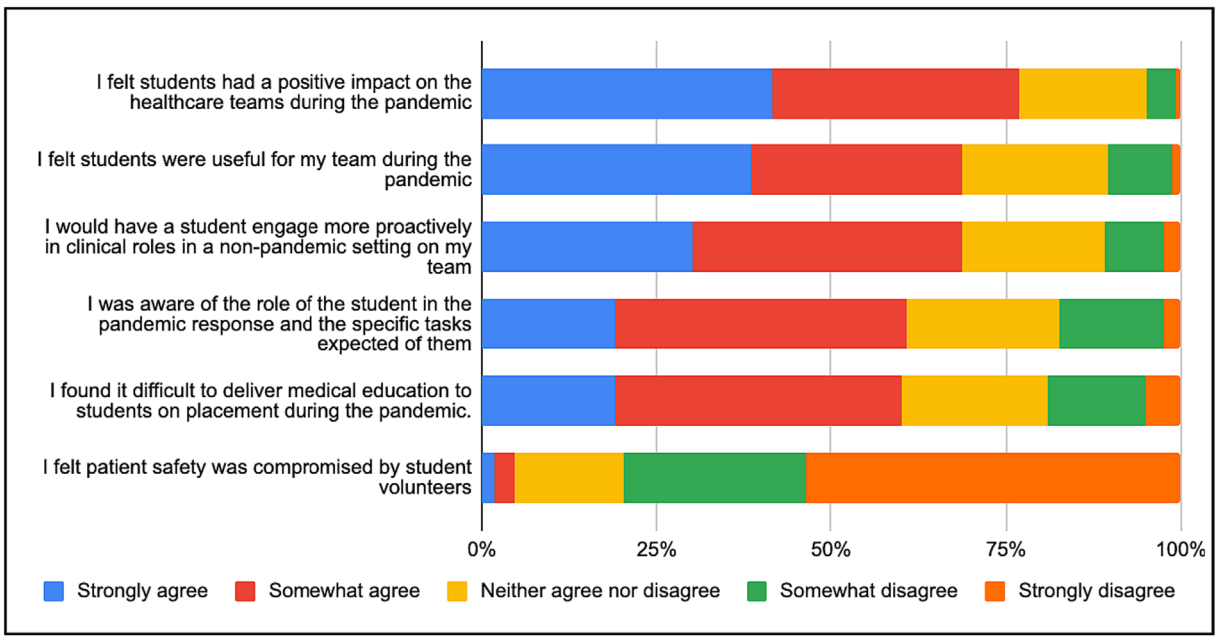

FIGURE 2 Likert scale response to section 2 questions on impact of student response.

- What additional training should medical students have received as part of their induction?

The three free text questions received a total of 375 responses from 138 respondents. Thematic analysis was performed on these three questions.

Four themes were identified from the free text questions (Table 3); these included (i) impact on health care service, (ii) interacting with health care staff and patients, (iii) student's professional development and (iv) additional training that students require.

3.5 | Positives of student response

First, 'students improved service and promoted good clinical practice'. The diverse professional background of students allowed them to

TABLE 3 Qualitative themes identified by the free text responses.

Impact on health care service	Students improved service and promoted good clinical practise	'(Students) maintained patient safety when nursing ratios were totally abnormal.' '(Students) helped decrease waiting times to be seen and increase bed space by clerking patients in triage.'
	Students had limited competency and were uncertain in their role	'Students were left to observe patients and monitor patients in the absence of a competent ICU nurse when ratios were stretched during the pandemic.' 'At times they (students) appeared lost as to what to do, and had no given role.'
	Difficulties with coordination and management	'Sometimes there was actually more staff available than necessary on a particular day and some medical students may have felt their role was redundant.' 'Sometimes they did not have logins and so computer tasks (bloods/PACs x ray) required two people.'
Interacting with health care staff and patient	Improved morale and reduced workload of health care teams	'Their (student's) presence had certainly boosted the morale of the team; the sense of everyone was helping each other during the difficult times.'
	Improved staff-patient communication and continuity of care	'They (students) worked really well with patients and (were) good at raising concerns with senior members or staff.' 'Helped ensure continuity of care for patients by coding documents coming into the surgery.'
	Improved patient care and comfort	'They (students) were great at calling families via FaceTime on I-pads so patients could see their relatives.'
Student's professional development	Students gained educational experiences and skills	'(Students were) able to quickly learn tasks to be performed under direct supervision/alongside registered clinicians.'
	Students had to balance their roles of being medical students and volunteers	'Students required time for me to sign them off for skills which I found hard to do due to the busyness of the ward.' 'It takes time to do bedside teaching with students, and during the peak of the pandemic, there was not much time to spare.'
	Students had to adjust to the changes due to the pandemic	'(Students) took up doctors' time when they did not know what to do because of e.g. lack of knowledge/skills or unfamiliarity with local trust guidelines.' 'Some consultants were harsh with their expectations which were sometimes not fulfilled by the students.'
	There was a negative impact on student's wellbeing	'Their (students) work ethic is amazing but this can not be maintained every day and they should be warned about burn out.'
Additional training that students require	Students require Trust-specific training such as local guidelines and IT training	'(Students require training in) the logistical structure of a pandemic hospitality, who and when to escalate to and IT training.'
	Students require pandemic-specific training on knowledge and skills	'They (students) should have had some written info about Covid to supplement their experiential learning.'
	Students need training on particular clinical skills and knowledge	'It would have been useful if they (students) had done some pre-pandemic ITU training as many were unfamiliar with the environment.' '(Students) having some experience of virtual telephone consultations might have helped them talk to patients on the phone more confidently.'
	Students require training of soft skills such as human factors and communication	'Students require human factors training - with specific emphasis with coping in stressful situations and dealing with things that arise in an extremely busy and scary work environment.'
	Students require mental health support	'Students require counselling after the pandemic as it has taken a toll on many people's mental health.'

undertake a variety of different roles, such as nurses, health care assistants, vaccinators and volunteers. Students were also able to help in a variety of ways from delivering food to the community to improving service evaluation.

Second, students had a positive impact when 'interacting with healthcare staff and patients' by improving team morale and a positive work ethic. Students helping in tasks such as clerking and observations allowed staff to focus on more pressing matters. Students also had more time to communicate with patients, resulting in a positive effect on communication and continuity of care between patients and staff. Moreover, students contributed to improved patient care and comfort by helping patients communicate with their relatives remotely.

Finally, there was a positive impact on student's professional development. The experience of responding during a pandemic allowed students to develop their communication skills, developing

teamwork skills and gain skills that were useful to being a foundation doctor.

3.6 | Negatives of student response

There was a small number of respondents who thought that students lacked the competence or knowledge required for their role (Figure 2). The large influx of students created difficulties in coordination and management, such as rota management and infection control. Furthermore, there were issues related to access management due to students lacking smartcards and computer logins.

Second, students were faced with conflicting roles as primary learners and as volunteers. Students at times required sign offs for their skills or teaching, which was difficult to deliver due to the pressures on staff. Concurrently, students themselves had to change and adapt to the pandemic, whether that was through their volunteering or their education. Students had to get used to the restructuring of health care service and manage expectations that were placed on them as student volunteers. The effect of responding to the pandemic on students' psychological well-being was highlighted, with students described to have felt overwhelmed and lacking awareness of burnout.

When considering additional training that students required, five subthemes were identified: students require trust-specific training such as local guidelines and IT training, students require pandemic-specific training on knowledge and skills, students need training on particular clinical skills and knowledge, students require training of soft skills such as human factors and communication and students require mental health support.

4 | DISCUSSION

While the pandemic created a significant workforce burden, several studies have demonstrated the effectiveness of students within the pandemic workforce in both clinical and non-clinical roles.[5–7,11,14] Our study found that students supported a wide range of health care units by engaging in a variety of tasks, and the additional support they provided was perceived as a useful component of the pandemic workforce by most respondents (76.8%). The student response demonstrated competence based on the GMC outcomes for graduates and their response was positively received by health care staff without compromise to patient safety. Moreover, they were also found to improve team morale and clinical practise.

4.1 | Implications on medical education

While student response was generally well received, a conflicting dichotomy was noted in students as they were forced to balance their role as a doctor or volunteer while attempting to fulfil their training requirements. Given the impact of COVID-19 on medical education,[12,19] students may have been more motivated to seek out learning opportunities while volunteering.[28,29] Several studies have shown how this discrepancy can be addressed through the development of an integrated and context-specific curriculum.[30–32]

Forced to balance their role as a doctor or volunteer while attempting to fulfil their training requirements.

Although health care services are largely returning to normal after the pandemic, the burden on NHS workforce is consistently increasing.[33,34] Although students may not be expected to formally volunteer as they did during COVID-19, implementing learning programmes within a stressed health care system may yield unfavourable outcomes for both students and staff. Byrne et al. highlighted a similar phenomenon in their study, where they discussed the integration of clinical support roles within medical curriculum, and the potential conflict with existing educational opportunities.[35] While clinical support roles can be beneficial to a student's learning, our study demonstrates that balancing this with their role as a learner can prevent students from being an active member of a health care team and reduce the efficiency of the health care team in general. Instead, having clinical support roles and ward-based learner roles as exclusive and independent scheduled sessions within a placement timetable can enable students to enter their placement with more well-defined roles and aims.

Clinical support roles and ward-based learner roles as exclusive and independent scheduled sessions within a placement timetable.

Integrating this into a competency-based framework for students in their clinical years enables a student to acquire competencies at their own pace and utilise those competencies effectively to be a more active member of a health care team. For example, ward-based learning time can provide students the opportunity to seek out learning opportunities for specific competencies and be supervised or signed off for these competencies. In their clinical support role, they would be able to practise their signed off competencies and be an active member of the health care team, while playing a role that will be beneficial to their learning and future career.

4.2 | Implications on future health care crises response

Our study also found several notable downsides to the student response. The sudden influx of student workforce resulted in lack of coordination and management, causing staffing redundancies, reduced service efficiency and uncertainty in student roles and limits, precipitated by deficiencies within the system such as lack of preparedness for the pandemic.[36] There was significant heterogeneity in student volunteering, with many respondents noting a lack of formalised volunteering process for students and highlighting the need for such a formalised process. While the UK Foundation Programme Office (UKFPO's) interim foundation programme provided a formalised platform for final-year medical students to enter employment early,[37] medical students of other years responded without any nationalised processes for trusts or medical schools to follow.[12,38]

The sudden influx of student workforce resulted in lack of coordination and management. There was significant heterogeneity in student volunteering.

A small number of staff felt that students worked outside competencies at times. Although our quantitative data suggest this only applied to a minority of students, as 78.9% of respondents felt that students were competent in their role, and 84.1% felt students undertook their competencies and escalated appropriately. This was predicted in an opinion piece by Rainbow et al, which discussed the possibilities of students working outside of competencies due to the pressures on the NHS.[12]

Any adaptation of service delivery to integrate medical students during a health care crisis can be better conducted if done locally, owing to medical students being more familiar with the health care infrastructure and teams within the hospitals they are training in.[39,40] Organising service delivery through a competency-based approach can allow services and departments requiring additional workforce to be classified based on the competencies they require. Thus, medical students can be deployed to the appropriate areas based on their competencies.

Service delivery to integrate medical students during a health care crisis can be better conducted if done locally.

4.3 | Limitations of study

There are a few limitations in this study. First, given that this survey is self-reported, some of the findings can be subjective, and for a truly objective assessment of student response, local initiatives need to be undertaken to evaluate service efficiency during student response. Second, as this was a nationalised survey, there will be some heterogeneity in staff perception of student response as guidance and processes regarding student response may have varied between each hospital. Moreover, some hospitals may have received more responses than others; hence, the results may not be generalisable to the overall population of doctors and nurses. As student collaborators disseminated the survey to staff who worked alongside medical students, this may have introduced a sample bias of respondents who have a generally positive perception of the student response. However, this was an intentional study design to target and capture the perception of staff who worked closely with students. Finally, our survey had a high Cronbach alpha value, indicating a large level of overlap between questions. However, due to the rapidly changing research landscape mandated by COVID-19, we opted for a higher level of granularity in our questions and accepted the high Cronbach alpha value.

5 | CONCLUSION

Our data shows that students were an effective part of the workforce during COVID-19 and that health care staff stated that they would want to have students integrated within their team even within a non-pandemic setting. However, without appropriate definition of a student's role within a clinical setting, students may be forced to balance learning and service provision, negatively impacting their own learning and the general efficiency of the team. Providing students with dedicated clinical support roles and ward-based learning roles with a competency-based approach not only holds potential to be a

powerful learning tool but can also strengthen health care systems to face future health care crises.

Students were an effective part of the workforce during COVID-19.

AUTHOR CONTRIBUTIONS

Incision UK Collaborative: Conceptualization; data curation; formal analysis; investigation; methodology; project administration; resources; software; supervision; validation; visualization; writing—original draft; writing—review and editing. **MedEd Collaborative:** Formal analysis; methodology; project administration; supervision; validation; writing—review and editing. **The Royal Society Of Medicine Student Section Collaborative:** Data curation; project administration; supervision; writing—review and editing.

ACKNOWLEDGEMENTS

All collaborators are PubMed Citable.

Steering committee: Vigneshwar Raj Veerappan[1], Soham Bandyopadhyay[2], Sanskrithi Sravanam[3], Michal Kawka[4], Aleksander Dawidziuk[4], Matthew H. V. Byrne[5], Setthasorn Zhi Yang Ooi[6], Baveena Heer[7]

Writing Group: Vigneshwar Raj Veerappan, Soham Bandyopadhyay, Sanskrithi Sravanam, Setthasorn Zhi Yang Ooi, Matthew H. V. Byrne

Data analysis group: Vigneshwar Raj Veerappan, Baveena Heer, Michal Kawka, Aleksander Dawidziuk

Collaborators: Vigneshwar Raj Veerappan[1], Soham Bandyopadhyay[2], Sanskrithi Sravanam[3], Michal Kawka[4], Aleksander Dawidziuk[4], Matthew H. V. Byrne[5], Setthasorn Zhi Yang Ooi[6], Baveena Heer[7], Ana Catinca Ciuculete[8], Anna Chiara Corriero[9], Avani Varde[4], Burleen Kaur Chhatwal[10], Eleanor Kissane[11], Hamzah Hussain[12], Heidi Kressel[1], Jashan Selvakumar[13], Keerthana Rajaji[14], Kesri Gajadhar[15], Masako Shimato[10], Philomena Tiernan[8], Priya Patel[16], Viraj Shah[4]

Institutional affiliations

[1] Hull York Medical School, University of York, York, UK

[2] Oxford University Global Surgery Group, Nuffield Department of Surgical Sciences, University of Oxford, Oxford, UK

[3] Department of Neurosurgery, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK

[4] Imperial College London School of Medicine, London, UK

[5] Nuffield Department of Surgical Sciences, University of Oxford, Oxford, UK

[6] Cardiff University School of Medicine, Cardiff, UK

[7] GKT School of Medical Education, King's College London, London, UK

[8] Queen's University Belfast, Belfast, UK

[9] Faculty of Health, Education, Medicine and Social Sciences, Anglia Ruskin University, Cambridge, UK

[10] UCL Medical School, Faculty of Medical Science, University College London, London, UK

[11] School of Medicine, University of Leeds, Leeds, UK

[12] School of Medicine, University of Nottingham, Nottingham, UK

[13] St George's, University of London, London, UK

[14] University of St Andrews, St Andrews, UK

[15] University of Exeter Medical School, Exeter, UK

[16] Aston Medical School, Faculty of Health and Life Science, Aston University, Birmingham, UK

CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to disclose.

ETHICAL APPROVAL

All aspects of this study were reviewed and approved by the Institutional Review Board at the University of Oxford. Ethics Approval Reference: R74018/RE001. All participants provided informed consent for their data to be collected and used.

REFERENCES

1. The Guardian. Number of NHS doctors off sick 'may be nearly triple the official estimate'. [Internet]. 2020 [cited 28 October 2020]. Available from: https://www.theguardian.com/world/2020/apr/05/number-nhs-doctors-off-sick-may-be-three-times-more-than-thought
2. Bandyopadhyay S, Georgiou I, Bligh E, Coyle C, Pancharatnam R, Saunders K, et al. SPICE-19: a 3-month prospective cohort study of 640 medical students and foundation doctors. Med Sci Educ. 2021;31(5):1621–37. https://doi.org/10.1007/s40670-021-01349-0
3. Bandyopadhyay S, Baticulon R, Kadhum M, Alser M, Ojuka D, Badereddin Y, et al. Infection and mortality of healthcare workers worldwide from COVID-19: a systematic review. BMJ Glob Health. 2020;5(12):e003097. https://doi.org/10.1136/bmjgh-2020-003097
4. Ing E, Xu Q, Salimi A, Torun N. Physician deaths from corona virus (COVID-19) disease. Occup Med. 2020;70(5):370–4. https://doi.org/10.1093/occmed/kqaa088
5. Bazan D, Nowicki M, Rzymski P. Medical students as the volunteer workforce during the COVID-19 pandemic: Polish experience. Int J Disaster Risk Reduct. 2021;55:102109. https://doi.org/10.1016/j.ijdrr.2021.102109
6. Domaradzki J, Walkowiak D. Medical students' voluntary service during the COVID-19 pandemic in Poland. Front Public Health. 2021;9:618608. https://doi.org/10.3389/fpubh.2021.618608
7. Soled D, Goel S, Barry D, Erfani P, Joseph N, Kochis M, et al. Medical student mobilization during a crisis: lessons from a COVID-19 medical student response team. Acad Med. 2020;95(9):1384–7. https://doi.org/10.1097/ACM.0000000000003401
8. Lapolla P, Mingoli A. COVID-19 changes medical education in Italy: will other countries follow? Postgrad Med J. 2020;96(1137):375–6. https://doi.org/10.1136/postgradmedj-2020-137876
9. Siddique H. Final-year medical students graduate early to fight Covid-19, The Guardian. 2020. Available at: https://www.theguardian.com/world/2020/mar/20/final-year-medical-students-graduate-early-fight-coronavirus-covid-19
10. Iacobucci G. Covid-19: medical schools are urged to fast-track final year students. BMJ. 2020;368:m1064. https://doi.org/10.1136/bmj.m1064

11. Kinder F, Harvey A. Covid-19: the medical students responding to the pandemic. BMJ Student. 2020;369:m2160. https://doi.org/10.1136/bmj.m2160
12. Rainbow S, Dorji T. Impact of COVID-19 on medical students in the United Kingdom. Germs. 2020;10(3):240–3. https://doi.org/10.18683/germs.2020.1210
13. [Internet]. Medschools.ac.uk. 2020 [cited 1 October 2020]. Available from: https://www.medschools.ac.uk/media/2620/msc-covid-19-advice-for-uk-medical-schools.pdf
14. Miller D, Pierson L, Doernberg S. The role of medical students during the COVID-19 pandemic. Ann Intern Med. 2020;173(2):145–6. https://doi.org/10.7326/M20-1281
15. Bandyopadhyay S, Georgiou I, Baykeens B, Gillespie C, Crespo M, Bashir M et al. Medical students' mood adversely affected by COVID-19 pandemic: an interim analysis from the SPICE-19 prospective cohort study of 2075 medical students and interim foundation doctors. 2020.
16. Baker D, Bhatia S, Brown S, Cambridge W, Kamarajah S, McLean K, et al. Medical student involvement in the COVID-19 response. The Lancet. 2020;395(10232):1254. https://doi.org/10.1016/S0140-6736(20)30795-9
17. Tekkis N, Rafi D, Brown S, Courtney A, Kawka M, Howell A, et al. The impact of the COVID-19 pandemic on UK medical education. A nationwide student survey. Med Teach. 2021;44(5):574–5. https://doi.org/10.1080/0142159X.2021.1962835
18. Leong J, Lam W, Tan S, Ng C. Changing face of medical education during a pandemic: tragedy or opportunity? Postgrad Med J. 2022;98(1161):492–8. https://doi.org/10.1136/postgradmedj-2021-140330
19. Choi B, Jegatheeswaran L, Minocha A, Alhilani M, Nakhoul M, Mutengesa E. The impact of the COVID-19 pandemic on final year medical students in the United Kingdom: a national survey. BMC Med Educ. 2020;20(1):206. https://doi.org/10.1186/s12909-020-02117-1
20. [Internet]. 2022 [cited 12 June 2022]. Available from: https://www.gmc-uk.org/-/media/documents/outcomes-for-graduates-a4-6_pdf-78952372.pdf
21. tell.colvee.org. Lesson 5—theories of learning: what is competency-based learning? n.d. [online]. Available at: https://tell.colvee.org/mod/book/view.php?id=647&chapterid=1169
22. Brown M, Dueñas A. A medical science educator's guide to selecting a research paradigm: building a basis for better research. Med Sci Educ. 2019;30(1):545–53. https://doi.org/10.1007/s40670-019-00898-9
23. [Internet]. Incisionuk.com. 2022 [cited 12 June 2022]. Available from: https://www.incisionuk.com/
24. Artino A, La Rochelle J, Dezee K, Gehlbach H. Developing questionnaires for educational research: AMEE Guide No. 87. Med Teach. 2014;36(6):463–74. https://doi.org/10.3109/0142159X.2014.889814
25. Global Health Education in Medical Schools (GHEMS): a national, collaborative study of medical curricula. BMC Med Educ 2020;20(1), https://doi.org/10.1186/s12909-020-02315-x, 389.
26. R Core Team. R: A Language and Environment for Statistical Computing Vienna, Austria: R Foundation for Statistical Computing; 2021 https://www.R-project.org/
27. Clarke V, Braun V, Hayfeld N. Thematic analysis. In: Qualitative Psychology: A Practical Guide to Research Methods 1; 2015. p. 222–48.
28. Patel J, Robbins T, Randeva H, de Boer R, Sankar S, Brake S, et al. Rising to the challenge: qualitative assessment of medical student perceptions responding to the COVID-19 pandemic. Clin Med. 2020;20(6):e244–7. https://doi.org/10.7861/clinmed.2020-0219
29. Byrne M, Ashcroft J, Wan J, Alexander L, Harvey A, Schindler N et al. Examining medical student volunteering during the COVID-19 pandemic as a prosocial behavior during an emergency. 2021.
30. Rasmussen S, Sperling P, Poulsen M, Emmersen J, Andersen S. Medical students for health-care staff shortages during the COVID-19 pandemic. The Lancet. 2020;395(10234):e79–80. https://doi.org/10.1016/S0140-6736(20)30923-5
31. O'Byrne L, Gavin B, McNicholas F. Medical students and COVID-19: the need for pandemic preparedness. 2022.
32. Ashcroft J, Byrne M, Brennan P, Davies R. Preparing medical students for a pandemic: a systematic review of student disaster training programmes. 2022.
33. Alderwick H. Rhetoric about NHS reform is misplaced. BMJ. 2023;380:54. https://doi.org/10.1136/bmj.p54
34. van Ginneken E, Reed S, Siciliani L, Eriksen A, Schlepper L, Tille F, Zapata T. Addressing backlogs and managing waiting lists during and beyond the COVID-19 pandemic. 2022.
35. Byrne MHV, Alexander L, Wan JCM, Brown MEL, Arora A, Harvey A, et al. Clinical support during covid-19: an opportunity for service and learning? A cross-sectional survey of UK medical students. Med Teach. 2023;45(8):859–70. https://doi.org/10.1080/0142159X.2023.2184235
36. Byrne MHV, Ashcroft J, Alexander L, Wan JCM, Harvey A. Systematic review of medical student willingness to volunteer and preparedness for pandemics and disasters. Emerg Med J. 2022;39(10):e6. https://doi.org/10.1136/emermed-2020-211052
37. Youssef S, Zaidi S, Shrestha S, Varghese C, Rajagopalan S. First impressions of the foundation interim year 1 postings: positives, pitfalls, and perils. Med Educ Online. 2020;25(1):1785116. https://doi.org/10.1080/10872981.2020.1785116
38. Medical student involvement in responding to the current Omicron wave|Medical Schools Council [Internet]. Medschoolsacuk 2022 [cited 12 June 2022]. Available from: https://www.medschools.ac.uk/news/medical-student-involvement-in-responding-to-the-current-omicron-wave
39. Goldacre M, Davidson J, Maisonneuve J, Lambert T. Geographical movement of doctors from education to training and eventual career post: UK cohort studies. J R Soc Med. 2013;106(3):96–104. https://doi.org/10.1177/0141076812472617
40. McNaughton E, Riches J, Harrison G, Mires G, MacEwen C. What factors influenced the choice of medical specialty for doctors surveyed in the final year at medical school and again having entered their specialty training destination? Postgrad Med J. 2018;94(1111):312–3. https://doi.org/10.1136/postgradmedj-2017-135370

How to cite this article: InciSioN UK CollaborativeThe Royal Society of Medicine Students Section CollaborativeMedEd Collaborative. COVIDAssist: Exploring the perspectives on student assistance during the COVID-19 pandemic. Clin Teach. 2024;21(1):e13650. https://doi.org/10.1111/tct.13650