

COVID-19 Cross-skilling training to support medical redeployment in the COVID-19 pandemic

Authors: David Hettle,^A Katherine Sutherland,^B Edward Miles,^C Lucy Allanby,^A Zoe Bakewell,^A Danielle Davies,^A Yasin Dhonye,^A Victoria Handford,^A Rebecca Upton,^A Victoria Vilenchik^A and Rebecca Wood^A

ABSTRACT

During the response to the COVID-19 pandemic, doctors will be redeployed into roles with which they are unfamiliar. Adequate training must be provided to reacquaint doctors with medical ward practice, supporting psychological wellbeing and patient safety. Here we describe a cross-skilling programme in North Bristol NHS Trust designed to address colleague anxiety and support wellbeing during redeployment.

KEYWORDS: Medical education, redeployment, training, COVID-19, induction

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Problem

Planning for the sustainable delivery of patient care is a major challenge to all NHS trusts in the face of a potential COVID-19 surge.^{1,2} There is a need to redeploy doctors in training into roles with which they may be unfamiliar.^{1,3} Guidance from a host of organisations emphasises that adequate training and resources must be available to redeployed staff, appropriate to local requirements.^{4,5}

North Bristol NHS Trust is a large secondary care acute trust and tertiary major trauma centre, employing 600 junior doctors and approximately 75 SAS grade doctors (staff grade, associate specialist and specialty doctors). Following a major service reorganisation in response to COVID-19, doctors were redeployed to support medical inpatient services at the main Southmead Hospital site. Throughout this process, we recognised the need to train and support redeployed staff to work in unfamiliar clinical environments, maintaining their psychological safety as well as their patients' physical wellbeing. In particular, trainees previously working in non-medical specialties required re-exposure to the day-to-day roles of a doctor practicing in medicine. This would further enable trust management to be assured of a cross-skilled workforce ready for mobilisation as a contingency for the pandemic surge.

Authors: ^AClinical teaching fellow, Southmead Hospital, Bristol, UK; ^Banaesthetic registrar, Southmead Hospital, Bristol, UK and RCP chief registrar; ^Canaesthetic registrar and post-graduate education fellow, Southmead Hospital, Bristol, UK

Potential solution

We developed a cross-skilling learning programme in collaboration with medical consultants and trust management (Table 1), which included online and face-to-face elements. As far as possible, face-to-face components were undertaken in line with local social distancing measures, while still addressing critical training needed to prepare for redeployment. Our primary aim was to address colleague preparedness and support their wellbeing during redeployment. Doctors' involvement was strongly recommended for all non-medical trainees and any senior colleague who felt they would benefit from a 'refresher' on medical ward work.

Table 1. COVID-19 medical training programme

COVID-19 summary	Presentation Video eLearning package
Personal protective equipment (PPE)	PHE donning and doffing video links Trust PPE update
Medical scenarios	Acute coronary syndrome with ECG interpretation Sepsis Managing palliative and end-of-life care
Medical investigations	Arterial blood gases (ABGs) Chest X-rays ECGs
COVID-19 local guidance	Assessment and treatment escalation bundles Palliative care guidance
Resuscitation simulations	Deteriorating patient Advanced life support in COVID-19 (in line with Resus Council [UK])
Additional resources document	Relevant eLearning for Healthcare (eLfh) packages Local resources
COVID-19 wellbeing and support guidance	

ECGs = electrocardiograms; PHE = Public Health England.

All participants completed a two-hour face-to-face session, supplemented by an online eLearning module on the care of 'the non-intensive care unit respiratory patient'. The face-to-face element was delivered systematically by clinical teaching fellows, whose usual responsibility lies in preparing undergraduate medical trainees for their roles as junior doctors on the ward.

Following training, participants were distributed a summary of the face-to-face learning materials and a compendium of further online-based learning resources, useful in preparing for redeployment. All participants were asked to complete a post-course evaluation considering the value of specific elements addressed in the course, such as the use of personal protective equipment (PPE) and the update on resuscitation, as well as its utility in supporting wellbeing and preparedness for redeployment.

Results so far

Of 288 doctors to receive training, 158 (55%) completed the post-course evaluation.

Our participants have comprised 75 (48%) non-medical consultants, 10 (6%) SAS doctors, 43 (27%) specialty registrars, 24 (15%) clinical fellow or core trainees and 6 (4%) other grades. Over half of those attending had not worked on medical wards for over 10 years.

On a Likert-type scale (0–10), attendees were asked how prepared they felt for treating patients on medical wards. Prior to the course, mean and median responses were 3, improving to 5.7 (mean) and 6 (median) post-course, further illustrated in Fig 1.

Over half (53%) of participants felt the course was pitched at the right level (median 5, IQR 0.5) to inform their necessary learning, with 97% (n=154) feeling the additional resources and links to further learning adequately enabled their preparedness. Free-text responses were used to identify areas in which staff felt they would have benefitted from additional face-to-face training: 75% (n=119) had no specific requests, 14% (n=23) requested additional training on specific conditions, 6% (n=9) on practical skills and 4% (n=7) on operational structures related to redeployment.

Further questioning focused on specific areas of training. Following the course, 150 participants (95%) felt they understood the correct use of PPE during the pandemic, and 134 (85%) were aware of the wellbeing support available to them.

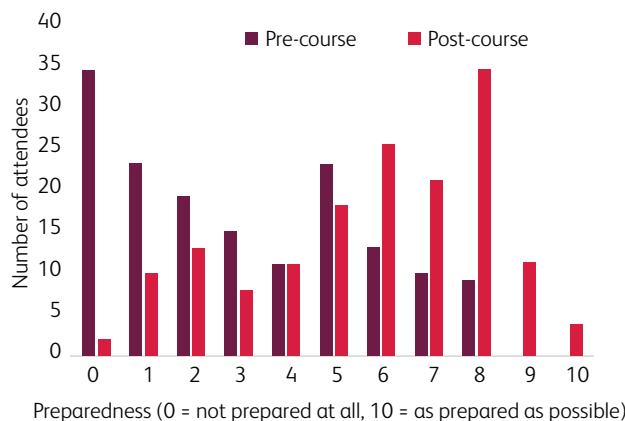


Fig 1. Staff confidence in preparedness to treat patients on medical wards.

+ 69

Positive responses

'Highly valuable refresher, pitched at just the right level, a well-designed interactive course in a supportive learning environment'

'A really positive reflection on the Trust that we can assimilate such a course at short notice'

'Didn't laugh at my lack of medical knowledge'

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Negative responses

'Low fidelity SIM'

'Inadequate social distancing'

Fig 2. Illustration of free-text comments from attendees.

Generally the course was reflected on as positive (92%), with Fig 2 illustrating free-text comments from attendees. Of the few negative reflections (n=6), two attendees commented on a level too low for their learning needs, and a further two attendees reflected that there was inadequate social distancing despite best efforts to maintain this.

Further evaluation

This course demonstrates the hunger for appropriate training for those who are to be imminently redeployed into the medical workforce. In our organisation, nearly 300 doctors spanning most grades and non-physician specialties attended our cross-skilling programme in preparation for redeployment. Attendance was not mandated, only strongly encouraged.

Targeting doctors with less recent experience in the care of medical inpatients, our aim was to equip and ready staff for the benefit of individuals and the organisation. Staff confidence in managing medical inpatients improved dramatically, as shown in Fig 1. On an individual level, this represents Level 1 (reaction) and self-reported evidence of Level 2 (learning) on the Kirkpatrick model of evaluating training methods,⁶ illustrated in Fig 3. Further

	Level 1 Reaction	Have participants enjoyed and found training relevant?
	Level 2 Learning	Have participants' knowledge and skills improved?
	Level 3 Behaviour	Has participants' learning transferred to their workplace-based behaviours?
	Level 4 Results	Has training impacted the organisation's capabilities?

Fig 3. Kirkpatrick model of evaluating training methods.⁶

evaluation assessing higher levels of evidence will become possible following redeployment. Nevertheless, the uptake of this course by nearly almost 300 doctors has developed high-level organisational assurance of appropriate training to its doctors, aligning to the requirements of individuals, our Trust and NHS England.⁵

Medical consultants, trust management, the RCP chief registrar and education fellows collaborated to develop the course content, ensuring all viewpoints on the requirements of training were considered. This enabled the inclusion of COVID-specific content alongside addressing trainee preparedness and wellbeing. As departmental inductions in our Trust vary in time and content, we replicated their use of face-to-face and online components but standardised the material delivered to provide a consistent basis for all redeployed staff. The delivery method – a 2-hour face-to-face session supplemented by online material – facilitated training best delivered in an interactive setting while minimising unnecessary social contact. The course content was widely recognised to be pitched at the right level. A minority of free-text answers reflected a desire for more focus on the management of specific medical conditions, though several of these respondents recognised the difficulties given time constraints. Further, a small number of participants remarked that despite efforts to maintain adequate social distancing, this was not successful. The challenge in balancing adequate distancing measures with delivering a reasonable-fidelity simulation, which accurately reflected real-life practice, led us to limit group numbers (to a maximum of four per simulation session), promote the allocation of roles which encouraged half of each group to be distant from the patient's bed, and debrief in socially distanced settings.

Delivering COVID-specific training, such as up-to-date PPE advice, and directing staff towards local and accessible wellbeing services was an important secondary aim of our programme. Given the challenges in measuring doctors' wellbeing⁷ we sought to align with the GMC's *Caring for doctors, caring for patients*,⁸ ensuring that attendees received clear guidance on wellbeing services, which have been locally expanded during the pandemic. The vast majority of responses reflect that our attendees were made aware of support; however, awareness does not always mean that doctors access wellbeing services.⁹ Therefore new team structures have incorporated a tool to address wellbeing at every team handover. Through future evaluation post-redeployment, we will be able to further assess the impacts of our training and the improved wellbeing services.

There are limitations to our programme, and adaptations should be considered when adopting our methods for use elsewhere. Firstly, we conducted the programme in a single educational setting, and some of the value of our course was gained by ensuring our participants' readiness for practice in our setting: for example, we used some of our time to ensure correct computer system access and training. The value of ensuring operational (alongside clinical) readiness should be addressed by those using this model elsewhere, including the involvement of local administrative and system-specific training support. Secondly, we recognise that confidence does not always correlate well to competence,^{10,11} though our model aimed to build participant confidence prior to redeployment such that competence could develop within redeployed team structures. It is necessary for such structures to build in safeguards and escalation policies to ensure patient safety remains paramount while operational competence develops.

Potential future

Following this success, we are continuing to provide training to other groups redeployed into the medical workforce, including retired doctors returning to practice. We are currently adapting the programme for use during interim Foundation Year 1 inductions. Our adaptations for this training are modelled on requirements outlined by the UK Foundation Programme Office. These include introducing documentation practice to simulation, task prioritisation scenarios, and prescribing practice in each relevant station.

Further evaluation of this training will be possible after several weeks' redeployment within new teams. However, learning within new team structures will not be limited to learning due to our training, and we are considering how to capture the frequent learning moments that will inevitably occur between members of traditionally different teams who now find themselves working alongside each other. By recording learning moments, the use of wellbeing services and a further follow-up survey we can continue to develop our service to promote learning and wellbeing.

Conclusion

Our programme provides an example of how we have addressed mandatory guidance from NHS England to provide medical redeployment training for doctors in the COVID-19 pandemic²⁻⁵ in a large NHS trust. We have evaluated the programme's impact on individuals' learning needs and its ability to equip our staff practically, educationally and psychologically to work outside the scope of their normal roles. Our programme's success, evidenced through responses from over 150 attendees, focused on principles of medical ward practice while outlining important COVID-specific learning and encouraging a spirit of adult learning through the distribution of further resources. Ongoing work will focus on how this adult learning mentality is maintained and stimulated further during the redeployment period. Our approach offers a novel framework which we will use and adapt for other groups and which could also be used in other NHS settings. ■

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**Address for correspondence: Dr David Hettle, North Bristol Academy, North Bristol NHS Trust, Southmead Hospital, Bristol BS10 5NB, UK.
Email: d.hettle@nhs.net**