

Adult critical care novel coronavirus (COVID-19) staffing framework

This guidance is correct at the time of publishing. However, as it is subject to updates, please use the hyperlinks to confirm the information you are disseminating to the public is accurate.

Contents

1. Background and definitions	2
2. Principles	3
3. Staffing structures and ratios	5
Nurse staffing for critical care	5
Medical staffing for critical care	6
Allied health professionals	7
Cross-cutting teams	8
4. Special circumstances.....	15
Appendix 1: Self-assessment competency reporting framework example	16
Appendix 2: Bedside support worker	20
Appendix 3: Other healthcare workers.....	21

1. Background and definitions

“...and there are no more surgeons, urologists, orthopaedists, we are only doctors who suddenly become part of a single team to face this tsunami that has overwhelmed us...” Dr Daniele Macchine, Bergamo, Italy, 9 March 2020

To match the increasing demands that the coronavirus pandemic will place on critical care, new and flexible models of care are required. This document:

- states principles for deploying and redeploying staff to match the needs of a critical care department, independent of where this care is delivered
- sets out indicative staffing ratios and competencies
- suggests professional groups that could potentially form part of this new workforce during times of surge and super-surge.

Surge: increased activity supported by reducing other routine activity (eg elective/non-urgent surgery and outpatient appointments).

- This will operationalise operating theatres, recovery wards and similar areas to provide critical care for an increased number of patients.

Super-surge: increased activity that requires new critical care units to be created.

- Additional resources required include:
 - equipment: eg ventilators, monitors and syringe driver
 - consumables: eg oxygen and central venous line set
 - extra beds: these may be created in partnership with independent sector hospitals or by setting up of new field hospitals.

Note that all staffing plans must take consider the other factors that impact on safe, high quality patient care, including the resources listed above, and other issues such as geographical layout of critical care areas and oxygen demands within individual institutions.

This is a working document created during an evolving situation. It will be updated based on emerging experience.

2. Principles

Safe for staff and patients

- **Personal protective equipment:** All staff who could potentially need to wear PPE should be trained in how to don and doff it before taking on a clinical role.
- **Competencies:** Contracted staff should work within their usual frame of competence and experience but may have to work outside their usual teams and hierarchies. <https://www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus>
- **Flexibility:** The types of staff who might fit into different roles is indicated below. Ideally all redeployed staff should self-assess their suitability to perform the required task, under supervision, to confirm their suitability. An example framework is given in Appendix 1.
- **Returning members of staff:** They should also self-assess according to their competence, which may depend on their length of time away from practice. They will need to be placed initially based on this assessment, recognising that this may quickly improve after a return to practice.
- **Resilience:** Staff should ideally not be removed from roles that would leave urgent or emergency non-COVID pathways understaffed or with inexperienced staff (eg ED, emergency surgery, labour ward, etc).
- **Staff ratios:** Aim for 1:1 or 1:2 bedside staff to patient ratios even at time of super-surge by augmenting the usual workforce with Category B nurses/multiprofessionals (bedside support workers) sourced from the student workforce and other professions. Nursing staff are supported in this: <https://www.england.nhs.uk/coronavirus/secondary-care/management-confirmed-coronavirus-covid-19/developing-immediate-critical-care-nursing-capacity/>

The staffing ratios in this framework are a guide and will need to be tailored depending on local circumstances and geographical layouts.

- **Support:** Both new and existing staff are at high personal physical and mental health risk. Local teams should consider how they can support their staff working in challenging circumstances and unfamiliar environments.
- **Induction and training:** These should include PPE training (face-to-face/simulation), basic life support (online) and induction/orientation to their working environment.
- **Rota management:** This must allow adequate training, support and rest.

Efficient

- **Designated teams:** These should deliver routine tasks for the whole ward or hospital – see cross-cutting teams, page 7.
- **Define roles:** All staff should have their role clearly defined and identified (including while wearing PPE), to facilitate communication and appropriate distribution of tasks.

Patient-centred

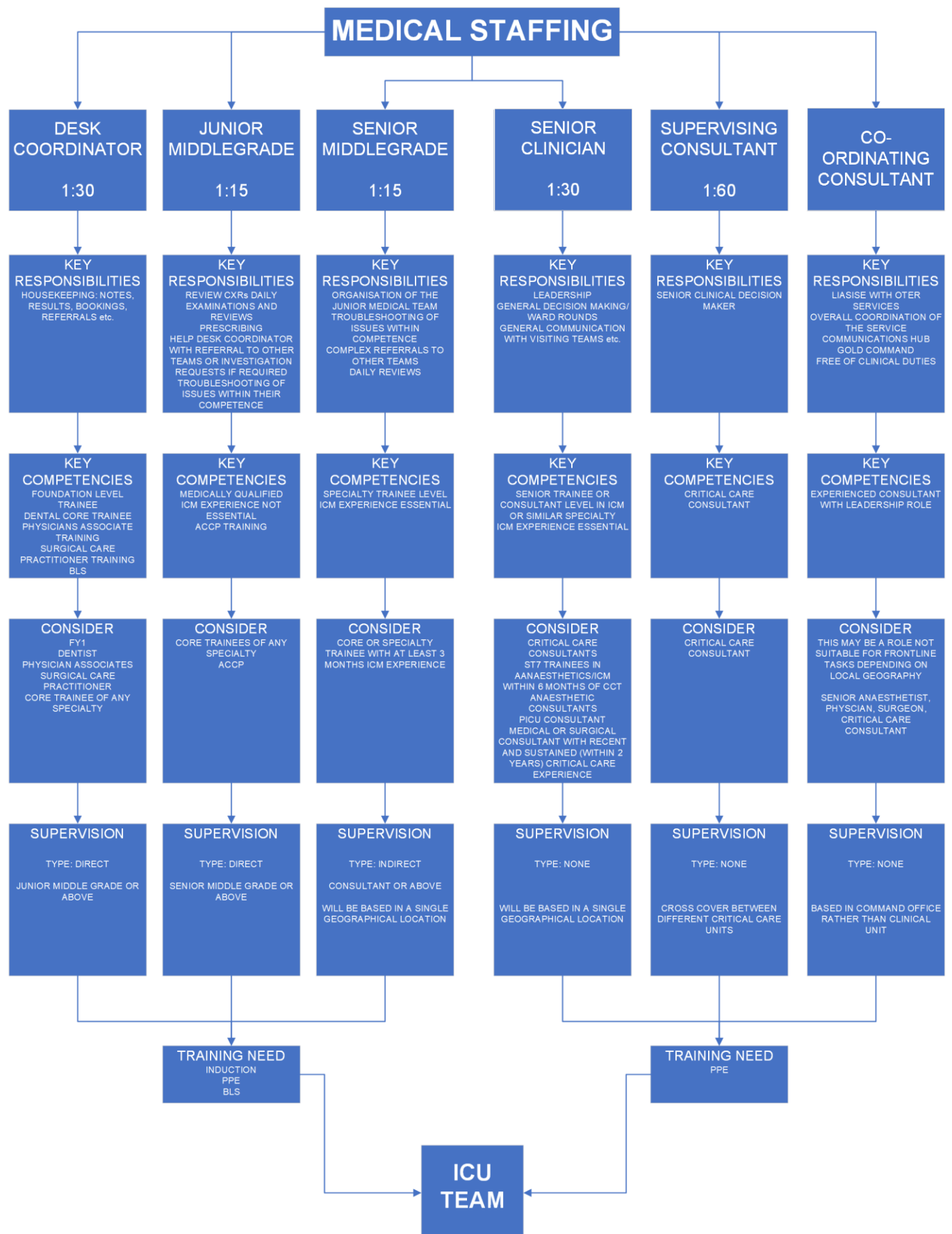
- **Communication:** Include teams that can support communication with patients and families and include escalation/de-escalation plans – see cross-cutting teams, page 7.
- **Responsibility:** Every staff member has a responsibility to contribute to patient care, as part of the wider critical care team, according to their competency.

3. Staffing structures and ratios

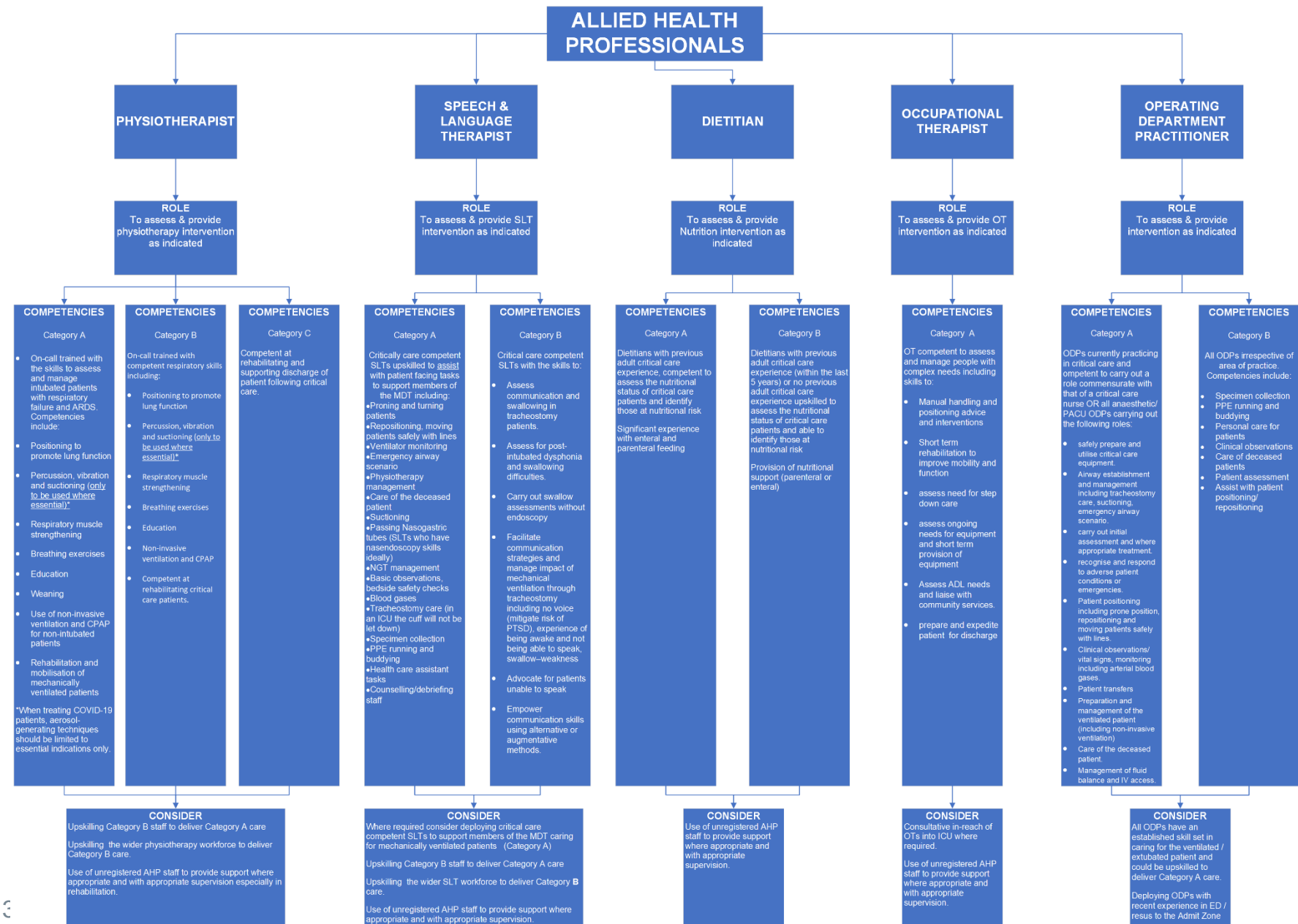
Nurse staffing for critical care



Medical staffing for critical care



Allied health professionals



Cross-cutting teams

This section advises on proposed team structures and numbers. The number of teams within a unit (ward or hospital) will depend on the size of the unit and should be reviewed daily, alongside projected patient figures based on local modelling data.

CARDIAC ARREST TEAM (at least one per hospital)	
STAFF	Usual staffing No other responsibilities
ROLE	Cardiac arrest calls ONLY (2222)

TRANSFER TEAM (at least one per hospital)	
STAFF	<ul style="list-style-type: none">• Transfer competent anaesthetic trainee• Porter• Anaesthetic assistant (ODP, theatre nurse)
ROLE	<ul style="list-style-type: none">• Transfers to and from radiology, ED, between wards etc

MOBILE EMERGENCY RAPID INTUBATION TEAM (MERIT) (at least one per hospital)	
STAFF	<ul style="list-style-type: none"> • Senior (consultant) anaesthetist • Middle-grade anaesthetist • ODP/anaesthetic nurse • Runner – one of: healthcare assistant, medical student, nursing student, dental nurse, FY1 (new starter)
ROLE	<ul style="list-style-type: none"> • Induction of anaesthesia • Endotracheal intubation • Insertion of arterial, venous lines and NGT at time of intubation

RENAL SUPPORT TEAM (at least one per hospital)	
STAFF	<ul style="list-style-type: none"> • Renal nurses • Renal technicians
ROLE	<ul style="list-style-type: none"> • Setting up RRT • Troubleshooting RRT issues • Central and arterial blood sampling

LINES TEAM (at least one per unit of 30+ critical care patients)	
STAFF	Line insertion: any of the following: Surgeons Interventional radiologist Interventional cardiologist Renal physician/trainees Vascular access nurse* <i>* Vascular access nurses can help with some of these tasks, dependant on competency</i> Assistant: Medical student HCA assistance Respiratory and cardiac physiologists
ROLE	<ul style="list-style-type: none"> • Replacement of lines in critical care patients (peripheral, central, arterial) • Blood cultures • Setting up equipment • Assistance with patient preparation

CRITICAL CARE OUTREACH TEAM (at least one per hospital)	
STAFF	<ul style="list-style-type: none"> • One senior nurse • One senior doctor • One middle-grade or junior doctor
ROLE	<ul style="list-style-type: none"> • Seeing critically ill referrals: inpatient and ED • Escalation of care decisions in consultation with team

PALLIATIVE CARE TEAM (at least one per hospital)	
STAFF	Team leader: <ul style="list-style-type: none"> • Palliative care doctor Team members: <ul style="list-style-type: none"> • Palliative care nurses • Cancer clinical nurse specialist • Chaplaincy
ROLE	<ul style="list-style-type: none"> • Breaking bad news • Advance care plan • Management of end of life patients • Advice or prescription of end of life medication • Relative support

COMFORT/HYGIENE TEAM (at least one per unit of 30+ critical care patients)	
STAFF	Supervision by a critical care nurse for intubated patients Bedside support worker plus two of: <ul style="list-style-type: none"> • HCAs • Medical students • Nursing students • Dentist/hygienists/therapists/nurse
ROLE	Supports the bedside support worker with turning and washing, etc

PRONING TEAM (at least one per hospital)	
STAFF	Team leader: <ul style="list-style-type: none"> • Senior anaesthetist Team members: <ul style="list-style-type: none"> • Four people who have undertaken relevant training • Surgeons who regularly position patients • Other staff with manual handling training
ROLE	<ul style="list-style-type: none"> • Ensure safety of the airway and management of infusions, lines etc • Co-ordination of team • Manual handling of patient under the direction of the lead • Sourcing of pillows, slide sheets etc

RUNNERS TEAM (at least one per unit of 30+ critical care patients)	
STAFF	<ul style="list-style-type: none"> • Porters • HCAs • Medical students • Nursing students • Dental hygienists/therapists/nurse
ROLE	<ul style="list-style-type: none"> • Transport of bloods • Fetching equipment • Other tasks as required

PHARMACY CARE TEAM (at least one per unit of 30+ patients)

STAFF	<ul style="list-style-type: none"> • Pharmacist • Pharmacy technician • Pharmacy assistants
ROLE	<p>Pharmacists</p> <ul style="list-style-type: none"> • Maintain patient safety • Prescribing medicines <p>Pharmacy technicians</p> <ul style="list-style-type: none"> • Assistance with drug preparation • Double checking drugs with other staff <p>Pharmacy assistants</p> <ul style="list-style-type: none"> • Monitoring, ordering and top-up of stock levels <p>(Staff should be assigned to a role that best uses their skills)</p>
	<ul style="list-style-type: none"> • Consider the role that your pharmacy's central intravenous additive service or commercial companies could play in preparing medications in advance

EQUIPMENT AND PREPARATION TEAM

(at least one per hospital)

STAFF	<p>Team leader:</p> <ul style="list-style-type: none"> • Operating department practitioner <p>Team members</p> <ul style="list-style-type: none"> • HCAs • Medical students • Nursing students • Dental hygienists/therapists/nurse • Clinical engineers • Medical physicist • Respiratory physiologists • Physiologists
	<ul style="list-style-type: none"> • Preparation of grab bags – non-drug items (clean roles) • Preparation of equipment packs (clean roles): eg intubation, lines, PPE • Stocking up the bed spaces (dirty role)

4. Special circumstances

Pregnancy

- The guideline [Coronavirus \(COVID-19\) infection in pregnancy](#) provides information for healthcare professionals. Pages 29 to 31 provide additional advice for professionals looking after parturients with severe coronavirus infection.

Appendix 1: Self-assessment competency reporting framework example

Below is an example self-assessment that you could use to assess the competency of your staff and their suitability for redeployment.

Personal details and competency information

Please spend a few minutes reviewing the list to decide which of the crucial tasks you might be able to assist with.

- You will not be left alone. There will always be someone to help you.
- For any task you **could** manage, try to assess how much supervision you would need. Could you manage to do the skill or task without supervision, or would you need someone nearby to help if you struggled?
- There may be some tasks that would be a real struggle to start with but with some supervision and support you will be able to take on. For these tasks indicate 'direct' supervision here.

YOUR DETAILS	Answer	Comments
Name		
Current role		
Location		

Registration number: eg GMC or NMC		
Date of birth		
Date last worked clinically		
Date of last DBS check		

SKILLS YOU HAVE	Competence in the following	Yes / No / with additional training	Supervision required: Direct (D) Indirect (I) None (N)
Patient care	PPE donning and doffing		
	PPE assess and teach donning and doffing		
	Washing and personal hygiene		
	Lifting and handling patients		
	IV drug administration training		
	National Early Warning Scoring		
Resuscitation	Basic/intermediate life support training		
	Advanced life support training		
	Completing respect forms/DNAR		
Airway management	Basic mask ventilation skills		
	Advanced airway management skills		
	COVID-19 Intubation trained		
Respiration	Ventilator management		

	Proning trained		
Circulation	Insertion of peripheral lines		
	Insertion of central lines		
	Cardiac output monitoring interpretation		
	Arrhythmia management		
Renal	Renal replacement therapy		
Admission and daily assessment Technical skills	Medical patients		
	ED patients		
	Critical care patients		
	Ultrasound of chest		
	Echo – screening (FICE)		
	Echo full study		
	Central line insertion		
	Arterial line insertion		
	Tracheostomy – percutaneous		
	Tracheostomy – surgical		
	Blood gas sampling		
	Arterial line insertion		
	Easi-IO insertion		
Psychological care	Debriefing/TRiM training		
	Family interaction skills – support after breaking bad news		

Support tasks	Prepare equipment according to instruction		
----------------------	--	--	--

Previously worked in	Yes/No	Comments
ICU		
Anaesthetics		
ED		
Operating theatres		

Appendix 2: Bedside support worker

Examples of potential bedside support workers and basic requirements

Basic requirements for bedside support workers are some understanding of healthcare and a commitment to work in a healthcare environment, compassion/kindness, personal resilience and a willingness to learn. These might include but are not limited to:

- medical students (Years 1 to 3 who wish to volunteer, final year students (5 or 6) may have accelerated entry to the provisional register; penultimate year students (4 or 5) may be kept within their usual clinical placements
- dental team members unlikely to have another major role during COVID-19 surge
- nursing students
- allied health professionals unlikely to have another major role during COVID-19 surge: eg podiatrists
- healthcare support workers.

Appendix 3: Other healthcare workers

Below is a list of other healthcare workers who can make a valuable contribution to the critical care workforce. Where required, we are seeking permissions nationally for these professional groups to work outside their normal scope of practice:

- clinical engineers from medical physics departments could help with the expansion of critical care departments into new environments
- clinical engineers and medical physicists could also help with equipment and preparation teams
- critical care scientists in cardiac theatres, whose work may be scaled down significantly, could be released for additional duties in critical care
- neurophysiologists could be upskilled to work in a critical care setting; their skills may be used to aid prognostication testing
- perfusionists with theatre and critical care experience could support critical care teams and assist in supporting roles
- respiratory physiologists, with some training, can perform arterial blood gases
- psychologists can contribute to sustaining the wellbeing of staff who are working as part of the critical care team.

