Bridging guidance for Critical Care during restoration of NHS services

Executive Summary

- This guidance is intended to be interpreted flexibly to meet individual hospital functions whilst encouraging adherence to the principles outlined.
- During the period of COVID-19 new models of Critical Care (CC) delivery will be required in the short/medium term, based on safety, workforce sustainability and high quality patient care.
- GPICS and PICS standards remain the goal and any deviation must be time limited with a clear strategy for returning to these. There must be an appropriate governance structure during the period of deviation and a plan to ensure the safety of these temporary models of care.
- Continuing to deviate from these standards, when no longer required, is likely to have a negative impact on immediate and longer term retention of staff and this must be taken into account during the recovery phase when considering staffing ratios outside of GPICS and PICS standards.
- Deviation from pre-pandemic standards may have had as-yet unquantified effects on patient safety, recovery from critical illness, and longer term outcomes, and must not be assumed to be a model for extended implementation.
- Critical Care staffing is a rate limiting factor, in combination with the availability of drugs, equipment and estate, in any plan to resume non-COVID activity as well as continuing the response to COVID. Staff wellbeing, health and safety must be prioritised to ensure that CC trained staff, and others redeployed to critical care remain in the CC workforce and are fit to respond to any future surge activity.
- Delivery of increased non-COVID activity whilst COVID patients remain in significant numbers within a hospital is likely to be extremely challenging for the existing CC workforce without the ongoing support of some of the deployed additional workforce used to support the pandemic response. This must be factored into any planning of resumed activity.
- It is challenging to deliver critical care in more than one location to accommodate increased non-COVID activity alongside existing COVID work. Some hospitals will need to operate below previous baseline CC capacity to maintain safety and service resilience. This will have an impact on the speed and extent of restoration of non-COVID services, particularly the ability of CC services to support Level 2 surgical activity. This may also require an increase in non-clinical patient transfers and, where critical care networks exist, distribution of service pressures across the Network.
- Many Paediatric Intensive Care Units (PICU) have committed beds and staff to caring for adult patients. There is an absolute priority to return all PICU beds to children’s services. Relying on PICUs to support additional adult surge capacity during winter months would have seriously adverse consequences for children’s critical care.
- CC survival and recovery should be seen as a pathway of care to maximise health benefits to patients and build in future service resilience. A funded review of CC services across all 4 nations is needed to address historical inequities and future demands created as a result of the pandemic, as any further unexpected demands on hospital and CC services are likely to be caused by infectious diseases. The impact of widespread redeployment and reduction in compliance with GPICS should also be monitored to support the rapid return to previous GPICS recommendations. Moreover the CC infrastructure in many hospitals lacks significant isolation facilities and there is a paucity of long term invasive ventilation and weaning services.
Background

The current pandemic required a huge effort by all healthcare workers and the rapid expansion of critical care capacity has only been possible due to a dramatic change in the way we work and the assistance of non-critical care medical and nursing staff, as well as rapid deployment and wide cross-skilling of non-specialist AHP staff to both traditional and non-traditional roles within critical care. The rapid NICE NG159 guideline1 aimed to offer a framework for service organisation for critical care delivery during the pandemic, however the scope was limited to admission and treatment decisions. The primary focus has quite rightly been on patient safety as our normal staff: patient ratios have been diluted but this is not sustainable in the medium to long term without negatively impacting on patient outcomes and service resilience. Trained Critical Care staff are a rate limiting factor in any plan to resume non-COVID activity and their wellbeing, health and safety must be prioritised to ensure that they remain in the CC workforce and are fit to respond to any future surge activity.

Unexpectedly, the number of non-COVID attendances to primary and secondary care fell dramatically during the pandemic. The impact of this on health has yet to be quantified but many patients are still awaiting their planned surgery and emergency non-COVID admissions to hospital are increasing. As we move into the next phase of the pandemic it is necessary to restore many of the services suspended in order to deal with COVID patients. We support this change but there will need to be a phased response whilst, at the same time, retaining the flexibility to surge capacity again if required.

NHSE published guidance on staffing critical care, to manage the exceptional increased demand during the pandemic, outlining a phased approach to staffing for the nursing workforce.2 This was an emergency response and de-escalation should be managed in a more ordered way. Retaining this approach as a framework would enable individual hospitals, having experienced different demands on their services, to implement national guidance in a flexible way to meet their specific needs. Any deviation from previously recognised GPICS and PICS standards (outside of a pandemic response), must however be accompanied by an appropriate governance structure during the period of variance with clear evidence that every effort has been made by organisations to return to and maintain those standards, including an uplift in existing establishments and recruitment to posts. There must also be a plan to ensure the safety of these temporary models of care.

Principles

There is an opportunity to review the delivery of critical care in light of the lessons learned from the pandemic, but short term changes precipitated by the pandemic response must not be assumed to be appropriate for an extended period without examination and analysis. We are now working towards new models of delivery that require flexibility, enabling us to provide care to COVID and increasing numbers of non-COVID patients. Demand for critical care prior to the pandemic increased 4% year on year and resumption of the estimated 2 million operations delayed by the first wave pandemic response will create an additional, currently uncalculated medium term critical care pressure.3 Commissioning additional staffed capacity in a planned manner will reduce in future the chances of needing surge capacity, and the speed at which a return to normal can occur if surge capacity is needed.

We will need to deliver care differently during the transition. Under normal circumstances, major change would occur over a period of time, following significant consultation and with an overarching governance structure. During the initial phase of the pandemic we had to adapt quickly to the huge increase in demand with many of these new ways of working being rapidly adopted. It is important to retain some of this experience, alongside more traditional models during the transition, until we
reach a situation where we have the evidence of how we should deliver care in the longer term as is defined by GPICS.

It is important to ensure that we still continue to maintain established standards of care delivery and patient outcomes, while taking the opportunity to incorporate the positive elements and learning of recent changes into how that care is delivered. During this next phase our workforce plans must consider staff health and wellbeing, sustainability of delivery and patient safety. We need to be willing to adapt and change as we gain experience. The important underlying principles to our approach are:

1. High quality care
2. Patient safety
3. Flexibility
4. Adaptability
5. Resilience both of workforce and the service
6. Forward thinking
7. Integration with wider hospital systems

The next phase of transition encompasses the ongoing management of COVID and non-COVID patients and ensuring that we are adequately resourced to not only support pre-pandemic levels of activity but be prepared for further COVID surges. Working with the likelihood of ongoing COVID for several months will influence how we practice ICM, both in terms of cohorting patients, working closely with colleagues in other specialties eg Anaesthesia, Respiratory Medicine and maintenance of the team based competency approach which has worked well in our peak. It will also require maintenance of a level of intervention based competency in our non ICM workforce to permit rapid redeployment if required. Response to future surges will require reductions in any increased activity to allow for staff redeployment to CC and other acute response areas again. Hospitals, Trusts and Health Boards should be planning for this now, taking into account their experiences from the first redeployment and acknowledging the fact that willingness to make significant changes to working practices and areas will be more difficult second time round, especially if people are exhausted from doing more elective work in addition to providing ongoing care to COVID patients.

It is 20 years since Comprehensive Critical Care led to a reorganisation of adult CC services and in its Critical Futures report the Faculty has identified and addressed many of the outstanding questions from that report. A way forward to review how CC services can be future-proofed is to have a fully funded review of critical care services for all 4 nations. The Faculty and endorsing organisations recognise that we need to fundamentally re-examine how the overall critical care service, ICM treatments and rehabilitation are delivered in a way that is beneficial to patients and the NHS. During this phase our workforce plans must consider staff health and wellbeing as well as patient safety and quality of care e.g. key national nursing quality and care indicators. Staff who have task-based competencies in critical care have become an essential part of our newly formed critical care team-based approach to delivery of care, however, we do not know how these skills will be retained; the desire or capacity of redeployed staff to continue to work flexibly and the impact of the different levels of training on both patient and staff outcomes. We need to take the opportunity to address the value of this model of delivery of care during the transition and develop new pathways for recognition and training in critical care. If AHP staff continue to be redeployed to support nursing services, there is a requirement for a task based competency tool for AHPs as well as non-critical care nursing staff. This will help support these staff in this modified role but also improve satisfaction, patient safety and resilience. Whilst each AHP discipline has significant overlap
in their knowledge and skills, there are also distinct differences which will affect their abilities to work in modified roles

**Alternative Models of Care**

**COVID and Non-COVID Environments**

- Whilst COVID remains we are likely to need to describe the following areas to deliver safe elective care:
  - COVID-free
  - COVID status unknown
  - COVID-positive patients
- The approach to cohorting patients as described above will directly impact upon PPE practice. All critical care units will need to plan to adopt new approaches to working in PPE for the foreseeable future.
- We will need a workforce who can work in all these areas on a sessional basis. For bedside nursing staff they will need to remain dedicated to just one area for the duration of a shift. For other staff groups, this means identifying if they can safely and practicably work between different COVID status areas. If they cannot, then this will place an additional requirement on the staffing needed to provide care. An important element of this is a robust local COVID staff testing policy.
- The cohorting of patients will have a direct impact on AHP workforce. In larger hospital sites there may be sufficient critical mass of AHPs (potentially using redeployed staff or additional temporary staff) to manage multiple patient cohorts across different critical care areas but this will not be possible in many smaller hospitals or disciplines with fewer staff members, such as OT and SLT. These staff may need to work across all of the units and therefore further consideration is required locally on how to manage infection control, the movement between areas and the prioritisation of the caseload.
- Geographical variation means that some institutions may be required to deliver elements of CC support to each of these areas at the same site, whereas in others these may be delivered in physically separate locations.
- Many critical care units have found the design of their units to be impractical for isolating large numbers of contagious patients. In the future critical care units need to smart plan for flexible use of beds with more negative pressure cubicles.
- How this is delivered will have a significant impact on any likely staffing ratios, as economies of scale will be lost in smaller units or where there is geographical challenge. This may mean that to safely deliver care staffing ratios may temporarily need to be lower than previously to allow for this e.g. a pre pandemic mixed L2/3 12 bed CC unit led by 1 ICM consultant and now delivering care in 2 separate areas may now need the same ICM consultant to advise on care in both areas but be supported by a non-ICM consultant to deliver care in one of the areas. The critical care workforce must be supported by appropriately skilled professionals such as anaesthetists, nurses and AHPs with previous critical care experience and those without critical care experience.

**Critical Care Capacity**

Getting it Right First Time (GIRFT) will be an important early element to support an urgent review of critical care capacity\(^1\), both in terms of absolute bed numbers and how this is configured in terms of levels of care. There is an unmet need that we manage continuously. Examples include:

---
\(^1\) The GIRFT program has not yet been carried out in paediatric critical care
• cancelled elective surgery needing critical care support,
• prolonged periods of patient management delivered in post-operative recovery areas,
• demand for CC beds that exceeds supply requiring patient transfers between hospitals,
• inadequate workforce leading to closure of funded beds. In 2018 CC3N reported 1440 nursing vacant post in ICUs representing 8% of the nursing workforce.\(^5\)
• delayed discharges due to inability to provide the required level of care on a ward,
• delayed admissions from Emergency Departments (ED) leading to overcrowding in the ED, increased risk to patients and a negative impact on staff wellbeing,
• delayed admission of patients who deteriorate on the ward, and
• an inability to deliver care to tracheostomy patients outside of the critical care environment in many hospitals across the UK.

Confounding population factors include an emerging population of young adults with life limiting conditions, an ageing population, impact of deprivation, co-morbidity, societal demand and new therapeutic interventions. Survivors of COVID will likely also contribute to chronic disease and use of acute services and there is a need for increased rehabilitation support services after critical care as identified in the Faculty’s interim statement on Life After Critical Illness.\(^6\)

New models of care may allow us to adopt a flexible approach to some staffing based upon team competencies e.g. ICM consultants conducting some ward rounds remotely or working in smaller teams/pods. The rapid adoption of virtual and remote working during the pandemic, while necessarily partial and as yet largely lacking service evaluation, presents us with an opportunity to consider our approach to the supervision of smaller ‘satellite’ adult intensive care units out of hours with support from a network of trained critical care staff providing telemedicine support. The mutual aid encouraged during the pandemic could also continue with development of specific critical care adult transport teams, transferring patients to address both capacity issues and severity of disease. This would introduce more flexibility across a network of hospitals and potentially further optimise care provision.

**Bridging framework**

There has been a huge geographical variation in the degree to which individual hospitals have been pressured during this pandemic and therefore learning from their experience, as well as referring to an evidence base where available, is essential. Critical care must be considered when individual organisations begin to plan to restore their normal services. A focus on increasing the permanent, resilient and appropriately trained workforce in order to meet ongoing increased capacity requirements and provide flexibility in the workforce to manage further surges in activity should be an integral part of planning service resumption.

Delivery of critical care during the pandemic has been reliant on a workforce that would normally be redeployed back to their own specialty and on returning critical care nurses/AHPs and medical staff. It seems highly likely that there is a need to maintain greater baseline critical care capacity, both for COVID resilience and associated new baseline COVID activity alongside identifying beds for elective self-isolating swab negative patients and urgent/emergent patients (swab status awaited). Delivery of CC activity in this way is likely to be extremely challenging for the existing CC workforce without the ongoing support of some of the deployed additional workforce used to support the pandemic response.

Within these new models of care we will need to provide cancer surgery, other cancer treatments (bone marrow transplants and CAR-T therapies), solid organ transplant and all our normal work
through critical care. This type of activity requires hospital wide service transformation to ensure patients are safe and CC is a significant element of care to ensure good outcomes for patients.

The framework proposed below for adult CC will need to be adapted for local implementation. **Local CC teams (in consultation with those planning resumption of activity) are best informed to make operational decisions as to the site, nature and staffing of the zones of care described.**

**This framework describes high level staffing models for Level 3 care.** Any decisions will need to be aligned with close monitoring of staff required for elective activity and non-COVID emergent activity. Changes in critical care staffing models will need to consider the entire workforce, doctors, nurses, ACCPs, pharmacists and other Allied Health Professionals. Geography of critical care services will also need to be taken into account as there will be a loss of economies of scale. The modelling may also need to be mirrored in other departments e.g. ward/theatre/diagnostics, ambulatory and outpatient services. At all times, where care is being delivered by non-critical care personnel, this must be supervised by trained critical care staff. It will be essential to develop a competency based modular programme for colleagues who are new to critical care such that their contribution is recognised and allows them a career path. Level 1 Enhanced Care competencies and some of the Step 1 competencies will be useful, as will programmes developed as part of the COVID response although they may not yet have gone through a process of accreditation. It may be appropriate to underpin the theoretical input using online courses validated by HEIs or other organisations.

**Framework to consider return to accommodating elective work and high level staffing ratios**

To avoid confusion we have used the following definitions to distinguish between normal (baseline) capacity and surge (expanded) capacity.

- **Baseline capacity**
  - Maximum funded critical care bed capacity before the pandemic eg declared staffed beds.

- **Expanded capacity**
  - Maximum critical care bed capacity achieved in order to manage the increased workload associated with the pandemic.

The definitions of ‘surge’, ‘coming out’ and ‘normal’ link to those used by HM Government to describe how the UK comes out of lockdown.

**SURGE:** Stage 3 = Not ready for any restoration of services. This may be described by;

- Critical care occupancy close to expanded capacity.
- Patients in temporary ICUs which might be situated in operating theatres scheduled for elective use or in other locations to be used in the surgical pathway, e.g. PACU or surgical ward.
- Staff in all groups (medical, nursing, and allied health professions) continuing to work in highly disrupted rotas, supported by non-critical care colleagues, with no timeline or exit plan for stepping down from these arrangements.
- No long term plan for creating COVID-19-positive and COVID-19-negative patient separation in critical care facilities to accommodate planned and unexpected admissions after elective surgery.
- Critical care staffing ratios significantly deviated from pre-pandemic levels and reliant on non-critical care staff to deliver care. For example, a nurse:patient staffing ratio of no more
than 4 patients to 1 ICU nurse, supported by other RNs not trained or experienced in critical care, but with transferable skills equitable to Level 1-enhanced care-competencies.  

- AHP workforce working in modified roles, therefore reduction in compliance with GPICS recommendations and reduction in ability to provide key services such as individualised nutritional treatment plans, early intervention for communication/swallow, tracheostomy weaning, delirium management and early rehabilitation with a potential to prolong ICU length of stay and safe step-down.  
- The physical environment and infrastructure will limit the provision of early mobilisation and impact on critical care length of stay and patient outcomes.  
- Other hospitals in the regional ICU network still using temporary ICU facilities, including the use of paediatric ICUs for adult patients.

**COMING OUT OF SURGE:** Stage 2 = Close to being able to restore some services. This may be described by;  

- Critical care occupancy reduced from expanded capacity but remaining above baseline capacity. Consideration must be given to the impact of delivering critical care services in multiple locations and the need to continue to provide separate services for COVID/suspected COVID and non-COVID patients.  
- Plans for COVID-19-positive and COVID-19-negative critical care beds and pathways in development but not necessarily complete.  
- Critical care consultant and nurse staffing ratios above pre-pandemic levels or reliant on non-ICU staff to support care delivery, but with local risk assessment, agreed governance measures, and a clear time-limited plan for either winding down expanded capacity or recruiting and matching dedicated critical care staffing to new expanded capacity.  
- Trainee on call rotas restored but less than normal number of trainees available for work. Consultant working patterns significantly disrupted from historical and aligned to the pandemic response working pattern. There must be a clear plan for restoration of sustainable rosters, and for continued involvement from other medical staff groups in the interim.  
- Allied health professions unable to provide recommended level of support either due to numbers of patients or multiple areas of delivery of care.  
- Step down adult patients from paediatric ICU back to adult ICUs.

**NORMAL:** Stage 1 = Able to support restoration of normal services. This may be described by;  

- Critical care occupancy close to 85% of baseline capacity, taking into account the impact that delivery of care in multiple sites will have on staffing. Whilst many CC units will have exceeded this occupancy level pre-pandemic, the additional logistical burden of caring for COVID and non-COVID patients makes higher bed occupancy rates an undesirable starting point.  
- Critical care staffing ratios at pre-pandemic levels (e.g. Critical Care nurse staffing 1:2 for Level 2 and 1:1 for Level 3 patients) as per UKCCNA position statement  
- Trainee on call rotas restored with normal numbers of trainees.  
- Return to baseline regarding allocation of nursing and Allied Health Professional colleagues. It is acknowledged that pre-pandemic, most AHP workforces did not comply with GPICS recommendations.  
- Paediatric ICU beds/staff returned to children’s services.
As capacity and availability of critical care staff changes we recommend the following guidance. As reliance on non-critical care staff reduces, pre-pandemic staffing levels will eventually be restored. Until that occurs there will still be a requirement for a healthcare worker to be responsible for each patient, with the appropriate level of supervision from critical care trained staff. These maximum daytime ratios are based on Level 3 patients with critical care being delivered in one area and either COVID or non-COVID patients, not both. Different models will require additional staff and therefore are likely to reduce available capacity.

<table>
<thead>
<tr>
<th>Critical Care bed capacity</th>
<th>Critical Care nurse: patient ratio</th>
<th>Support staff**</th>
<th>Critical Care consultant: patient ratio***</th>
<th>Trainee/ACCP: patient ratio****</th>
<th>Pharmacist: patient ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approaching baseline L3 capacity</td>
<td>1:1</td>
<td>normal HCA establishment</td>
<td>1:10</td>
<td>1:15 ‘senior’ 1:15 ‘junior’</td>
<td>1:10*</td>
</tr>
<tr>
<td>2x baseline L3 capacity</td>
<td>1:2</td>
<td>1 non-critical care nurse AND 1 HCA</td>
<td>1:20*</td>
<td>1:15 ‘senior’ 1:15 ‘junior’</td>
<td>1:20*</td>
</tr>
</tbody>
</table>

*As the ratio is increased away from baseline, forward planning of care and strategic oversight for each patient is impacted in favour of dealing with immediate problems only (firefighting). Higher ratios are supportable in a pandemic only and the aim should be to work towards lower ratios for pharmacists or an additional supervising consultant for medical staff. Supportable ratios will be determined by patient populations, COVID pathways and unit geography at a local level. The suggested 1:10 Consultant ratio for baseline activity is a daytime maximum without additional non-ICM consultant support, especially in a COVID PPE zone.

**Staffing ratios for AHPs should, where possible, be aligned with GPICS recommendations, however this will require ongoing use of redeployed non-critical care AHPs. Staffing ratios must also account for 7 day working and appropriate allowance for COVID related staff sickness. Further guidance should also be provided by each of the allied health professions via their specialist interest groups. Prior to this pandemic it was acknowledged that a 4-nation review of the AHP workforce was required. This work has been temporarily halted, but the requirement to complete this review has been further emphasised during this pandemic.

***Consultants from other clinical specialities who do not work in ICM need support and advice when looking after any critical care patients and this also needs to be built into staffing considerations. For split floor working with 14 plus patients we also suggest an additional coordinating doctor (Consultant or senior trainee)

****Where at all possible trainee/ACCP staffing ratios should stay the same. The seniority and the skill set of the individuals may change (and therefore any additional support required) but the ratio is important for patient safety and staff wellbeing. ‘Senior’ is an individual with ICM experience (trained FICM ACCP or ICM trainee), ‘junior’ is an individual who is relatively new to ICM and/or does not possess advanced resuscitation and airway skills.

**Other considerations**

- **PICU Considerations.** It should be acknowledged that Paediatric Intensive Care units have given both resources and staff to manage adult CC pressures. This has proved hugely disruptive in
many parts of the UK. While essential paediatric trauma and urgent cardiac surgical activity has been maintained, it should be anticipated that PICU activity will pick up over the usually quieter summer months as waiting lists resulting from cancelled elective surgery are addressed. It is of paramount importance that PICU beds and nurses in each unit are returned to children’s services. Escalation plans for a 2nd COVID-19 surge should recognise that paediatric critical care, ECMO, and regional transport teams are nationally commissioned specialised children’s services. Preparation for predictable winter pressures will demand that all existing PICU capacity is ring-fenced for critically ill children. PICS standards remain the benchmark for which workforce provision should be provided.

- **Pharmacy** services. Clinical pharmacy services are integral to care of the critically ill patient. The pandemic has further emphasised the need for expert critical care pharmacist support to maintain patient safety and medication therapy during a period of considerable stress in the medicine supply system. Although the vast majority of critical care units have a clinical pharmacist assigned to them, not all are established critical care specialist pharmacists. The pandemic identified challenges in critical care pharmacist workforce surge capacity and ability to readily extend the scope of services, supervision and weekend service provision. Finally, the small number of consultant-level critical care pharmacists has limited the number of experts available to provide regional (ODN) and national medication continuity and service planning advice. The clinical pharmacy workforce is an important example of critical care staffing inequities. They must be included in the funded review of critical care services to ensure pharmacists have the appropriate training, accreditation and workforce numbers to meet the current and future needs of critical care 7/7.

- The geography, design, and layout of the unit may mean that the above staffing levels are insufficient to provide safe patient care (i.e. side rooms / patients spread over numerous areas) and adequate infection control

- **Outreach services** may need to be remodelled, expanded and strengthened depending on site needs. Changes identified from pandemic planning should be retained where beneficial e.g. admitting teams continuing to follow NICE Guidance NG159 regarding Advance Care Planning and provision of telephone advice from the CC team (where appropriate) to support them in this.¹

- **Microbiology** ward rounds for all patients should be retained but can be conducted virtually where resource and technology permits.

- **Rehabilitation** services in many hospitals will have been put on hold during the surge phase. When planning for restoration it is important to ensure that the workforce and resources are made available both in critical care, on wards and for follow-up, including video conferencing facilities to try and deal with the backlog and the new bulge of cases coming through as soon as it is feasible to do so. The Faculty has recently released an interim statement from the Life After Critical Illness Working Group to highlight key considerations.⁶

- Restoration of normal services will place significant demand on therapy services for core outpatient and rehabilitation services. Rehabilitation is key for improving patient outcomes and all patients must continue to have their rehabilitation needs assessed by Allied Health Professionals. It is imperative that the critical care AHP workforce is retained and further developed both during and following the pandemic, to ensure the delivery of rehabilitation during the acute phase of illness and throughout the recovery pathway. This has been historically underfunded and the gaps in rehabilitation provision are now more apparent due to increases in the number and complexity of patients recovering from critical illness. A 4-nations review of the provision of AHP services and rehabilitation pathways is required to support better outcomes which in turn have significant social and economic benefits.

- Staffing redeployment of AHPs has been achieved by suspension of core services e.g. outpatient appointments and rehabilitation services. There is now clearly a requirement for these services
to be reinstated to support those recovering from COVID and non-COVID pathologies, and hence these staff are increasingly unlikely to be able to continue to support critical care services and similarly will be unlikely to be re-deployed again in the event of further surges. Future surges without redeployment of these AHP staff will mean that it will not be possible to provide support for altered nursing ratios and clinical support teams whilst maintaining the usual input for recovery and management of patient outcomes.

- **Electronic prescribing and clinical information systems** provide an essential hub of patient and medication therapy data that support infection prevention and control practice and facilitating remote review and supervision. Units without electronic prescribing systems going into the pandemic should consider how these can be implemented in a timely manner, within the wider hospital electronic prescribing and medicines administration system strategy going forward.

**Human Resource**

- There should be a designated, supernumerary, critical care trained charge nurse per shift to ensure the effective provision of support, supervision and co-ordination.
- Use of alternative staff groups required for the pandemic response should be reviewed on a regular basis. The default position should be to keep support wherever possible until such time as activity is firmly established at Stage 1 and safe staffing can be delivered without this support.
- **Leave** planned prior to the pandemic should not be cancelled to facilitate restoration of normal services without the agreement of the staff member concerned. Staff groups should be permitted and encouraged to take planned leave to ensure health and wellbeing.
- **Supporting Professional Activity** must be restored in the normal phase to enable resumption of teaching, research, patient safety, planning and other activities essential to the running of a safe CC service.
- **Study time** needs to be restored for nursing staff and other groups to train. Ways to work with mentors in clinical practice need to be explored in order for CC units to maintain extended capacities into the future.
- **Shift Patterns and rosters** must be sustainable and staff should not be expected to continue pandemic response patterns of working to support Stage 1 activity without their agreement.
- **Health & Wellbeing** needs to be supported and promoted. Some staff will have experienced considerably challenging times that they may require support to process as they adapt to the impact it has had/may be having on them. Access to staff psychology and workplace wellbeing services should be available for all staff groups.

**Organisational**

- Many CC ODNs in England have played a significant part in planning, provision of mutual aid and support during the pandemic. Where such ODNs exist, they should be involved in ensuring that hospitals and organisations resume activity in a balanced and fair manner across the network. This includes ensuring equity of provision and staffing wherever possible between regions.
- Decisions regarding triggers to reducing planned services again should be taken regionally or at ODN level, taking account of CC bed occupancy across a region to ensure equity of access to CC services for all patients.
- Individual CC services will need to consider how they manage their quality improvement and safety functions in this period e.g. unit team management meetings, mortality & morbidity. Whilst some essential activity may need to be undertaken by some staff members in Stage 2, we recommend that this is planned as an essential component of resumption of Stage 1 activity.
This therefore requires the return of relevant supporting activity for ALL relevant staff groups as previously.

- Consultation with CC and an appropriate overarching governance structure should be integral to restoration of services.
- Timeline for review. The intention should be to return to GPICS and PICS standards as soon as possible. Deviation from these standards should be reviewed on a regular basis and reported on the hospital risk register. Monitoring of deviations from GPICS standards and the impact on patient safety and quality of care is a necessary part of ongoing review.

References

1 NICE. COVID-19 rapid guideline: critical care in adults [NG159]. 20 March 2020
3 FICM. Workforce Databank for Adult Critical Care. May 2018.
7 The National Outreach Forum. Competency Framework for Registered Practitioners Level 1 and Enhanced Care Areas. 2018
8 CC3N. Steps Framework for Adult Critical Care Nurses. 2018
9 FICM. Position statement on sustainable senior doctor working patterns during COVID-19 pandemic. April 2020