Cheshire and Mersey Critical Care Network (CMCCN)
Management of Adult Critical Care Capacity: Principles and Guidance
September 2024

Document Title	Management of Adult Critical Care Capacity: principles and guidance tool
Version	Version 2
Document replaces	CMCCN Critical Care capacity management thresholds, September 2020: Version 1.
Author	CMCCN
To be read in conjunction with.	NW Adult Critical Care Networks: Principles and guidance for the management of local adult critical care surge and capacity pressures August 2023 Principles for Operation of Cheshire & Mersey Critical Care Transfer Vehicle & Driver (CMCCN CCTVD) last updated June 2022 Intensive Care Society Guidance: CRITCON Levels, August 2023
Supporting References	NHS England, Adult critical care surge plan guidance, December 2023 Intensive Care Society Consensus Statement -Levels of Care, March 2021 Intensive Care Society Guidance: CRITCON Levels, August 2023
Review Date	September 2025

Introduction

This guidance is intended to guide Cheshire and Mersey Critical Care Network Unit teams and all other stakeholders within the Cheshire and Merseyside Integrated Care System (ICS) on the actions required when there are exceptional demands for Critical Care capacity within a network.

This guidance is intended to assist **local escalation at Trust and Network level** in the management of increasing demands for Adult Critical Care capacity and will be superseded in the occurrence of any declared major incident or clinical event, where wider cross regional or national coordination and escalation is required.

This plan replaces any historical local escalation plans referenced and has been developed in accordance with ***NHS England, Adult critical care surge plan guidance, December 2023*** and as such directly references the principles and definitions outlined within it.

NHS England -adult-critical-care-surge-plan-guidance - December 2023

Aims of this guidance are to:

- Ensure an equitable and consistent approach at each Cheshire and Merseyside (C&M) site/critical care unit in times of extreme capacity pressures.
- Maintain high quality and safe care to support the best possible outcomes for patients, with providers working collaboratively across the Cheshire and Merseyside Integrated Care Board region.
- Ensure equitable access to adult critical care services.
- Maximise capacity within the critical care system, through a coordinated escalation and de-escalation approach.
- Avoid the need to transfer critically ill patients wherever possible, by ensuring all options to increase capacity have been exhausted, prior to the consideration of capacity or mutual aid transfers.
- Where clinically and practically possible, ensure provision of critical care as close to the patients' homes as possible while maintaining high and safe standards of care.
- For this document "critically ill" is defined as requiring a level of care greater than that normally provided on a standard hospital ward.
- Levels of care are defined based on the monitoring and support patients require, rather than the location in which they are receiving care. They have been developed by the Intensive Care Society and set out in their Levels of adult critical care Consensus statement Intensive Care Society: Levels of Care

Principles

The following principles should guide the system response when managing exceptionally high surge and escalation pressures**:**

- Nationally recognised professional nursing and medical staffing ratios as per GPICS version 2.1 should be maintained wherever possible, in line with the National adult critical care specifications or in accordance with any current position statements or guidance

released by the National Professional bodies and alliances such as the UKCCNA at the time.

- Normal clinical pathways for critically ill patients should be preserved and maintained for as long as possible.
- The provision of emergency, general and specialised services should be maintained and preserved for as long as possible.
- Equity of access to treatment should be maintained.
- A 'system first' approach to the management of adult critical care must be adopted to ensure that capacity is coordinated equitably across the system to meet demand.
- Elective activity priorities must be determined by the Cheshire and Merseyside ICB and applied to the system as a whole and not as single sites; this system approach may relocate some or all elective activity to other providers within a system, including the independent sector.
- Adult Critical Care capacity and occupancy data will be monitored at C&M regional level via the Adult Critical Care Dashboard on the National Commissioning Data Repository (NCDR) which is generated from data submitted to the National Directory of Services (DoS) by all units within the Cheshire and Merseyside Critical Care Network (CMCCN. It is therefore imperative that accurate and timely twice daily submission to DoS is maintained by all Adult Critical Care units.
- The stepped increase in capacity in response to demand should be fully aligned with regional NHS Resilience principles. NHSE Resilience Principles.

Inter Hospital Mutual Aid

When there is demand for critical care beyond usual capacity (i.e., surge conditions), inter-hospital mutual aid may be required to manage supply and demand across an ICS/ regional/interregional footprint.

A unit may require decompression for several reasons, this may include maintenance of safe staffing ratios to ensure safe patient care, inadequate capacity to accept emergency admissions and, on rare occasions, the need to provide life-saving treatment to another patient.

Redistribution of consumables and equipment is likely to be required.

Inter-hospital transfers are categorised as:

Clinical Transfer: a patient's own clinical care requires expertise unavailable in their current critical care unit or hospital.

Repatriation: the patient is being repatriated closer to home, family, friends, or carers or where initial episode of care has been completed within a specialist or tertiary Centre.

Mutual aid or surge transfer: the treating critical care unit is under extreme clinical pressure, and the patient is likely to benefit from moving to a less pressured unit.

Capacity transfer: the treating critical care unit needs to create capacity to facilitate emergency or urgent clinical care for another patient. During periods of usual operating practice such transfers **must** be avoided, but this may occur in extremely rare exceptional circumstances **during periods of surge** to support urgent admission for another patient and should be **subject to discussion and agreement between Senior Executives at each Trust involved, the Critical Care Core Network Team and designated representatives from the ICB, System Control Centre (SCC) leadership team**. Urgent interventions include P1 and P2 surgery without which a patient is at risk of reduced survival or significant morbidity if surgery is delayed. Further NHS England guidance on capacity transfers can be found at:

Framework-to-support-inter-hospital-transfer-of-critical-care-patients.pdf

Key Considerations Prior to Enacting a Mutual Aid or Capacity Transfer

- All patients should have equitable and timely access to critical care.
- If critical care capacity is impaired by patient flow problems (i.e. delayed discharges), these must be resolved before capacity/mutual aid patient transfers are considered.
- The referring trust/system/region must have undertaken all reasonable measures (as outlined in Table 1 below) to improve critical care capacity while maintaining safe staffing limits.
- In exceptional circumstances when safe capacity in the critical care unit has, or is expected to be exceeded within hours, it may be necessary to make the decision to transfer out a patient to a critical care unit in another hospital. This may include the requirement to transfer out an existing patient to facilitate the admission and management of another patient who requires intervention or surgery that needs to be provided within the referring hospital for a life threatening/limiting condition.
- That all decisions to instigate a potential transfer out should be informed by a clinical risk assessment and agreed on a case-by-case basis between consultants within the referring and receiving units and discussed with and endorsed by the relevant senior/executive operational management and medical leaders within the Trust.
- The reason for transfer should be explained clearly to the patient and family/next of kin in line with duty of candor. Capacity transfers require patient consent or family/next of kin assent.

Escalation factors

- System approaches to co-ordination of the safe management of demand and capacity should be made in alignment to local command and control structures/governance and escalated to national levels in a consistent way.
- It is imperative that the triggers to activate additional capacity are sensitive enough to give sufficient time to free up capacity before the system is grid locked.
- It is recognised that the management of local surge and wider escalation pressures will be dependent upon the consideration of a number of factors. These factors include:
- The availability of registered staff and skill mix with appropriate training and experience, and equipment and specialist supplies. In the case of infectious disease outbreaks, this should include consideration of the additional workforce required to maintain safe staffing in separate cohorted areas.
- The case-mix and acuity of patients in local units.
- The expected length of stay of patients in local units.
- The available capacity (or forecasted).
- Any underlying disease rates impacting on critical care admission rates.
- The size of hospitals within systems and the capability to extend critical care or increase surge capacity.

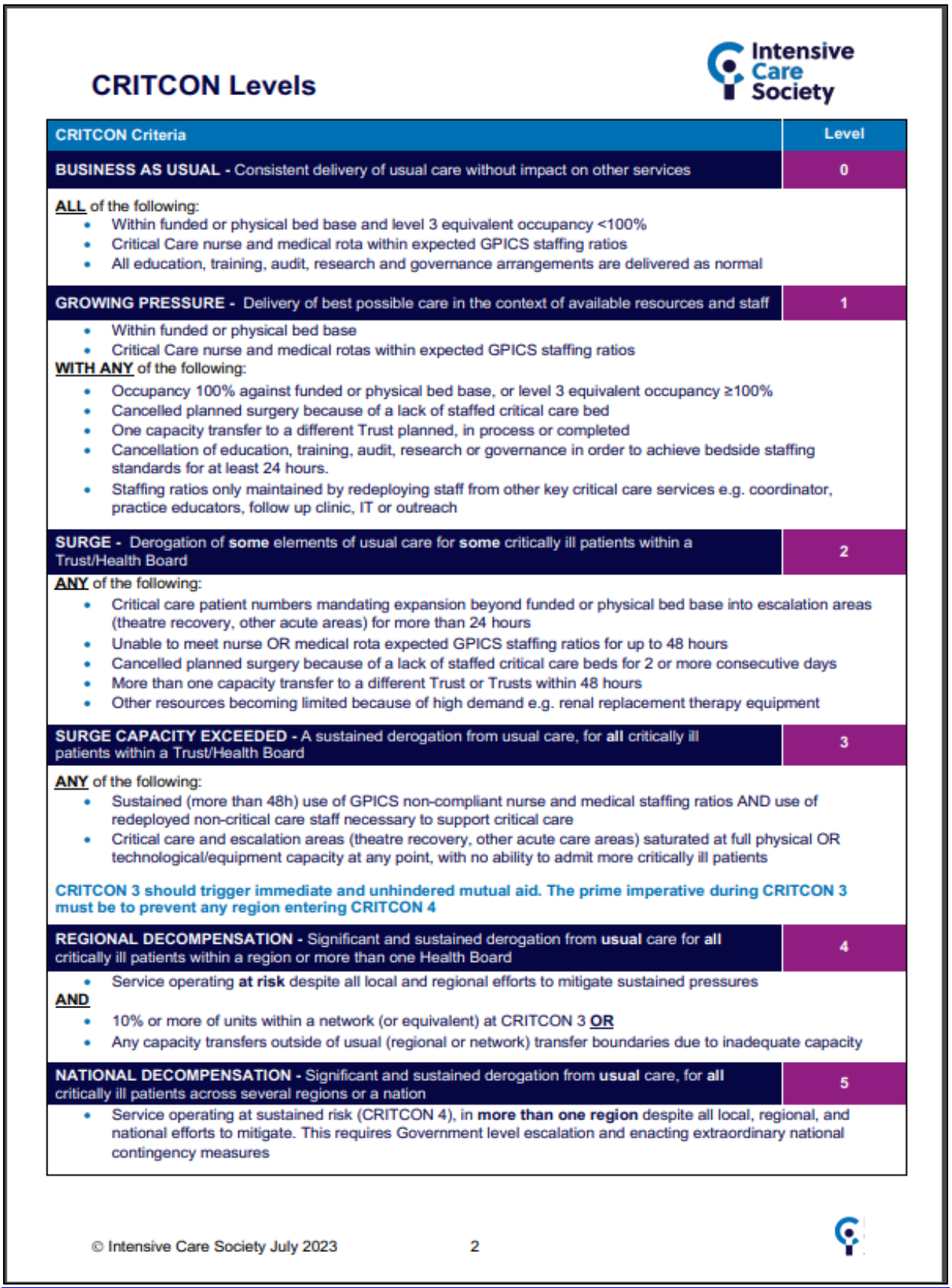
Escalation Thresholds and Key Actions

Requirement to surge critical care capacity can be extremely rapid and not all hospitals in a region will surge at the same time.

CRITCON has been developed as a national tool to assess and monitor the level of strain within an individual unit, network of units or on a national basis, objectively and consistently.

Latest CRITCON guidance was released by the Intensive Care Society in August 2023 with an overview of the CRITCON Levels outlined in Table 1. Full guidance can be accessed at ICS CRITCON Levels

Table 1: Intensive Care Society (ICS) CRITCON Levels



CRITCON Levels

Intensive Care Society

CRITCON Criteria	Level
BUSINESS AS USUAL - Consistent delivery of usual care without impact on other services	0
ALL of the following: • Within funded or physical bed base and level 3 equivalent occupancy <100% • Critical Care nurse and medical rota within expected GPICS staffing ratios • All education, training, audit, research and governance arrangements are delivered as normal	
GROWING PRESSURE - Delivery of best possible care in the context of available resources and staff	1
• Within funded or physical bed base • Critical Care nurse and medical rotas within expected GPICS staffing ratios **WITH ANY** of the following: • Occupancy 100% against funded or physical bed base, or level 3 equivalent occupancy ≥100% • Cancelled planned surgery because of a lack of staffed critical care bed • One capacity transfer to a different Trust planned, in process or completed • Cancellation of education, training, audit, research or governance in order to achieve bedside staffing standards for at least 24 hours. • Staffing ratios only maintained by redeploying staff from other key critical care services e.g. coordinator, practice educators, follow up clinic, IT or outreach	
SURGE - Derogation of **some** elements of usual care for **some** critically ill patients within a Trust/Health Board	2
ANY of the following: • Critical care patient numbers mandating expansion beyond funded or physical bed base into escalation areas (theatre recovery, other acute areas) for more than 24 hours • Unable to meet nurse OR medical rota expected GPICS staffing ratios for up to 48 hours • Cancelled planned surgery because of a lack of staffed critical care beds for 2 or more consecutive days • More than one capacity transfer to a different Trust or Trusts within 48 hours • Other resources becoming limited because of high demand e.g. renal replacement therapy equipment	
SURGE CAPACITY EXCEEDED - A sustained derogation from usual care, for **all** critically ill patients within a Trust/Health Board	3
ANY of the following: • Sustained (more than 48h) use of GPICS non-compliant nurse and medical staffing ratios AND use of redeployed non-critical care staff necessary to support critical care • Critical care and escalation areas (theatre recovery, other acute care areas) saturated at full physical OR technological/equipment capacity at any point, with no ability to admit more critically ill patients **CRITCON 3 should trigger immediate and unhindered mutual aid. The prime imperative during CRITCON 3 must be to prevent any region entering CRITCON 4**	
REGIONAL DECOMPENSATION - Significant and sustained derogation from **usual** care for **all** critically ill patients within a region or more than one Health Board	4
• Service operating **at risk** despite all local and regional efforts to mitigate sustained pressures **AND** • 10% or more of units within a network (or equivalent) at CRITCON 3 **OR** • Any capacity transfers outside of usual (regional or network) transfer boundaries due to inadequate capacity	
NATIONAL DECOMPENSATION - Significant and sustained derogation from **usual** care, for **all** critically ill patients across several regions or a nation	5
• Service operating at sustained risk (CRITCON 4), in **more than one region** despite all local, regional, and national efforts to mitigate. This requires Government level escalation and enacting extraordinary national contingency measures	

Phases of Critical Care Escalation

- **Pre-surge phase** occurs during most periods of higher activity (eg average winter) and is defined as: the majority of critical care units within a system are declaring CRITCON 0-1.

- **Surge phase** represents expected winter pressures where critical care units, systems and regions are operating within regional winter planning assumptions, with the majority of units declaring CRITCON 2.

- **Escalation phase** occurs when critical care units, systems and regions are operating above expected winter pressures, with the majority of units declaring CRITCON 2 and an increasing number of units declaring CRITCON 3.

- **Heightened escalation phase** occurs when critical care units, systems and regions are operating under severe pressures, and multiple capacity transfers are required within and between adjacent regions each day. There are an increasing number of tertiary units reporting CRITCON 3.

Phases of Critical Care Escalation Cheshire and Merseyside Response and Key Actions

Table 2 in Appendix 1 at the end of this document outlines more detailed threshold definitions and the key actions that should be adopted and implemented within each of the C&M Provider organisations with Adult Critical Care Units as aligned to wider system, regional and national activity.

Other Supporting Actions and Requirements:

- Adult critical care units to submit information on their bed capacity through NHS Pathways Directory of Services (DoS) twice daily at 8am and 8pm, additional submissions to DoS may be indicated as CRITCON levels increase.
- Regional surge plans to be in place which include a mechanism for the identification of current available capacity and potential surge capacity at trust level, to inform the process of rapid escalation.
- Groups of adult critical care units to work jointly together through a networked approach co-ordinated by regional critical care cells and adult critical care Specialised service clinical networks (SSCNS): the use of local 'bubbles or joint working systems between trusts may be appropriate.
- Regions and ICB's to be assured that all adult critical care units and trusts in their locality have adequate escalation and business continuity plans in place. These plans are required to have clear escalation triggers to NHS Resilience structures and are co-ordinated at a regional level by regional critical care cells.
- ACC services to work with relevant other services, including Paediatric Critical Care services and Children and Young People Specialised Services Clinical Networks Delivery Networks, to ensure that surge plans are developed which consider how and when communication channels are instigated and if and how reciprocal support will be provided.

CMCCN Role and Function

The primary function of the network is to inform and support the optimisation of critical care capacity across C&M, working collaboratively with provider trusts and units, and the ICB, SCC and EPPR teams. Direct involvement of the CMCCN team (contained in-hours, Monday-Friday) will increase with progression through the CRITCON levels.

Input will include sharing of data and other supporting clinical and operational intelligence and information, sourced directly from the adult critical care teams, which could assist in decision making and action planning at all levels.

In conjunction with other system colleagues and senior clinicians, the CMCCN team may also support optimal safe and effective surge and mutual aid. This would include identifying the need for and supporting the equitable allocation of equipment made available via the system.

CMCCN team will utilise its established relationships with other Specialised Services Clinical

Networks and other commissioning and provider stakeholders both within he Northwest and nationally to share information and collaborate.

Supporting Workforce Wellbeing and Resilience

All disciplines including medical, nursing, pharmacy and allied health professionals are integral to the implementation of any surge plan. As such, consideration of the ability to flex staffing levels with the required skill set and competencies to meet rising demand, while maintaining safe, quality care is central to implementing this guidance.

Key considerations are:

- The safety of staffing levels, particularly in relation to the nursing workforce.
- The availability of suitably trained staff, equipment, and specialist supplies.
- Ensuring the levels of critical care nurses are trained as per national GPIC's standards and competent to care for level 3 patients as per National Critical Care Nursing Education Standards V2 (CC3N 2023) are maintained to build flexibility within the workforce to meet increased case mix acuity within the unit.
- Ensuring there is sufficient skill mix on the unit and there is ongoing support for new members of staff.
- Redeployment of support staff and non-critical care staff, to enable cohorted capacity, and to meet increased demand in number or acuity of patients. These staff will require educational support from the critical care educator. Use of a national critical care surge induction document should be used at this time. A buddying up system of patient allocation is advocated for these members of staff and they should be assigned duties that remain in their own scope of professional practice. National guidance from UKCCNA is in place to support this approach.
- Ensuring that there are processes and facilities in place to support staff health and wellbeing. There are specific roles within critical care units to assist in supporting staff mental health and wellbeing These are unit-based psychologists, Professional Nurse Advocates, Mental Health First Aiders and Peer Supporters. For units who do not have a unit-based psychologist, there should also be clear signposts and pathways for staff that may need specialist support from psychology services.

De-escalation and debrief.

As pressure and demand on adult critical care services reduces there should be a clear staged approach to de-escalation across systems and the production of lessons learnt documentation for cascade.

An essential part of this process is to ensure all staff can participate in reflective debrief sessions to identify good practice and set out opportunities for learning, as well as to ensure staff are able to access health and wellbeing support. The use of nationally endorsed critical care specific debrief tool should be considered.

Feedback from the debrief sessions should be used to update plans to ensure continuous improvement and ideally lead to a reduction in future occasions where escalation plans need to be activated.

Appendix 1

Table 2 outlines more detailed threshold definitions of the CRITCON levels and the key unit/ trust and wider system actions that should be adopted and implemented within each of the C&M Provider organisations with Adult Critical Care Units.

Reference is also made to the NHS England Operational Pressures Escalation Levels OPEL Framework [OPEL Framework 2023-24]

Table 2

Phase	CRITCON and OPEL	Descriptors	Trust/ Network Actions	System/ Regional Actions and National Actions
Pre-surge Sustain	Majority of units reporting **CRITCON 0 to 1**	➢ **<100% of baseline beds occupied and <50% of baseline beds occupied by patients requiring cohorting for any reason.** ➢ Treatment available and supply is greater than demand. ➢ Normal, able to meet all critical care needs, without impact on other services. ➢ Typical winter levels of capacity transfer and other overflow activity. ➢ Nursing and Medical rotas within expected GPICs ratios	**Trust** Ensure accurate and timely twice daily submission to the National Critical Care Directory of Services (DoS). Maintain effective patient flow including prioritising timely discharges from the unit. **CMCCN Core Team** Routine daily (Monday-Friday) monitoring by CMCCN core team via National Commissioning Data Repository (NCDR) Adult Critical Care dashboard supported by any additional local processes and communications	**System / Region** None other than usual network monitoring **National** No National input required

Surge Monitor	Majority of units reporting **CRITCON 2** **OPEL 1**	**Triggers** ➢ Up to 100% of baseline beds which are staffed and occupied and implications of cohorting impacts on capacity. ➢ Expected winter pressures. ➢ Operating within regional winter planning assumptions ➢ Some usual high dependency unit (L2) beds may be converted to L3. ➢ Enhanced Care beds are used optimally (if available) ➢ Usual funded critical care capacity full. Some capacity transfers	**Trust Actions** Eliminate any delayed discharges. If required, where feasible convert L2 to L3 capacity, dependent on staffing. Consider planning and preparation for the redeployment of staff (for example specialist nurses, theatre staff and educators) to maintain acceptable nurse staffing ratios. The provision of Critical Care Outreach should be maintained to ensure rapid escalation and timely treatment of patients who may be deteriorating or at risk of deteriorating within other Trust areas. . Where available optimise use of Enhanced Care beds and plan to open additional surge beds if nurse staffing is available. Initiate Trust process for review and prioritisation of elective activity where post operative critical care admission may be required. Ensure accurate reporting through appropriate trust processes and subsequently through to the ICB System Control Centre Maintain contact with and update CMCCN core team. **CMCCN Core Team Actions** CMCCN monitoring of ACC capacity via NCDR Adult Critical Care dashboard supported by any additional local processes and communications. Step up two way and communication between CMCCN and C&M ICB System Control Centre (SCC) with Network representation at daily 9.30AM System calls as required. (Monday-Friday). Consult with the other NW critical care network core teams including the Northwest Paediatric Critical Care Network regarding their critical care capacity and capability status.	**System/ Region Actions** Monitoring and reporting of capacity and demand within trusts and systems as part of usual Unplanned and Emergency Care (UEC), winter pressures process, plus regular review of NCDR Adult Critical Care dashboard System calls to include the reporting of CRITCON status of each Trust as part of their organisational update. Regions preparing to increase capacity to meet regional surge plan levels. Consider standing up local Critical Care monitoring and reporting arrangements at regional level such as the Cell structures defined in the NHS Resilience structure. **National Actions** Critical Care Capacity Panel (CCCP) meetings in place Monitoring of interdependent services Consideration of any cross-region capacity transfer requests

Escalation Protect	Majority of units declaring **CRITCON 2** and an increasing number of units declaring **CRITCON 3** **OPEL 2**	**Triggers** ➢ 100% to 150% of capacity occupied ➢ Exceeding expected winter pressures ➢ Expanded in to enhanced care areas or expanded into next identified surge area. ➢ Usual funded critical care capacity full – overflow into quasi-critical care areas or identified surge areas. ➢ Increased conversion of L2 to L3 beds ➢ High level of non-clinical transfers ➢ Trusts beginning capacity transfers and other mutual aid. ➢ Treatment currently available within the system utilising surge areas in trusts but majority of units maybe declaring CRITCON 2 ➢ There may be pressures on critical care resources, e.g. Renal replacement therapy or particular medicine.	**Trust Actions** Open all available surge and escalation areas if appropriate registered nurse and other staffing and equipment are available. Cancellation of elective surgery in line with clinical prioritisation to commence. Surge beds to be used optimally. Maintaining acceptable staffing ratios through redeployment of non-critical care staff although these may not be GPICS6 compliant. Identify patients potentially suitable for transfer out, initiate and explore mutual aid options. **CMCCN Core Team Actions** Establish regular (Monday to Friday) interface between Network team and SCC to ensure both are cognisant of the regional position in relation to Adult Critical Care and wider organisational OPEL status. In hours Monday-Friday, CMCCN to facilitate meetings of all C&M ACC Clinical Leads and Senior Nurses to clarify pressures and agree options and priorities for mutual aid. If not already activated CMCCN /SCC to escalate the potential requirement for NHSE NW Medical Directors Office to convene and chair a NW Critical care cell or equivalent.	**System/Region Actions** Regional Command and Control structures in place Capacity transfers and other mutual aid across systems and within regions Critical care cells meeting regularly. Enhanced monitoring and reporting by ACC commissioners and UEC winter teams Daily submission of regional transfer requirements Daily reporting and review of ACC occupancy at a system and regional level **National Actions** Increased national and regional commissioning input may be required. National Critical Care Capacity Panel (CCCP) to provide strategic direction for inter-regional capacity transfers.

Heightened Escalation Control	Increasing number of tertiary units reporting **CRITCON 3** Some units at risk of moving to **CRITCON 4** **OPEL 3**	**Triggers** ➢ **150% to 200% of capacity occupied** ➢ Expanded into identified suitable surge areas AND ➢ Expanded into non-conventional areas (if applicable) OR in final expansion area (for local escalation) ➢ Expansion into non-critical care areas (e.g. wards) and/or use of paediatric facilities for adult critical care where appropriate. ➢ Trust operating at or near maximum physical capacity. ➢ Maximum capacity transfers between Trusts, with network and regional NHSE co-ordination. ➢ *The prime imperative in CRITCON 3 is to prevent any single trust entering CRITCON 4* **CRITCON 4:** ➢ Resources overwhelmed. Possibility of triage by resource (non-clinical refusal or withdrawal of critical care due to resource limitation). ➢ This must only be implemented on national directive from NHSE and in accordance with national guidance. ➢ Treatment available but in very limited supply across a region. Systems unable to maintain segregation	**Trust Actions** Optimise utilisation of all available critical care capacity. As determined by Trust Medical Director, continue with process for senior clinical review and prioritisation of all elective and non-elective pathways that may impact on demand for critical care. Prepare to act on offers of mutual aid identifying and preparing most appropriate patients for transfer out. Ensure all clinical handovers and processes are complete and where required, implement arrangements to access the CMCCN Transfer Service. **CMCCN Core Team Actions** Within NW framework facilitate Ensure all critical care units have adequate equipment and facilitate equipment mutual aid requests when requested. CMCCN to support the coordination and prioritisation of intra- and inter-regional transfers by the Adult Critical Care Transfer Service in accordance with Standard Operating Procedure and determination of clinical priorities. Ensure CMCCN representation within regional command and control structures	**System/ Region Actions.** Regional Command and Control structures in place – All non-life threatening/lifesaving elective inpatient surgery to stop. Review of prioritisation and cancellation of some specialist elective surgery Trigger and facilitate access to immediate mutual aid and adequate equipment where it is evident that all thresholds are met and options to manage locally have been exhausted. Daily identification of suitable patients for inter-regional transfer by regions under surge (as per guidance) GPICS staffing ratios may not be maintained in some clinical areas (e.g. multi-bed cohorted areas) Operation of NW regional critical care cell, any requirement for CMCCN representation at weekend/ outside usual core network commissioned provision / working hours would need to be negotiated and potentially provided by representatives from outside the core CMCCN.

		and to continue priority elective work. ➢ Inter-system mutual aid and capacity transfers are required, facilitated by Regional Transfer sub-group. Capacity may soon be exceeded if demand increases further. ➢ Full use of surge staffing ratios and cross skilling		**National** Increased frequency of national CCP meetings. Escalation of need for inter-regional capacity transfers to decompress multiple hospital sites. Enhanced monitoring and reporting will be in place. Enhanced national and regional commissioning support will be required. Monitoring and co-ordination of escalation of interdependent services Potential for devolved nation engagement for mutual aid and capacity transfers − Increased frequency of CCCP meeting