

SCHEDULE 2 – THE SERVICES

A. Service Specifications

Service Specification No:	220502S
Service	Adult Critical Care
Commissioner Lead	<i>For local completion</i>
Provider Lead	<i>For local completion</i>

1.	Scope
1.1	<p>Prescribed Specialised Service</p> <p>This service specification covers the provision of Adult Critical Care services. The Identification Rules for Prescribed Specialised Services state that any adult critical care period that is linked with a specialised service spell is considered a commissioning responsibility of NHS England.</p>
1.2	<p>Description</p> <p>Adult Critical Care underpins all secondary and specialist adult services. Critical Care incorporates both intensive and high dependency care (ICU/HDU) stand alone or combined. Specifically, this service specification is for adults whose care incorporates the need for or availability of level 2 or 3 Adult Critical Care as defined within the Intensive Care Society, Levels of Care Consensus statement, March 2021) as a component of their pathway of care, and recognises the continuum of levels of care throughout the pathway.</p> <p>This specification is not applicable to high care areas (level1) provided by specialised services such as Peri-operative Enhanced Care, Post-Operative Anaesthetic Care Units, Extended Recovery Units, Nephrology, Respiratory or Cardiology, however the interdependency between these services are recognised within the continuum of care. Level 2 critical care provided outside of an ICU/HDU setting falls outside the scope of this service specification.</p>
1.3	<p>How the Service is Differentiated from Services Falling within the Responsibilities of Other Commissioners</p> <p>Adult critical care services are commissioned by both NHS England and Clinical Commissioning Groups/Integrated Care Systems. The standards and indicators should be applied to all critical care services within the defined model, irrespective of responsible commissioner.</p>
2.	Care Pathway and Clinical Dependencies
2.1	<p>Care Pathway</p> <p>Critical Care services are delivered within discrete locations such as Intensive Care or High Dependency Units, or combined units (where ICU and HDU are co-located). Sometimes these services are dedicated to one speciality e.g. post-cardiac surgery or neurosurgery/neurology, but increasingly services are integrated clinically into a single critical care service and these may be located in separate geographical areas within the hospital.</p> <p>Additional professional standards may exist at network and national level for specialty focused ICUs and these will not be covered in this specification.</p>

2.2 Admission to Critical Care

- The provider must implement a standardised approach to the detection and response to deteriorating health on general wards, enhanced care areas or Emergency departments with reference to NICE Clinical Guideline 50.
- Admission to Critical Care must be timely and meet the needs of the patient. Admission must be within 4 hours from the decision to admit wherever possible and should adhere to the appropriate standards
- The decision to admit a patient to Critical Care must be made by a Consultant in Intensive Care Medicine.
- The transfer of a level 3 patient for comparable critical care at another acute hospital (transfer for non-clinical reasons) must be avoided wherever possible and should be carried out in line with the Adult Critical Care Transfer Service Specification and transfer framework.

2.3 Critical Care Service Model

Critical care is a multi-professional, multidisciplinary service which must deliver an integrated care pathway focused on patient need whilst addressing quality, governance and supporting optimal outcomes for patients. This may include specialist care such as advanced respiratory support and renal replacement therapy and as such, treatment and care will be provided by a range of professions including pharmacists, speech and language therapists, technologists, physiotherapists, psychologists and occupational therapists in addition to core medical and nursing staff. All staff will work with patients, families, and carers to ensure a holistic team approach to patient treatment and care.

All admissions must have a handover between the team bringing the patient to critical care and the receiving team. On admission to Critical Care all patients must have a treatment plan discussed with a Consultant in Intensive Care Medicine. All admissions to Critical Care must be seen and reviewed within 12 hrs by a Consultant in Intensive Care Medicine.

- Patients in Critical Care should receive twice daily ward reviews by a Consultant in Intensive Care Medicine (in line with NHS 7-day standards).
- In addition, there should be multidisciplinary 7-day input available from the extended team.

All providers must provide a Critical Care nursing establishment which is determined by the following nurse to patient ratio (in line with [GPICS](#)):

- Level 3 patients have 1:1 Critical Care nursing ratio for direct patient care.
- Level 2 patients have 1:2 Critical Care nursing ratio for direct patient care.

2.4 Critical Care Workforce Model

The core critical care workforce model must align to the guidelines set out in [GPICS](#)

- Each provider must have a designated Clinical Director/lead Consultant, Matron, and advanced level Pharmacist for Critical Care and other Allied Health Professionals and technician with the relevant competencies to work in Critical Care.
- All professional representatives should be actively engaged in their local Adult Critical Care Operational Delivery Network (ODN).
- Clinical pharmacists are essential practitioners within the critical care multi-professional team and are vital to the routine delivery in critical care practice of medicines optimisation.
- Care within Critical Care must be led by a Consultant in Intensive Care Medicine (as defined by the Faculty of Intensive Care Medicine). Where providers do not meet this standard consideration should be given as to how this may be achieved or mitigated through involvement in their local Adult Critical Care ODN to facilitate collaboration between stakeholders.
- Consultants must be freed from all other clinical commitments when covering Intensive Care and

this must include other on-call duties.

- A Consultant in Intensive Care Medicine must be available 24/7 and be able to attend within 30 minutes.
- Clinical pharmacists supporting delivery of medicines optimisation in critical care areas must provide patient-centred care, including: medicines reconciliation (on admission and discharge), independent patient medication review with attendance of multi-professional ward rounds and professional support activities, including: clinical guidelines, medication-related clinical incident reviews and clinical audit and evaluation.

Nursing staff should be supported by an appropriately sized critical care educational team which is compliant with [GPICs](#) standards, as a minimum of 1:75 or ideally 1:50. The size of the team should be determined locally, however there must be access to a clinical educator.

Additionally:

- There must be a training strategy in place to achieve a minimum of 50% of nursing staff with a post-registration award in critical care nursing.
- Each Critical Care Unit must aim to have a supernumerary shift clinical coordinator 24/7.
- Critical Care services must have an effective clinical governance platform and robust data collection system. This must encompass participation in national audit programmes for Adult Critical Care (the Intensive Care National Audit and Research Centre (ICNARC) Case Mix Programme, including patient reported outcome measures (PROMS) when available.

Each unit must have a workforce strategy and delivery plan in place which includes Workforce development, supporting staff health and wellbeing and implementing new models of working.

Providers are required to participate in activities of the unit's local ODN for Adult Critical Care, including peer review and participation in the National Audit programme for ICM run by ICNARC (Case mix Programme and ad hoc audits relating to Quality and Safety
Providers should be:

- compliant with [NICE Clinical Guideline 83: Rehabilitation after Critical Illness in Adults](#) and the associated [NICE Quality Standard 158](#).
- participate in Public Health England Infection in Critical Care Quality Improvement Programme (ICCQIP).
- able to evidence effective engagement with patients and their families and carers.
- able to demonstrate that they have a risk register in place together with an associated audit calendar which is regularly updated and acted upon.
- have effective strategies in place to minimise hospital-acquired infections within Critical Care and publish central venous catheter-related blood stream infection rates.
- be able to demonstrate avoidance of readmission to Critical Care (ICU and HDU) within 48hrs of discharge.
- Each Critical Care Unit must submit capacity data at least twice a day to the national Directory of Services bed management system.

2.5 Discharge from Critical Care

Transfer from Critical Care to a ward must be formalised within the handover. The handover must satisfy the requirements in [NICE Clinical Guideline 50](#) and demonstrate progress towards compliance with NICE Quality Standard 83 and working towards implementation of the recommendations set out in [Life After Critical Illness: A guide for developing and delivering aftercare services for critically ill patients](#) (FICM, 2021).

- Transfer from Critical Care to a ward must occur between the hours of 07.00hrs and 21.59 hrs, ideally between 07.00hrs and 19.59hrs in line with the relevant quality indicator.

- Discharge from Critical Care to ward level care must be within 24 hours, ideally within 4 hours of the decision to discharge.
- Discharge from Adult Critical Care directly to home as a result of lack of availability of ward beds must be avoided.
- Patients undergoing specialist care should be repatriated to a Trust closer to their home when clinically appropriate to continue their reablement. Such discharge should occur within 48hrs of the decision to repatriate and the decision to repatriate should not be a reason to delay discharge from critical care to a ward bed.

2.6 Interdependence with other Services

Access to adult critical care services may be impacted during episodes of unexpected, increased demand on services. Critical Care services must ensure that there are robust, surge plans in place which align to published guidance to ensure services are responsive to changes in demand. This may require the patient to be transferred to another unit where the required speciality is available. The transfer should be carried out in line with the [Adult Critical Care Transfer service specification](#) by a commissioned provider.

Renal replacement therapy within an Adult Critical Care setting must be provided in line with the national [service specification](#)

Adult Critical Care underpins all acute specialised and non-specialised inpatient clinical pathways. Collaborative working between commissioners (NHS England Specialised Commissioning teams and CCGs) and Clinical Networks (SCNs and ODNs) is essential to the design and delivery of the service.

The management of critically ill patients whether commissioned by NHS England or CCGs requires the input of several medical and non-medical specialties, and other agencies such as Major Trauma Centres or Units, General Surgery/General Internal Medicine, Clinical Psychology, Mental Health, Rehabilitation, Reablement and Recovery Services. Ultimately the nature of core supporting services will be dependent on the patient case mix of the critical care unit.

2.7 Co-located services provided on the same site so that they are immediately available 24/7:

- General Internal Medicine
- Radiology: CT, ultrasound, plain x-ray
- Echocardiography/ECG
- General surgery
- Transfusion services
- Essential haematology/ biochemistry service and point of care service
- Physiotherapy
- Pharmacy
- Medical Engineering services /Critical Care Technologists (as needed)
- Speciality Intensive Care Units must have their speciality specific surgical service co-located with other interdependent services, e.g. vascular surgery with interventional vascular radiology, nephrology and interventional cardiology, obstetrics with general surgery and neurosciences centres with thrombectomy and stroke services.

Access to theatres and a competent resident clinician (Anaesthetist / Intensive Care Medicine) with advanced airway skills must also be available 24/7 along with informatics support.

2.8 Interdependent services

The following 24/7 services need not be co-located on-site, but service level agreements should specify response times for these specialities, which will range from being available within 30mins to a maximum of 4 hours, dependent on the case mix of the patient population. In some instances, there

will be a need to transfer the patient via an appropriate Adult Critical Care Transfer service:

- Interventional vascular and non-vascular Radiology
- Neurosurgery
- Neurosciences centres
- Vascular surgery
- General surgery (only applies to a site which does not admit general surgical patients)
- Nephrology
- Endoscopy
- Coronary angiography
- Cardiothoracic surgery
- Trauma and Orthopaedic surgery
- Burns services
- Plastic surgery
- Maxillo-facial surgery
- Ear, Nose and Throat surgery
- Obstetrics and Gynaecology
- Organ donation services
- Acute/early phase rehabilitation services
- Additional laboratory diagnostic services

The following services should be available during daytime hours (Monday – Sunday):

- Occupational Therapy*
- Dietetics*
- Speech and Language Therapy*
- Bereavement Services
- Patient Liaison Service*

*A 5-day service is adequate unless special indications have been identified at a local level

2.9 Related services – following the critical care phase of the patient journey:

- Local Hospital and Community Rehabilitation Services
- Specialised Rehabilitation Services
- Critical Care follow up
- Clinical Psychology
- Spinal Cord Rehabilitation Services
- Primary Care
- Burns Services
- Voluntary Support Services

2.10 Relationship with Operational Delivery Networks

Critical Care ODNs fulfil several roles including:

- Supporting providers with knowledge, expertise, and practical support to redesign their services; enhancing patient safety; patient experience and partnership working.
- Supporting commissioners in the delivery of their commissioning functions, for example:
 - providing peer review functionality.
 - assisting with service redesign/delivery.
 - supporting quality improvement initiatives.
- providing local knowledge to support funding models and commissioning intentions inherent in their sustainability and transformation partnership (STP) plans where expertise and funding exist.
- Supporting the NHSE/I region in developing plans and regional response in preparedness for unforeseen events. Ensure there are links with related ODNs e.g. Trauma, Burns Networks), UECs, STPs etc, to ensure a joined-up approach to critical care.
- Their role is also increasingly relevant to supporting the very small number of geographically remote critical care units (there are 16 providers with an average distance of 80 KM from a neighbouring unit) to develop a service model that maintains equity of access and breadth of service for their population and provides sustainable solutions for these rural units.

3. Population Covered and Population Needs

3.1 Population Covered by This Specification

The service outlined in this specification is for patients ordinarily resident in England or otherwise the commissioning responsibility of NHS England (as defined in [the Manual of Prescribed Specialised Services, 2018/19](#)).

Specifically, this service is for adults who have or are anticipated to require level 2 or level 3 Adult Critical Care as a component of their pathway of care. However, it is recognised that patient's acuity may fluctuate as part of the continuum of care and therefore all standards described are applicable to the whole pathway, irrespective of responsible commissioner.

Adult is defined as 18 years or older and critical care is defined by the level of care a patient requires as described in the [Intensive Care Society, Levels of Care Consensus statement, March 2021](#). Patients aged 16 to 18 years are also included in this specification but there may be occasions when a paediatric critical care service is more appropriate for such patients. Such pathways may have both planned and emergency requirements.

3.2 Population Needs

The demand for critical care may continue to grow due to an ageing population and advances in technology. The need for level 2 and level 3 care may increase with the increasing use of specialised services such as complex interventional cardiology, bone marrow and solid organ transplants and CAR-T.

NHS England commissions approximately 35% of the total critical care activity in England, however this seems to be declining year on year with clinical commissioning groups commissioning the remainder. In 2019/20, an average of 39,500 bed days were commissioned by NHS England per month. The majority of patients were aged 50 years and over (73%). Since 2014 the average annual increase in activity is about 3.8%. In the last uninterrupted year of activity, 2018/19, and the number of spells increased by 0.6% in that year with the number of bed days increasing by 2.2%.

3.3 Expected Significant Future Demographic Changes

The population in England is expected to increase by an average annual increase of ~1%. The number of people aged 75 or older is expected to double. Both will have an impact on demand for specialised critical care as this is likely to lead to increases in specialised interventions such as vascular procedures, CAR-T, arterial thrombectomy and cardiac procedures.

3.4 Evidence Base

- [Evaluation of modernisation of adult critical care services in England: time series and cost effectiveness analysis](#), British Medical Journal (2009).

- [Adding insult to injury: A review of the care of patients who died in hospital with a primary diagnosis of acute kidney injury](#) (acute renal failure), NCEPOD (2011).
- [Knowing the Risk, a review of the peri-operative care of surgical patients](#), NCEPOD (2011)
- [Care of the Critically Ill Woman in Childbirth; enhanced maternal care](#), RCoA (2018).
- [Higher Risk General Surgical Patient: Towards Improved Care for a Forgotten Group](#), Royal College of Surgeons /DH (2011).
- [Guidelines for the transport of the critically ill adult \(3rd Edition\)](#), Intensive Care Society (2011).
- [Prospectively defined indicators to improve the safety and quality of care for critically ill patients](#): a report from the Task Force on Safety and Quality of the European Society on Intensive Care Medicine ICM (2012)
- [Adult Critical Care National Specialty Report](#), Getting it Right First Time (2021)

4. Outcomes and Applicable Quality Standards

There will be a revision of the Quality Indicators and associated metrics in during 2022/23 leading to the publication of an updated service specification in 2023. Quality Statement – Aim of Service

The aims of the service are as follows:

- To ensure equity of access, equitable care and timely admission and discharge to and from adult critical care for all clinically appropriate patients.
- to ensure timely transfer of patients between hospitals to access speciality services when required.
- Support delivery of elective surgery across interdependent specialities through providing sufficient capacity and thereby avoid the postponement of planned surgery due to lack of a post-operative Critical Care bed.
- To ensure that Critical Care continues to be provided in the discrete locations of Intensive Care, High Dependency Care or combined Intensive care and High Dependency Care Units, recognising to the interdependence with other high care hospital settings such as Enhanced Perioperative Care.
- Ensuring an agile and responsive service model to meet fluctuating demand as part of a pre-planned and agreed surge framework.

4.2 Data reporting and monitoring requirements

- To utilise the Critical Care National Dataset (i.e. the Critical Care Minimum Dataset - [CCMDS](#)) to describe Adult Critical Care activity in one of 7 HRGs determined by the total number of organs supported on a daily basis within Critical Care (both ICU and HDU).
- To re-enforce the role played by [Critical Care Outreach](#) services in providing outreach to avoid unnecessary and avoidable transfer to critical care and supporting provider organisations in the implementation of their strategies to recognise the deteriorating patient, deliver response to deteriorating health on the wards and other settings and the delivery of effective follow up of patients post discharge from Critical Care.
- To continue the culture of continual quality improvement underpinned by reliable information and audit.
- To deliver a national dashboard for Adult Critical Care Services within NHS England's footprint to inform the clinical effectiveness debate at local, network and national levels.
- To improve functionality and increase the quality of life for patients recovering from a period of critical illness ([NICE Clinical Guideline 83](#) and [Quality Standard 158](#)).
- All units must participate in National Audits in Intensive Care Medicine, including [ICNARC's](#)

[Case Mix Programme.](#)

NHS Outcomes Framework Domains

Domain 1	Preventing people from dying prematurely	√
Domain 2	Enhancing quality of life for people with long-term Conditions	√
Domain 3	Helping people to recover from episodes of ill-health or following injury	√
Domain 4	Ensuring people have a positive experience of care	√
Domain 5	Treating and caring for people in safe environment and protecting them from avoidable harm	√

4.3 Quality Indicators

There will be a revision of the Quality Indicators and associated metrics in during 2022/23 leading to the publication of an updated service specification in 2023.

Number	Indicator	Data Source	Outcome Framework Domain	CQC Key question
Clinical Outcomes and Quality Indicators				
107 Quality Indicator	Standardised mortality ratio (using ICNARC risk adjustment model) for critical care patients	SSQD	1, 2,5	effective, safe

- 4.4
- Commissioned providers are required to participate in annual quality assurance and collect and submit data to support the assessment of compliance with the service specification as set out in Schedule 4A-C

5. Applicable Service Standards

5.1 Applicable Obligatory National Standards

The provider must comply with the following:

NICE

- [NICE Clinical Guideline 50: Acutely ill adults in hospital: recognising and responding to deterioration \(2007\)](#)
- [NICE Clinical Guideline 83: Rehabilitation after Critical Illness in Adults*](#) (2009)
- [NICE Clinical Guideline 103: Delirium: diagnosis, prevention, and management](#) (2010)
- [NICE Clinical Guideline 135: Organ Donation for transplantation: improving donor identification and consent rates for deceased organ donation](#) (2011)
- [NICE SG1 Safe staffing for nursing in adult inpatient wards in acute hospitals](#) (2014)
- [NICE DG39 Tests to help assess risk of acute kidney injury for people being considered for critical care admission](#) (2020)
- [NICE QS72 Renal Replacement Therapy services for adults](#) (2014)
- [NICE QS66 Intravenous fluid therapy in adults in hospital](#) (2014)

- [NICE NG94 Emergency and acute medical care in over 16s: service delivery and organisation \(2018\)](#)
- [NICE NG5 Medicines Reconciliation \(chapter 1\) \(2015\)](#)

NHS Estates

- [NHS Estate Guidance 2013 HBN 04/02](#)

Department of Health/NHS England

- [2006 Critical Care Dataset](#) launched (CCMDS).
- [The National Education and Competence Framework for Advanced Critical Care Practitioners](#), FICM (2008).
- Information Standards Notice amendment: CCMDS version 8 (2010).
- [Seven Day Services Clinical Standard](#), NHSE England (Sept 2017).

National Audit programmes in Intensive Care Medicine

- [ICNARC Case Mix Programme, National Dashboard for Adult Critical Care.](#)

5.2 Other Applicable National Standards to be met by Commissioned Providers

The provider should comply with:

- [Intensive Care Society, Levels of Care Consensus statement, March 2021.](#)
- [Guidelines for the transport of the critically ill adult \(3rd Edition\)](#), (2021).
- [Guidelines for Provision of Intensive Care Services \(GPICs\)](#) FICM/ICS (2019).

5.3 Other Applicable Local Standards

ODN and sub-speciality standards may apply

5.4 Evidence supporting the standards for Intensive Care Medicine

Guidelines for Provision of Intensive Care Services (FICM/ICS) (2015). This document has collated all relevant standards which apply to Adult Critical Care in the UK. Some of the recommendations are aspirational and as such provide a framework for teams to develop their services over several years.

- [NICE Guideline 5 "Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes"](#) (March 2015).
- [Guidelines for Provision of Intensive Care Services \(GPICs\)](#)
- [Operational productivity and performance in English NHS acute hospitals: Unwarranted variations](#) Carter Review (Feb 2016)
- [Transformation of seven-day clinical pharmacy services in acute hospitals](#) NHS England (Sept 2016).
- [Life After Critical Illness: A guide for developing and delivering aftercare services for critical ill patients](#), FICM (2021)

6. Designated Providers (if applicable)

Not applicable.

7. Abbreviation and Acronyms Explained

The following abbreviations and acronyms have been used in this document:

CCMDS: Critical Care Minimum Dataset

EPRR: Emergency Preparedness, Resilience and Response FICM: Faculty of Intensive Care Medicine

HDU: High Dependency Unit

ICNARC: Intensive Care National Audit and Research Centre ICS: Intensive Care Society

ICU: Intensive Care Unit

NCEPOD: National Confidential Enquiry into Patient Outcome & Death ODN: Operational Delivery Network

PHE ICC QIPP: Public Health England Intensive Care Quality Improvement Programme SCN: Strategic Clinical Network

Date published: 30/05/2022

Appendix 1

Change form for published Specifications and Products developed by Clinical Reference Group (CRGs)

Product name: Adult Critical Care Service Specification

Publication number: 220502S

Description of changes required

Describe what was stated in original document	Describe new text in the document	Section/ Paragraph to which changes apply	Describe why document change required	Changes made by	Date change made
This service specification covers the provisions of Adult Critical Care services	This service specification covers the provision of Adult Critical care services. The Identification Rules for Prescribed Specialised Services states that any adult critical care period that is linked with a specialised service spell is considered a commissioning responsibility of NHS England	Section 1: Scope Paragraph 1.1: Prescribed Specialised service	Reworded to clarify the commissioning arrangements across the Adult Critical Care pathway	Anna Vogiatzis/ CRG	November 2021
Adult Critical Care underpins all secondary and specialist adult services. Critical Care incorporates both intensive and high dependency care (ICU/HDU) stand alone or combined. Specifically, this service specification is for adults who have a specialised commissioned pathway which incorporates the need for or availability to Adult Critical Care (level 2 and 3 see 2009 Intensive Care Society: Levels of Care for definitions) as a component of their pathway of care. This service specification is not applicable to high care areas (level 1) provided by specialised services such as Post-Operative Anaesthetic Care Units, extended Recovery Units, Nephrology, Respiratory or Cardiology.	Adult Critical Care underpins all secondary and specialist adult services. Critical Care incorporates both intensive and high dependency care (ICU/HDU) stand alone or combined. Specifically, this service specification is for adults whose care incorporates the need for or availability of to level 2 or 3 Adult Critical Care as defined within the Intensive Care Society, Levels of Care Consensus statement, March 2021 as a component of their pathway of care, and recognises the continuum of levels of care throughout the pathway. This specification is not applicable to high care areas (level1) provided by specialised services such as Peri-operative Enhanced Care, Post-Operative Anaesthetic Care Units, Extended Recovery Units, Nephrology, Respiratory or Cardiology, however the interdependency between these services are recognised within the continuum of care. Level 2 critical care provided outside of an ICU/HDU setting falls outside the scope of this service specification.	Section 1: Scope Paragraph 1.2 Description	Update to the referenced document To recognise the continuum of levels of care for patients irrespective of commissioner		
Adult critical care services are commissioned by both NHS England and Clinical Commissioning Groups.	Adult critical care services are commissioned by both NHS England and Clinical Commissioning Groups/Integrated Care Systems. The standards and indicators should be applied to all critical care services	Section 2: Care Pathway and Clinical Dependencies	Moved Section on IR to section 1 Specialised service	AV/ CRG	November 2021

Describe what was stated in original document	Describe new text in the document	Section/ Paragraph to which changes apply	Describe why document change required	Changes made by	Date change made
The Identification Rules for Prescribed Specialised Services state that any adult critical care period that is linked with a specialist spell is considered specialised and is commissioned by NHS England.	within the defined model, irrespective of responsible commissioner.	Paragraph 2.1 Care Pathway			
Critical Care services are delivered within discrete locations such as Intensive Care or High Dependency Units, or combined units (where ICU and HDU are co-located). Sometimes these services are dedicated to one speciality e.g. post-cardiac surgery or neurosurgery/neurology, but increasingly services are integrated clinically into a single critical care service. Minimum standards for Adult Critical Care are consistent across all services irrespective of case-mix. Additional professional standards exist at network and national level and will not be covered in this specification.	Critical Care services are delivered within discrete locations such as Intensive Care or High Dependency Units, or combined units (where ICU and HDU are co-located). Sometimes these services are dedicated to one speciality e.g. post-cardiac surgery or neurosurgery/neurology, but increasingly services are integrated clinically into a single critical care service and these may be located in a separate geographical area within the hospital. mix. Additional professional standards exist at network and national level for these specialty focused ICUs and will not be covered in this specification.	Section 2: Care Pathway and Clinical Dependencies Paragraph 2.1	Removal of Minimum standards are consistent across all services irrespective of case-mix to make the document more succinct	AV/CRG	November 2021
Admission to Critical Care <ul style="list-style-type: none"> • The provider must implement a standardised approach to the detection and response to deteriorating health on general wards with reference to NICE Clinical Guideline 50. • Admission to Critical Care must be timely and meet the needs of the patient. Admission must be within 4 hours from the decision to admit (unscheduled admissions). • The provider should ensure appropriate planning of elective surgical admissions to critical care to avoid unnecessary postponement of surgery. • The decision to admit a patient to Critical Care must be made by a Consultant in Intensive Care Medicine. 	Admission to Critical Care <ul style="list-style-type: none"> • The provider must implement a standardised approach to the detection and response to deteriorating health on general wards, enhanced care areas or Emergency departments with reference to NICE Clinical Guideline 50. • Admission to Critical Care must be timely and meet the needs of the patient. Admission must be within 4 hours from the decision to admit wherever possible and should adhere to the appropriate standards • The decision to admit a patient to Critical Care must be made by a Consultant in Intensive Care Medicine. • The transfer of a level 3 patient for comparable critical care at another acute hospital (non- clinical transfer) must be avoided wherever possible and should be carried out in line with the Adult Critical Care 	Section 2: Care Pathway and Clinical Dependencies Paragraph 2.1 Section 2: Care Pathway and Clinical Dependencies Paragraph 2.1	Updated to include link to referenced document and additional of “emergency departments” as point of clarification Addition of link to Adult Critical Care Transfer service specification and statement to set out transfers must be carried out in line with this	AV/ CRG AV/CRG	November 2021 November 2021

Describe what was stated in original document	Describe new text in the document	Section/ Paragraph to which changes apply	Describe why document change required	Changes made by	Date change made
<p>discussed with a Consultant in Intensive Care Medicine.</p> <ul style="list-style-type: none"> All admissions to Critical Care must be seen and reviewed within 12 hrs by a Consultant in Intensive Care Medicine. Patients in Critical Care should receive twice daily ward reviews by a Consultant in Intensive Care Medicine (in line with 7-day standards) (Domains 1 and 3). In addition, there should be multidisciplinary 7-day input available from the extended team (e.g. microbiology, pharmacy, physiotherapy and where applicable, dietetics and speech and language). Clinical pharmacists supporting delivery of medicines optimisation in critical care areas must provide patient-centred care, including: medicines reconciliation (on admission and discharge), independent patient medication review with attendance of multi-professional ward rounds and professional support activities, including: clinical guidelines, medication-related clinical incident reviews and clinical audit and evaluation. <p>All providers must provide a nursing establishment determined by the following nurse to patient ratio:</p> <ul style="list-style-type: none"> Level 3 patients have 1:1 nursing ratio for direct patient care Level 2 patients have 1:2 nursing ratio for direct patient care 	<ul style="list-style-type: none"> Level 3 patients have 1:1 Critical Care nursing ratio for direct patient care Level 2 patients have 1:2 Critical Care nursing ratio for direct patient care <p>Critical Care Workforce Model The core critical care workforce model must align to the guidelines set out in GPICS</p> <ul style="list-style-type: none"> Each provider must have a designated Clinical Director/lead Consultant, matron, and advanced level pharmacist for Critical Care. All professional representatives should be actively engaged in their local Adult Critical Care Operational Delivery Network (ODN). Clinical pharmacists are essential practitioners within the critical care multi-professional team and are vital to the routine delivery in critical care practice of medicines optimisation. Care within Critical Care must be led by a Consultant in Intensive Care Medicine (as defined by the Faculty of Intensive Care Medicine). Where providers do not meet this standard consideration should be given as to how this may be achieved or mitigated through involvement in their local Adult Critical Care ODN to facilitate collaboration between stakeholders. Consultants must be freed from all other clinical commitments when covering Intensive Care and this must include other on-call duties. A Consultant in Intensive Care Medicine must be available 24/7 and be able to attend within 30 minutes. Clinical pharmacists supporting delivery of medicines optimisation in critical care areas must provide patient-centred care, including: medicines reconciliation (on admission and 	<p>Section 2: Care Pathway and Clinical Dependencies</p> <p>Paragraph 2.2</p>	<p>Staffing description moved to new Workforce model and the narrative updated to reflect service model</p>	<p>AV/CRG</p>	

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<p>Nursing staff should be supported by an appropriately sized critical care educational team. The size of the team should be determined locally, however there must be access to a clinical educator.</p> <p>Additionally:</p> <ul style="list-style-type: none"> • There must be a training strategy in place to achieve a minimum of 50% of nursing staff with a post-registration award in critical care nursing. • Each Critical Care Unit must aim to have a supernumerary shift clinical coordinator 24/7. • Critical Care services must have an effective clinical governance platform and robust data collection system. This must encompass: <ul style="list-style-type: none"> - Participation in national audit programmes for Adult Critical Care (the Intensive Care National Audit and Research Centre (ICNARC) Case Mix Programme, including patient reported outcome measures (PROMS) when available; Public Health England Infection in Critical Care Quality Improvement Programme (ICQIP), including the nationally agreed dashboard. Note: The Standardised Mortality Ratio is included in this dashboard. • In addition to the NHS England self-assessment process, providers are required to participate in activities of the unit's local ODN for Adult Critical Care, including peer review. • Providers should: <ul style="list-style-type: none"> ○ be working towards compliance with NICE Clinical Guideline 83 and Quality Standard 	<p>discharge), independent patient medication review with attendance of multi-professional ward rounds and professional support activities, including: clinical guidelines, medication-related clinical incident reviews and clinical audit and evaluation.</p> <p>Nursing staff should be supported by an appropriately sized critical care educational team which is compliant with GPICs standards, as a minimum of 1:75 or ideally 1:50. The size of the team should be determined locally, however there must be access to a clinical educator.</p> <p>Additionally:</p> <ul style="list-style-type: none"> • There must be a training strategy in place to achieve a minimum of 50% of nursing staff with a post-registration award in critical care nursing. • Each Critical Care Unit must aim to have a supernumerary shift clinical coordinator 24/7. • Critical Care services must have an effective clinical governance platform and robust data collection system. This must encompass participation in national audit programmes for Adult Critical Care (the Intensive Care National Audit and Research Centre (ICNARC) Case Mix Programme, including patient reported outcome measures (PROMS) when available. <p>Each unit must have a workforce strategy and delivery plan in place which includes Workforce development and implementing new models of working and supporting workforce health and wellbeing</p> <p>In addition to the NHS England self-assessment process, providers are required to participate in activities of the unit's local ODN for Adult Critical Care, including peer review and participation in the National</p>	<p>Section 2: Care Pathway and Clinical Dependencies</p> <p>Paragraph 2.2</p>	<p>Staffing description moved to new Workforce model and the narrative updated to reflect service model</p> <p>Addition of reference to Workforce strategy *under development</p>	<p>AV/CRG</p>	

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<p>158. As a minimum, this should include having benchmarking data and a 'SMART' action plan in place;</p> <ul style="list-style-type: none"> • be able to demonstrate effective implementation of evidenced based practice within Intensive Care Medicine. • be able to evidence effective engagement with patients and their families and carers. • be able to demonstrate that they have a risk register in place together with an associated audit calendar which is regularly updated and acted upon. • have effective strategies in place to minimise hospital-acquired infections within Critical Care and publish central venous catheter-related blood stream infection rates. • be able to demonstrate avoidance of readmission to Critical Care (ICU and HDU) within 48hrs of discharge. • Each Critical Care Unit must submit capacity data at least twice a day to the national Directory of Services bed management system. 	<p>Audit programme for ICM run by ICNARC (Case mix Programme and ad hoc audits relating to Quality and Safety)</p> <p>Providers should:</p> <ul style="list-style-type: none"> • be compliant with NICE Clinical Guideline 83: Rehabilitation after Critical Illness in Adults and the associated NICE Quality Standard • participate in Public Health England Infection in Critical Care Quality Improvement Programme (ICQIP) • be able to evidence effective engagement with patients and their families and carers. • be able to demonstrate that they have a risk register in place together with an associated audit calendar which is regularly updated and acted upon. • have effective strategies in place to minimise hospital-acquired infections within Critical Care and publish central venous catheter-related blood stream infection rates. <ul style="list-style-type: none"> • be able to demonstrate avoidance of readmission to Critical Care (ICU and HDU) within 48hrs of discharge. • Each Critical Care Unit must submit capacity data at least twice a day to the national Directory of Services bed management system. 	<p>Section 2: Care Pathway and Clinical Dependencies</p> <p>Paragraph 2.2</p>	<p>Links to referenced documents</p>	<p>AV/CRG</p>	
<p>Discharge from Critical Care</p> <p>Transfer from Critical Care to a ward must be formalised within the handover. The handover must satisfy the requirements in NICE Clinical Guideline 50 and demonstrate progress towards compliance with NICE Quality Standard 83.</p> <ul style="list-style-type: none"> • Transfer from Critical Care to a ward must occur between the hours of 07.00hrs and 21.59 hrs, ideally between 07.00hrs and 19.59hrs. 	<p>Discharge from Critical Care</p> <p>Transfer from Critical Care to a ward must be formalised within the handover. The handover must satisfy the requirements in NICE Clinical Guideline 50 and demonstrate progress towards compliance with NICE Quality Standard 83.</p> <ul style="list-style-type: none"> • Transfer from Critical Care to a ward must occur between the hours of 08.00hrs and 21.59 hrs, ideally between 08.00hrs and 	<p>Section 2: Care Pathway and Clinical Dependencies</p> <p>Paragraph 2.3</p>	<p>Links to referenced documents added</p> <p>Change of transfer times to include "ideally between 08:00 and 19:59 to reflect optimal staffing and patient experience"</p>	<p>AV/CRG</p>	<p>November 2021</p>

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<ul style="list-style-type: none"> Discharge from Critical Care to ward level care must occur within 4 hours of the decision to discharge. Patients undergoing specialist care should be repatriated to a Trust closer to their home when clinically appropriate to continue their reablement. Such discharge should occur within 48hrs of the decision to repatriate and the decision to repatriate should not be a reason to delay discharge from critical care to a ward bed. 	<p>19.59hrs in line with the relevant quality indicator</p> <ul style="list-style-type: none"> Discharge from Critical Care to ward level care must be timely and ideally occur within 4 hours of the decision to discharge. Discharge from Adult Critical Care directly to home as a result of lack of availability of ward beds must be avoided Patients undergoing specialist care should be repatriated to a Trust closer to their home when clinically appropriate to continue their reablement. Such discharge should occur within 48hrs of the decision to repatriate and the decision to repatriate should not be a reason to delay discharge from critical care to a ward bed. 				
<ul style="list-style-type: none"> Speciality Intensive Care Units must have their speciality specific surgical service co-located with other interdependent services, e.g. vascular surgery with interventional vascular radiology, nephrology and interventional cardiology; obstetrics with general surgery. 	<ul style="list-style-type: none"> Speciality Intensive Care Units must have their speciality specific surgical service co-located with other interdependent services, e.g. vascular surgery with interventional vascular radiology, nephrology and interventional cardiology, obstetrics with general surgery and neurosciences centres with thrombectomy and stroke services. 	Section 2 Specialist Intensive care units	Updated to include thrombectomy and stroke to reflect changes in services since last specification published	AV/CRG	November 2021
<p>Critical Care ODNs fulfil several roles including:</p> <ul style="list-style-type: none"> Supporting providers with knowledge, expertise and practical support to redesign their services; enhancing patient safety; patient experience and partnership working. Supporting commissioners in the delivery of their commissioning functions, for example: <ul style="list-style-type: none"> providing peer review functionality; 	<p>Critical Care ODNs fulfil several roles including:</p> <ul style="list-style-type: none"> Supporting providers with knowledge, expertise, and practical support to redesign their services; enhancing patient safety; patient experience and partnership working. Supporting commissioners in the delivery of their commissioning functions, for example: <ul style="list-style-type: none"> providing peer review functionality. assisting with service redesign/delivery. supporting quality improvement initiatives. providing local knowledge to support funding models and commissioning 	Relationship with ODNs	Updated to reflect the need for ODNs to support regions in responding to unforeseen events Addition of link to other ODNs (Eg Burns, Major Trauma)	AV/CRG	November 2021

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<ul style="list-style-type: none"> - assisting with service redesign/delivery; - supporting quality improvement initiatives; - providing local knowledge to support funding models and commissioning intentions inherent in their sustainability and transformation partnership (STP) plans where expertise and funding exist. • Their role is also increasingly relevant to supporting the very small number of geographically remote critical care units (there are 16 providers with an average distance of 80 KM from a neighbouring unit) to develop a service model that maintains equity of access and breadth of service for their population and provides sustainable solutions for these rural units. • Assisting providers and commissioners in the delivery of their Emergency Preparedness, Resilience and Response (EPRR) plans. 	<p>intentions inherent in their sustainability and transformation partnership (STP) plans where expertise and funding exist.</p> <ul style="list-style-type: none"> ○ Supporting the NHSE/I region in developing plans and regional response in preparedness for unforeseen events. Ensure there are links with related ODNs e.g. Trauma, Burns Networks), UECs, STPs etc, to ensure a joined up approach to critical care <p>Their role is also increasingly relevant to supporting the very small number of geographically remote critical care units (there are 16 providers with an average distance of 80 KM from a neighbouring unit) to develop a service model that maintains equity of access and breadth of service for their population and provides sustainable solutions for these rural units.</p>				
<p>3.1 Population Covered by This Specification</p> <p>The service outlined in this specification is for patients ordinarily resident in England or otherwise the commissioning responsibility of the NHS England (as defined in 'Who Pays? Establishing the Responsible Commissioner' and other Department of Health guidance relating to patients entitled to NHS care or exempt from charges).</p> <p>Specifically, this service is for adults who have or are anticipated to require Adult Critical Care as a component of their pathway of care. Adult</p>	<p>Links to updated documents added</p>				

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<p>is defined as 18 years or older and critical care is defined by the level of care a patient requires as described in "Levels of Care". This specification relates to patients requiring levels 2 and 3 critical care. Patients aged 16 to 18 years are also included in this specification but there may be occasions when a paediatric critical care service is more appropriate for such patients. Such pathways may have both scheduled and emergency requirements</p>					
<p>3.1 Population Needs The demand for critical care will continue to grow due to an ageing population and advances in technology. The need for level 2 and level 3 care will increase with the increasing use of specialised services such as complex interventional cardiology, bone marrow and solid organ transplants.</p> <p>NHS England commissions approximately 43% of the total adult critical care activity in England with clinical commissioning groups commissioning the remainder. In 2016/17 an average of 41,000 bed days were commissioned by NHS England per month. The majority of patients were aged 50 years and over (77%). Since 2014 the average annual increase in activity is about 3.8%.</p>	<p>3.1 Population Needs The demand for critical care may continue to grow due to an ageing population and advances in technology. The need for level 2 and level 3 care may increase with the increasing use of specialised services such as complex interventional cardiology, bone marrow and solid organ transplants and CAR-T.</p> <p>NHS England commissions approximately 35% of the total critical care activity in England, however this seems to be declining year with clinical commissioning groups commissioning the remainder. In 2019/20, an average of 39,500 bed days were commissioned by NHS England per month. The majority of patients were aged 50 years and over (73%). Since 2014 the average annual increase in activity is about 3.8%. In the last uninterrupted year of activity, 2018/19, and the number of spells increased by 0.6% in that year with the number of bed days increasing by 2.2%.</p>	3.1	<p>Updated to include CAR-T as new treatment</p> <p>Updated data to reflect changed in spells, and commissioning balance</p>	AV/CRG	November 2021
<p>3.1 Expected Significant Future Demographic Changes The population in England is expected to increase by 5.9% between mid-2016 and mid-2026, an average annual increase of ~1%. The number of older people is expected to double. Both will have an impact on demand for specialised critical care as this is likely to lead to</p>	<p>3.1 Expected Significant Future Demographic Changes The population in England is expected to increase by an average annual increase of ~1%. The number of older people is expected to double. Both will have an impact on demand for specialised critical care as this is likely to lead to increases in specialised interventions such as vascular procedures, CAR-T, arterial thrombectomy and cardiac procedures.</p>	3.1	Updated forecast demand to reflect current changes and remove growth as this is not evidenced in data	AV/CRG	November 2021

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increases in specialised interventions such as arterial thrombectomy and cardiac procedures.					
<p>3.1 Evidence Base This specification references existing standards (section 5).</p>	<p>3.2 Evidence Base</p> <ul style="list-style-type: none"> • Evaluation of modernisation of adult critical care services in England: time series and cost effectiveness analysis, British Medical Journal (2009) • Adding insult to injury: A review of the care of patients who died in hospital with a primary diagnosis of acute kidney injury (acute renal failure), NCEPOD (2011) • Knowing the Risk, a review of the peri-operative care of surgical patients, NCEPOD. (2011) • Care of the Critically Ill Woman in Childbirth: enhanced maternal care, RCoA (2018) • Higher Risk General Surgical Patient: Towards Improved Care for a Forgotten Group, Royal College of Surgeons /DH (2011) • 2011 Guidelines for the transport of the critically ill adult (3rd Edition). • Prospectively defined indicators to improve the safety and quality of care for critically ill patients: a report from the Task Force on Safety and Quality of the European Society on Intensive Care Medicine ICM (2012) 	3.2	Updated to include links to referenced documents	AV	November 2021
<p>4.1 Quality Statement – Aim of Service The aims of the service are as follows:</p> <ul style="list-style-type: none"> • To ensure equity of access, equitable care and timely admission and discharge to and from adult critical care for all appropriate patients. • Avoidance of postponement of elective surgery due to lack of a post-operative Critical Care bed. 	<p>4.1 Quality Statement – Aim of Service The aims of the service are as follows:</p> <ul style="list-style-type: none"> • To ensure equity of access, equitable care and timely admission and discharge to and from adult critical care for all clinically appropriate patients. • to ensure timely transfer of patients between hospitals to access speciality services when required • Support delivery of elective surgery across interdependent specialities 	4.1	<p>Updated to set out the need for units to be agile and responsive in surge planning and delivery</p> <p>Addition of Data reporting and monitoring requirements as a</p>	AV/CRG	November 2021

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<p>To ensure that Critical Care continues to be provided in the discrete traditional locations of Intensive Care, High Dependency Care or combined Intensive care and High Dependency Care Units, recognising that in exceptional circumstances it may extend to other high care hospital settings as part of a pre-planned and agreed surge framework.</p> <ul style="list-style-type: none"> To utilise the Critical Care National Dataset (i.e. the Critical Care Minimum Dataset - CCMDS) to describe Adult Critical Care activity in one of 7 HRGs determined by the total number of organs supported during a spell of Critical Care (both ICU and HDU). To re-enforce the role played by Critical Care Outreach services in providing outreach to avoid unnecessary and avoidable transfer to critical care and supporting provider organisations in the implementation of their strategies to recognise the deteriorating patient, deliver response to deteriorating health on the wards and the delivery of effective follow up of patients post discharge from Critical Care. To continue the culture of continual quality improvement underpinned by reliable information and audit. To deliver a national dashboard for Adult Critical Care Services within NHS England's footprint to inform the clinical effectiveness 	<p>through providing sufficient capacity and thereby avoid the postponement of planned surgery due to lack of a post-operative Critical Care bed.</p> <ul style="list-style-type: none"> To ensure that Critical Care continues to be provided in the discrete locations of Intensive Care, High Dependency Care or combined Intensive care and High Dependency Care Units, recognising to the interdependence with other high care hospital settings such as Enhanced Perioperative Care Ensuring an agile and responsive service model to meet fluctuating demand as part of a pre-planned and agreed surge framework. <p>Data reporting and monitoring requirements</p> <ul style="list-style-type: none"> To utilise the Critical Care National Dataset (i.e. the Critical Care Minimum Dataset - CCMDS) to describe Adult Critical Care activity in one of 7 HRGs determined by the total number of organs supported on a daily basis within Critical Care (both ICU and HDU). To re-enforce the role played by Critical Care Outreach services in providing outreach to avoid unnecessary and avoidable transfer to critical care and supporting provider organisations in the implementation of their strategies to recognise the deteriorating patient, deliver response to deteriorating health on the wards and other settings and the delivery of effective follow up of patients post discharge from Critical Care. To continue the culture of continual quality improvement underpinned by reliable information and audit. 		<p>separate section for clarification</p>		

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<p>debate at local, network and national levels.</p> <ul style="list-style-type: none"> To improve functionality and increase the quality of life for patients recovering from a period of critical illness (NICE Clinical Guideline 83 and Quality Standard 158). All units must participate in National Audits in Intensive Care Medicine, including ICNARC's Case Mix Programme and PHE ICCQIP. 	<ul style="list-style-type: none"> To deliver a national dashboard for Adult Critical Care Services within NHS England's footprint to inform the clinical effectiveness debate at local, network and national levels. To improve functionality and increase the quality of life for patients recovering from a period of critical illness (NICE Clinical Guideline 83 and Quality Standard 158). All units must participate in National Audits in Intensive Care Medicine, including ICNARC's Case Mix Programme 				
<p>NICE Guidance NHS Estates Dept of Health/NHS England National Audit programmes in Intensive Care Medicine Other Applicable National Standards to be met by Commissioners Providers</p>	<p>no change except to add links to references</p>				
<p>Quality Indicators</p>	<p>Addition of statement to advise Quality indicators and associated metrics will be updated in 2022/23</p>	<p>8</p>	<p>Updated to reflect current quality metrics relevant to adult critical care.</p>	<p>AV/CRG/QST</p>	<p>Jan 2022</p>