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NHS Wales Health Collaborative

NHS Wales Health Collaborative
Service Specification

Adult Critical Care Services in Wales

March 2023

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Useful Abbreviations

WHC	Welsh Health Circular
FICM	Faculty of Intensive Care Medicine
NICE	National Institute of Health and Care Excellence
ICS	Intensive Care Society
WICS	Welsh Intensive Care Society
RCOA	Royal College of Anaesthetists
HARP	Healthcare Associated Infection and Antibiotic Resistance Programme
ICNARC	Intensive Care National Audit and Research Centre
PROM	Patient Reported Outcome Measure
PREM	Patient Reported Experience Measure
CCMDS	Critical Care Minimum Data Standards
GPICS	Guidelines for the Provision of Intensive Care Services
ACCP	Advanced Critical Care Practitioner
PICUPS	Post-ICU Presentation Screening Tool
RCS	Rehabilitation Complexity Scale
IMTP	Integrated Medium Term Plan
HCS	Health Care Standard
PEDW	Patient Episode Database for Wales

Statement

This document has been developed to inform the provision of adult critical care services. In creating this document, the Welsh Critical Care Network Board has reviewed the requirements and standards of care that are expected to deliver this service. Further work is ongoing to establish a national level of critical care capacity. This work is being undertaken by the network in collaboration with health boards.

Disclaimer

The Welsh Critical Care Network Board and NHS Wales Health Collaborative assume that healthcare professionals will use their clinical judgment, knowledge and expertise when deciding whether it is appropriate to apply this specification.

This document may not be clinically appropriate for use in all situations and does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian where appropriate.

The Welsh Critical Care Network Board and NHS Wales Health Collaborative disclaim any responsibility for damages arising out of the use or non-use of this specification.

1. Introduction

1.1 Background

Critical care encompasses the care that is provided to the sickest patients in the hospital system. Traditionally, care would be provided in intensive care and high dependency units, but over the years the scope of critical care has expanded to include offering earlier intervention for deteriorating patients through critical care outreach and acute intervention teams and support post-critical care stay with follow-up and rehabilitation, tailored to the needs of critically ill patients.

Hospitals in Wales have some of the lowest numbers of critical care beds per head of population in the UK and Western Europe. Several studies by both academia and NHS Wales, have found that critical care units in Wales are under-resourced and overstretched on a regular basis:
Task and Finish Group on Critical Care - Final Report
An Assessment of Unmet needs for Critical Care in Wales

Recommendations state that critical care units should run at an average of 75% bed occupancy to allow sufficient flexibility for surges in demand. Prior to the Covid-19 pandemic critical care units in Wales were regularly operating at 80% average bed occupancy and above, with several hospitals operating at over 100% bed occupancy by pressing beds into critical care service in other parts of the hospital. Due to the increasingly elderly population, improvements in medical treatment and higher public expectations, critical care demand is expected to rise by around 5% year on year.

Historically, critical care capacity has been calculated based upon the size of the local catchment population. More detailed mathematical modelling is needed to provide a much better method for estimating numbers of beds required in each unit. It is important that the number of beds is tailored to the case-mix each individual hospital treat, cognisant of the increasing number of centralised services. Each unit will need to carry out a needs-assessment exercise to calculate the number of critical care beds required to support the services and activities it offers. Health Boards will also be required to evaluate the impact of the development of other high-care areas such as PACU/step down beds and respiratory high care units. Whatever methodology is used, an increase from the current number of critical care beds in Wales both now and in the future will be required.

Critical care in Wales has been subject to a high level of attention and scrutiny for many years. Following the development of "Quality Requirements for Critical Care" in 2005 the Welsh Government directed the establishment of critical care networks across Wales. In 2017, those networks were merged into one critical care network for Wales. The network has supported health boards and trusts in Wales with implementation of the Delivery Plans for the Critically Ill and worked with Welsh Government to complete a task and finish group process focusing on some key areas for improvement in care for the critically ill.

1.2 Aims and objectives

The aim of this document is to describe the specification to be achieved, to provide a safe and effective adult critical care service in Wales, in line with the commitments and quality attributes described within the Quality Statement for Care of the Critically ill.

Adult general critical care services are planned by health boards across NHS Wales. All health boards excluding Powys Teaching Health Board provide critical care services for their population.

The objective of this specification is to:

- Provide safe, high quality and consistent services to critically ill patients across NHS Wales
- Ensure provision of sufficient critical care capacity to meet the needs of the Welsh population
- Ensure that critical care services meet requirement standards set out by the NHS and professional bodies e.g. National Institute of Health and Care Excellence (NICE), Faculty of Intensive Care Medicine (FICM) for safe and effective services
- Set out a clear standard for provision of critical care services for Welsh patients.

1.3 Relationship with other documents

This document should be read in conjunction with the following documents:

The Faculty of Intensive Care Medicine:

Guidelines for the Provision of Intensive Care Services (Edition 2) The Faculty of Intensive Care Medicine (ficm.ac.uk)

Welsh Government strategic documents:

A Healthier Wales: long-term plan for health and care in Wales.
WHC 2016(041) Revised guidelines for transfer of the critically ill adult
Task and Finish Group on Critical Care: Final Report July 2019
Written Statement: Quality Statement for Care of the Critically ill (7 October 2021) gov.wales
Care of the critically ill: quality statement | GOV.WALES
National Clinical Framework: A learning heath and care system (gov.wales)
Quality and Safety Framework
Transition and handover from children's to adult health services GOV.WALES
All Wales Rehabilitation Framework: Principles to achieve a person-centred value-based approach (2022)

National Institute for Clinical Excellence:

2007 NICE Clinical Guideline 50: Acutely ill Patients in Hospital
2009 NICE Clinical Guideline 83: Rehabilitation after Critical Illness
2016 NICE Clinical Guideline 135: Organ Donation for transplantation: improving donor identification and consent rates for deceased organ donation
2017 NICE Quality Standard Rehabilitation after Critical Illness in Adults
2019 NICE Clinical Guideline 103: Delirium: diagnosis, prevention and management

1.4 Scope

This specification includes the provision of outreach and acute intervention for early identification and admission-prevention of deteriorating patients, general adult critical care services within a critical care unit, and follow-up and rehabilitation after the acute general critical care stay.

The specification can be applied to specialist adult critical care areas at the discretion of health boards planning those services where specifications do not otherwise exist, or patients would benefit from standardisation of service.

This specification is not applicable to high care areas provided by other services such as post-operative/anaesthetic care units (PACU), extended recovery units, nephrology, respiratory, burns or cardiology, enhanced care areas, as defined by the Faculty of Intensive Care Medicine in their 2020 document *Enhanced Care: Guidance on service development in the hospital setting*[1] should be specified according to that guidance.

This service specification will cover provision of services to critically ill patients who are:

a) Cared for within a designated critical care facility, or
b) Cared for by a clinical team comprised of staff from the critical care service.

[1] Faculty of Intensive Care Medicine 2020 https://www.ficm.ac.uk/sites/ficm/files/documents/2021-10/enhanced_care_guidance_final_-_may_2020-.pdf accessed 04/02/22

2. Service Delivery

2.1 Levels of Care

Level 0 (ward care):

- Patients whose needs can be met through normal ward care in an acute hospital
- Patients who have recently been relocated from a higher level of care, but their needs can be met on an acute ward with additional advice and support from the critical care outreach team
- Patients who can be managed on the ward but remain at risk of clinical deterioration.

Level 1 (enhanced care):

- Patients requiring more detailed observations or interventions, including basic support for a single organ system and those ‘stepping down’ from higher levels of care
- Patients requiring interventions to prevent further deterioration or rehabilitation needs which cannot be met on a normal ward
- Patients who require ongoing interventions (other than routine follow up) from critical care outreach teams to intervene in deterioration or to support escalation of care
- Patients needing a greater degree of observation and monitoring that cannot be safely provided on a ward, based on clinical circumstances and ward resources
- Patients who would benefit from Enhanced Perioperative Care.

Level 2 (critical care):

- Patients requiring increasing levels of observations or interventions (beyond level 1) including basic support for two or more organ systems and those ‘stepping down’ from higher levels of care
- Patients requiring interventions to prevent further deterioration or rehabilitation needs, beyond that of level 1
- Patients needing two or more basic organ system monitoring and support
- Patients needing one organ systems monitored and supported at an advanced level (other than advanced respiratory support)
- Patients needing long term advanced respiratory support
- Patients who require level 1 care for organ support but require enhanced nursing for other reasons, maintaining their safety if severely agitated
- Patients needing extended post-operative care, outside that which can be provided in enhanced care units: extended postoperative observation is required either because of the nature of the procedure and/or the patient’s condition and co-morbidities
- Patients with major uncorrected physiological abnormalities, whose needs cannot be met elsewhere
- Patients requiring nursing and therapies input more frequently than available in level 1 areas.

Level 3 (critical care):

- Patients needing advanced respiratory monitoring and support alone
- Patients requiring monitoring and support for two or more organ systems at an advanced level
- Patients with chronic impairment of one or more organ systems sufficient to restrict daily activities (co-morbidity) and who require support for an acute reversible failure of another organ system
- Patients who experience delirium and agitation in addition to requiring level 2 care
- Complex patients requiring support for multiple organ failures, this may not necessarily include advanced respiratory support.

2.2 Admission Criteria

Admission of unscheduled patients must take place within four hours from the decision to admit (GPICS-2 standard 3.1.3).

Providers must ensure appropriate planning of high-risk 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 (GPICS-2 standard 3.1.1).

All admissions must have a handover between the team bringing the patient to critical care and the receiving team.

Patients must have a clear and documented treatment escalation plan (GPICS2).

Patients must be reviewed, in person, by a consultant in Intensive Care Medicine as urgently as the clinical state dictates and always within 12 hours of admission to critical care (GPICS2).

The transfer of a level 3 patient for comparable critical care at another acute hospital for capacity purposes (non-clinical transfer) must be avoided (GPICS-2 standard 3.1.6). All transfers of critically ill patients must be undertaken in accordance with the Design for Life: Welsh Guidelines for the Transfer of the Critically ill Adult.

2.3 Service Model

Critical care services are services that are delivered to critically ill patients and those recovering from a critical illness regardless of the setting. They can be delivered within discrete locations such as an intensive care unit (ICU), a high dependency unit (HDU), or units where ICU and HDU beds are co-located.

Critical care services are also often delivered to deteriorating patients at ward level by staff with specialist critical care training via an outreach or acute intervention service. Critical care follow-

up and rehabilitation services are also provided both during and following a critical care episode, in the intensive care unit, on wards, in the community and in follow-up clinics.

Occasionally, critical care services are dedicated to one speciality e.g. post-cardiac surgery or neurosurgery/neurology, but increasingly services are integrated into a single critical care service.

Minimum standards for delivery of adult critical care are consistent across all services irrespective of specialty. Additional professional standards exist at network specialty level and will not be covered in this specification.

All patients admitted to a critical care unit must be included in the Critical Care Minimum Data Set (CCMDS) to collect levels of care and the Intensive Care National Audit and Research Centre (ICNARC) Case Mix Programme to collect outcome data (GPICS-2 1.1.1 and 1.2.2). Adequate administrative support must be provided to ensure timely entry of data (GPICS-2.12).

Critical care facilities must be fit for purpose and comply with national standards for physical facilities or have a timeline for when national standards will be met (GPICS-2 standard 1.3.1, Recommendation 1.3.1). Critical care equipment must be provisioned on a 24/7 and emergent basis, although the precise requirements will be determined by the characteristics of the anticipated patient population (GPICS-2 standard 1.1.5).

2.4 Outreach

In delivering 'critical care without walls,' health boards must have processes in place to ensure that time-critical resuscitation, diagnosis, and intervention happen regardless of the critically ill patient's location.

GPICS-2 sets out the requirement for "a hospital wide, standardised approach to the detection of the deteriorating patient and a clearly documented escalation process" (standard 3.3.1). The Task and Finish Group on Critical Care[2] describe in more detail the processes for identifying deteriorating patients and ensuring those patients have access to trained, experienced, and dedicated staff to support their treatment. The group defined a set of standards for the operation of critical care outreach, which should be observed in all hospitals providing care to patients who are critically ill.

Providers must:

1. Have ceilings of treatment processes created and used with all patients admitted through unscheduled care to aid early identification of patients for escalation.
2. Use the National Early Warning Score (NEWS) 2 in all clinical areas to allow rapid, objective detection of early acute deterioration.
3. Have a hospital specific Standard Operating Procedure (SOP) that defines the response to acute deterioration. This will include details of the speed and urgency of response, the personnel involved and a jump call procedure. This policy will apply 24/7.

[2] Task and Finish Group on Critical Care (July 2019). Welsh Government.

4. Define and/or resource a team to deliver this rapid response system 24/7.
5. Critical Care Outreach, Hospital at Night, Nurse Practitioners, Resuscitation Practitioners etc., should be integrated into this team to ensure efficient use of existing resources.
6. Health boards agree appropriate risk management plans to ensure adequate resource to always respond to acutely deteriorating patients, even when critical care unit or hospital site pressures are high.
7. Ensure that rapid response team staff are appropriately trained and have regular competency assessments in line with the forthcoming National Critical Care Outreach Credential and Career Framework.
8. Ensure team staff have ring-fenced time to train ward staff.
9. Ensure team staff keep a record of their clinical work and record clinical outcomes on the patients they see to demonstrate improvement. These metrics should be clinically relevant and standardised across Wales.

Providers offering a critical care outreach or acute intervention services must do so in line with the National Outreach Forum's *Quality and Operational Standards for the Provision of Critical Care Outreach Services.*
Providers offering critical care outreach service must use the data set recommended by the Welsh Outreach Forum.

2.5 Care on the Critical Care Unit

Safe and effective patient-centred critical care requires the participation of a fully staffed, multidisciplinary clinical team. This includes sufficient medical, nursing, dietetic, occupational therapy, pharmacy, physiotherapy, psychology and speech and language therapy staff to meet the needs of patients.

Critical care should be co-located with the following essential services - provided on the same site so that they are available 24/7:

- General Internal Medicine
- Radiology: CT, ultrasound, plain x-ray
- Echocardiography/ECG
- General Surgery (for any site with general surgical admissions)
- Transfusion services
- Essential haematology/ biochemistry service and point of care service
- Physiotherapy
- Pharmacy
- Medical Engineering services
- Units that offer specialised services 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.
- Access to theatres and a competent resident clinician (Anaesthetist / Intensive Care Medicine) with advanced airway skills should also be available 24/7 along with informatics support.

The following interdependent services must be available 24/7 but need not be co-located on-site. Agreements should specify response times for these specialities, which will range from

being available within 30 minutes to a maximum of four hours, dependent on the case mix of the patient population:

- Interventional vascular and non-vascular radiology
- Neurosurgery
- 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
- 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.

Each provider must have a designated clinical director/lead consultant, matron/senior nurse, and a lead health professional from each of the other professions listed in the first paragraph of the section above, all of whom should be actively engaged with the Critical Care Network.

The care of the patient in critical care should be delivered by an intensive care physician operating a closed-unit model.

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, provision must be made to achieve this through collaboration between sites.

Consultants must be freed from all other clinical commitments when covering intensive care and this must include other on-call duties.

Unit level medical staffing and medical care must be delivered in line with the standards set out in GPICS-2.1 and 3.1. The patients must remain under an intensive care consultant as their named physician (GPICS-2.13).

Trainee medical staffing and advanced critical care practitioner (ACCP) staffing in critical care units must be in line with GPICS 2.1, 2.3 and 2.4.

All providers must provide a nursing establishment determined by the following nurse to patient ratio:

- Level 3 patients have 1:1 nursing ratio for direct patient care.
- Level 2 patients have 1:2 nursing ratio for direct patient care (GPICS-2 standards 2.2.1, 2.2.2).

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 at the ratio of educator/staff set out in GPICS2 (standard 2.3.1).

There must be a training strategy in place to achieve a minimum of 50% of nursing staff who have completed a post-registration academic programme in critical care nursing (GPICS standard 2.3.4). A UK-wide critical care nursing course has been jointly developed by the devolved nations for this purpose.

Each critical care unit must have a supernumerary nursing shift clinical coordinator 24/7 (GPICS standard 2.2.4). Units with greater than 10 beds must have additional supernumerary senior nursing staff to enable safe delivery of care and the layout of the unit may warrant additional nursing staff (GPICS standard 2.2.5).

Allied health profession (AHP) services (dietetics, occupational therapy, psychology, physiotherapy, and speech & language therapy) must actively strive to ensure services are staffed and delivered in accordance with GPICS recommendations (GPICS 2.6 – 2.10). These staff must dedicate time to critical care (e.g. appropriately job planned for input to critical care), ensuring the provision of evidence-based patient care, and involvement in non-direct aspects of service provision including clinical governance, education, and research. This should be supported by non-registered therapy support workers/profession specific support workers (GPICS 2.12) with individual health boards having specific guidance for the utilisation of non-registered staff based on their specific needs and service set-ups.

All AHP services must be available for a minimum of 5 days, ideally 7 days, per week, and of a quantity and frequency appropriate to each therapy to meet the clinical needs and the rehabilitation plan for an individual patient (see section 2.5, GPICS 3.7). Additionally, physiotherapy for provision of respiratory assessment and treatment must be available to patients within critical care 24 hours per day, seven days a week. This includes the provision of an out of hours/on-call service which may utilise specialist and non-specialist intensive care staff (GPICS 2.6.S5). Therapy services must comply with existing recommendations for the completion of patient and service level outcome measures and the provision of individualised rehabilitation prescriptions (GPICS 3.7, Life After Critical Illness). Additionally, psychologists should be available for family input and staff support, and offer services over five days, and staffing levels should take this into account.

As per GPICS standards 2.5, there must be a designated, suitably trained intensive care pharmacist for every critical care unit. The pharmacist must attend daily multidisciplinary ward rounds on weekdays, recognising that this must be supported by pharmacy technical and support staff roles to provide medicines management and reconciliation services.

Critical care services must have an effective clinical governance platform and robust data collection system. This must encompass submission of data to the Critical Care Minimum Dataset; 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 Wales Healthcare Associated Infection and Antimicrobial Resistance Programme (HARP), and include the nationally agreed dashboard.

Critical care units must participate in research and development, delivered by a team that complies with forthcoming NHS Wales Critical Care Guidance.

Providers are required to participate in activities of the Wales Critical Care Network, including peer review.

2.6 Discharge from the Critical Care Unit

Transfer from critical care to a ward must include a standardised handover procedure for medical, nursing and AHP staff, this must include an individual rehabilitation plan, clearly identifying the individual's specific goals and current level of provision. The handover must satisfy the requirements in NICE Clinical Guideline 50 and demonstrate progress towards compliance with NICE Quality Standard 83 (GPICS-2 standard 3.1.10).

Transfer from critical care to a ward must occur between the hours of 07:00hrs and 21:59hrs, ideally between 07:00hrs and 19:59hrs (GPICS-2 standard 3.1.9).

Discharge from critical care to ward level care must occur within 4 hours of the decision to discharge (GPICS-2 standard 3.1.9).

Patients undergoing specialist care must be repatriated to a hospital closer to their home when clinically appropriate to continue their rehabilitation. Such discharge should occur within 48hrs of the decision to repatriate and the decision to repatriate must not be a reason to delay discharge from critical care to a ward bed (GPICS-2 standard 3.1.11).

3. Rehabilitation and Recovery (including follow-up)

The following documents provide information regarding the follow up, rehabilitation and recovery for survivors from critical illness:
Health and Social Care Services Rehabilitation Framework
Life After Critical Illness

3.1 Rehabilitation

The rehabilitation needs of all patients must be assessed within three days of admission to critical care (or on discharge if sooner), and all patients must have a rehabilitation plan outlined by all relevant professions as clinically indicated. Rehabilitation needs and outcomes for all patients must be formally assessed using validated measures, including (as a minimum) PICUPS and the rehabilitation complexity scale (RCS) within the first 72 hours of admission. Patients who stay in critical care for more than three days and are at risk of morbidity must have a comprehensive assessment of physical, cognitive, psychological (non-physical) and other needs (NICE CG83). The critical care workforce must have sufficient capacity to meet patients' rehabilitation needs and be compliant with existing national guidelines (GPICS v2, NICE CG83, NICE QS158).

All patients at risk of ongoing physical or psychosocial morbidity must have a summary rehabilitation plan documented in their formal handover of care when transferred from critical care to the next care location. Those patients previously deemed at risk of physical, cognitive

and psychological (non-physical) morbidity and with a critical care length of stay of greater than seven days (or less if deemed clinically necessary) must be provided with a personal rehabilitation plan detailing ongoing rehabilitation needs. The rehabilitation plan should be completed in collaboration with the patient (where possible) and should be provided to the patient on critical care discharge, as well as being available to the wider MDT. Additionally, a copy of the critical care discharge letter must be available to primary care (e.g. via Welsh Clinical Portal). At the point of critical care discharge all patients must have PICUPS and a rehabilitation complexity scale completed. Once available, all patient details must be added to the national PROMS and PREMS system for critical care.

All health boards must ensure the provision of rehabilitation services to meet patient needs in line with the all Wales Rehabilitation Framework. The rehabilitation framework identifies the requirement for a whole pathway approach, ensuring seamless transition to health board provision and local rehabilitation services. As a minimum, this must include the completion of relevant outcome measures (e.g. PICUPS and /or PICUPS plus, EQ5D5L) and ongoing use of the rehabilitation plan. All health boards must review existing patient pathways to ensure the needs of those discharged from critical care can be met within their next care location. Regular audits must be completed exploring the provision of rehabilitation (as guided by PICUPS) and compliance with clinical guidelines, e.g. NICE CG83, NICE QS158.

3.2 Community Rehabilitation

All health boards must ensure that they can provide the appropriate support and intervention in a holistic manner with access to all required members of the multi-professional team. Services must be provided in line with the individual's goals and needs. The stepped model of rehabilitation identified in the rehabilitation framework must be used by all health boards. Access to rehabilitation should be determined by the needs of the person, not their condition. This includes post critical care patients' access to specialist bedded or community rehabilitation. Additionally, all health boards must ensure adequate access to patient information in a format that is accessible to them (e.g. Keeping Me Well).

3.3 Critical Care Follow-up / Recovery Clinics

All patients admitted to critical care for more than 72 hours must be assessed for critical care recovery clinic, with those deemed clinically relevant receiving an appointment within 12 weeks of discharge from hospital (GPICS v2, NICE CG83). The appointment must be booked through an appointment system with a record for invite and attendance. Critical care recovery clinics should involve a consultant in intensive care medicine, a critical care nurse, a critical care therapist (dietitian, occupational therapist, physiotherapist, or speech and language therapist) and a clinical psychologist. In addition, the clinic must have access to/ability to refer to a dietitian, occupational therapist, physiotherapist and speech and language therapist.

Sessional commitment is required for the provision of critical care recovery clinics – this must be in addition to existing critical care workforce. Each health board must ensure the delivery of critical care recovery clinics with total staffing requirements dependent on the number of patients accessing the clinic (GPICS v2, Life after Critical Illness [LaCI]).

For all those who attend critical care recovery clinic the following outcomes must be used: Community PICUPS, EQ-5D-5L, Trauma Screen (TSQ), 6MWT (face-to-face only). All health boards must ensure there are mechanisms for communication between critical care recovery clinics, primary and secondary care and where needed, specialist care.

4. Catchment Population and Population Need

4.1 Catchment Population

The population covered by this specification is patients usually registered with a general practitioner in Wales or otherwise the responsibility of NHS Wales.

Specifically, the population is comprised of adults aged 18 or above who require, or are expected to require, critical care services as part of their hospital treatment. Patients aged between 16 and 18 years of age may sometimes be included in the population and may require access to adult or paediatric critical care depending on their individual circumstances. Welsh Government Information and guidance on the management, handover, and accountability of healthcare services for children and young people during their transition from children's to adult services can be found in the following link:
Transition and handover from children's to adult health services.

4.2 Population Need

Demand for critical care is expected to continue to grow due to improvements in healthcare, increasing public expectation and an ageing population.

Hospital management teams must always optimise the use of critical care capacity. The admission and discharge of critical care patients must be prioritised, such that patients requiring critical care support are admitted without delay and patients no longer requiring critical care are discharged within four hours (GPICS-2 standard 3.2.1).

Critical care units must have documented escalation plans suitable for their hospital facilities and must audit and review the usage of these plans (GPICS-2 standard 3.2.2). These plans must address functional surge capacity for both Major Incidents and longer-term surges in pressure in accordance with the "All-Wales critical care escalation guidance for the management of large unplanned increases in demand".

Health boards must have plans to ensure sufficient critical care capacity to meet the needs of their population. The Task and Finish Group on Critical Care made clear recommendations for additional critical care capacity to meet expected need and health boards are expected to demonstrate how they will deliver this in their Integrated Medium Term Plans.

Health boards must have a workforce strategy to ensure safe staffing levels to meet demand for critical care.

5. Quality and Patient Safety

5.1 Clinical Governance

Providers must have a robust clinical governance structure in place, including a regular programme of clinical audit and regularly scheduled morbidity and mortality meetings. Providers must adhere to the national and professional standards within this specification.

Each critical care provider must have a nominated lead for clinical governance, audit, and quality improvement.

Providers must be able to demonstrate effective implementation of evidence-based practice within intensive care.

Providers must 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.

Each health board provider must establish and maintain a planning and delivery group for critical care services. The group must be chaired by an executive lead or an individual with a clear line of accountability to a Board level Executive Director, the group will include the following functions:

- Senior forum to consider and agree annual priorities for the service for inclusion in the IMTP.
- Monitoring of service issues/performance trends and ensuring optimal service delivery within the wider health board clinical model.
- Forum for the escalation of issues as appropriate within the heath board structure and the wider critical care network.
- Agreement of service development/action plans, e.g. in response to peer review recommendations.

5.2 NHS Wales Health and Care Standards

Monitoring patient outcomes will be mapped according to the Health and Care Standards**.**
The Duty of Quality, as part of the Health and Social Care (Quality and Engagement) (Wales) Act 2020, will come into force on 1 April 2023. This section will be updated when the Duty of Quality is published.

1 Staying Healthy	1.1 Health protection, promotion, and improvement
2 Safe Care	2.1 Managing risk and promoting health and safety 2.2 Preventing pressure and tissue damage 2.3 Falls prevention 2.4 Infection prevention and control and decontamination 2.5 Nutrition and hydration 2.6 Medicines 2.7 Safeguarding children and adults at risk 2.8 Blood management

	2.9 Medical devices, equipment, and diagnostic
3 Effective Care	3.1 Safe and clinically effective 3.2 Communicating 3.3 Quality improvement, research, and innovation 3.4 Information governance and communications 3.5 Record keeping
4 Dignified Care	4.1 Dignified care 4.2 Patient information
5 Timely Care	5.1 Timely access
6 Individual Care	6.1 Planning care to promote independence 6.2 People's rights 6.3 Listening and learning from feedback
7 Staff and Resources	7.1 Workforce

5.3 Quality Statement – Aim of the Service

The aims of the service are to provide equitable, safe, effective, efficient, patient-centred, and timely care as follows:

- To ensure equity of access, equitable care and timely admission and discharge to and from adult critical care for all appropriate patients. (HCS 5.1)
- Avoidance of postponement of elective surgery due to lack of a post-operative critical care bed. (HCS 5.1)
- 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 (HCS 2.1). To utilise 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). (HCS 3.5)
- To reinforce the role played by critical care outreach/similar services 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. (HCS 3.1)
- To continue the culture of continual quality improvement underpinned by reliable information and audit. (HCS 3.3)
- To deliver a national performance management dashboard for adult critical care services to inform the clinical effectiveness debate at local, network and national levels. (HCS 3.4)
- 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). (HCS 3.3)
- All units must participate in National Audits in Intensive Care Medicine, including ICNARC's Case Mix Programme. (HCS 3.3)

6. Key Performance Indicators

The provider will be expected to monitor and report against the following performance and activity indicators. Indicators are subject to further development and change.

6.1 Access		
No.	**Title**	**Measure**
1.	Delayed transfer of care	Welsh Government Standards
2.	Delayed admissions	ICNARC 4 definition
3.	Cancelled operations due to no critical care beds	Provider (validated) data

6.2 Quality and Safety		
No.	**Title**	**Measure**
1.	Re-admissions within 48 hours of discharge	ICNARC 4 definition
2.	Unplanned admissions (elective surgical patients)	ICNARC 4 definition
3.	Adverse incidents	Datix/risk register/ICNARC 4 definition

6.3 Workforce		
No.	**Title**	**Measure**
1.	GPICS staffing standards are met, partially met, or not met	Peer review
2.	The unit utilises the ICS Workforce Wellbeing Best Practice Framework Assurance and Assessment Tool on an annual basis	Peer review
3.	Staff retention rate (employee satisfaction)	Number of employees who leave/total number of employees, staff satisfaction survey

6.4 Patient Outcomes and Experience		
No.	**Title**	**Measure**
1.	The unit collects all-Wales agreed PROMS and PREMS for both patient and family	Peer review
2.	Completion of Wales Carer Survey (5% of all admissions)	Peer review
3.	Unit standardised mortality rates	ICNARC 4 definition

4.	Unit can demonstrate use of Post ICU Presentation Screen (PICUPS) to support discharge and ongoing rehabilitation for appropriate patients	Peer review

6.5 Data and Benchmarking		
No.	**Title**	**Measure**
1.	ICU admission as a proportion of the total hospital inpatient admissions	PEDW
2.	Participation in the ICNARC Case Mix Programme	ICNARC 4 definition
3.	Participation in National Emergency Laparotomy Audit (NELA)	NELA audit results
4.	Participation in Healthcare Associated Infection and Antimicrobial Resistance Programme (HARP)	Public Health Wales data

7. Useful Resources

Critical Care Minimum Data Set
(ficm.ac.uk)
ICS PICUPS assessing early rehabilitation needs following intensive care treatment
Evaluation of modernisation of adult critical care services in England: time series and cost effectiveness analysis the BMJ
NCEPOD - Acute Kidney Injury: Adding Insult to Injury Report (2009)
NCEPOD - Peri-operative Care: Knowing the Risk Report (2011)
Providing equity of critical and maternity care for the critically ill pregnant or recently pregnant woman (warwick.ac.uk)
Royal College of Surgeons (rcseng.ac.uk):The Higher Risk General Surgical Patient: Towards improved care for a forgotten group
Knowing the risk? NCEPOD 2011: a wake-up call for perioperative practice - PubMed (nih.gov)