Critical care capability framework (Abridged version)

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This document is an abridged version of the Critical care service capability framework, presented in a horizontal format to assist health services in completing section 2 of the self-assessment. To view the full Critical care service capability framework, please see on the Department of Health website <https://www.health.vic.gov.au/health-system-design-planning/critical-care-capability-framework>.

Section 2A: Adult Critical care capability levels

Section 2A of the Critical care service capability framework provides detailed descriptions of the minimum capability for each of the four adult levels (3-6) of critical care. Minimum requirements for each criterion are defined in the service levels based on best available evidence and requirements. The minimum criterion requirements for each level are incremental and cumulative and must be met at each level to provide safe, high quality critical care services.

Service description

The service description gives a summary of the minimum requirements for critical care services provided at each capability level. It gives a high-level indication of the setting, availability and complexity of care delivered at the campus.

Description	Level 3	Level 4	Level 5	Level 6
Complexity of care	A Level 3 unit provides: • the highest level of onsite adult critical care available at a health service site within a standalone unit, delivering care that is beyond the scope of a conventional ward but is not equivalent to an ICU • 24/7 evaluation and management of patients with single-system disorders at high risk of developing complications with minimally invasive or non-invasive supports • evaluation and management for patients while pending transfer to a higher-level service • frequent, active monitoring and interventions for 'at risk' medical and surgical patients proportionate to the condition to prevent complications	A Level 4 unit provides: • short-term intensive care services to adult patients in an ICU that operates 24/7 • intensive care services to critically ill patients with potentially life-threatening and/or potentially reversible single-system failure • monitoring for 'at risk' medical and surgical patients to prevent complications • organisation-wide support with representation on the rapid response team.	A Level 5 unit provides: • intensive care services indefinitely to adult patients 24/7 in a major ICU • complex multi-system life support to patients with potentially life-threatening and/or potentially reversible multi-system organ failure • a comprehensive range of medical and surgical specialty care for time-critical patients needing intensive care from across the state including transfers via Ambulance Victoria, particularly from hospitals where needed diagnostic or therapeutic services are not available • organisation-wide identification of patients at risk of an intensive care admission or readmission and support transitioning patients into or out of the ICU.	A Level 6 unit provides: • comprehensive care including complex multi-system life support for adults for an indefinite period • a wide range of intensive interventions except those only provided by statewide designated services • consultation and advice to lower-level services on clinical care and escalation.
Unit Size	A Level 3 unit has: • a minimum of 2 equipped beds	A Level 4 unit has: • a minimum of 4 equipped physical beds spaces • the ability to staff a minimum of 4 occupied beds • a recommended minimum of 200 admissions per year and 50 invasively ventilated patients per year	A Level 5 unit has: • a minimum of 6 equipped and operational bed spaces • the ability to staff a minimum of 6 occupied beds • a recommended minimum of 100 invasively ventilated patients per year.	A Level 6 unit has: • a minimum of 15 equipped and operational bed spaces • the ability to staff a minimum of 15 occupied beds • typically, more than 1,500 ICU admissions per year • a recommended minimum of 500 invasively ventilated patients per year.
Assessment	A Level 3 unit must:	A Level 4 unit provides:	• As for Level 4	• As for Level 4.

Description	Level 3	Level 4	Level 5	Level 6
	• have documented patient admission, discharge and escalation/transfer criteria • provide twice-daily medical reviews and documented care planning for every patient.	• clinical criteria for admission referrals relevant to onsite services and support • collaborative care with perioperative teams to identify patients at risk of requiring intensive care admission postoperatively including as part of a planned preadmission process		
Treatment	A Level 3 unit provides: • continual and uninterrupted nursing observation • continuous cardiac and basic physiological monitoring (ECG, pulse oximetry, invasive measurement of blood pressure, diabetic ketoacidosis management, low-level inotropic or pressor support) • continuous acute non-invasive ventilation (up to 24 hours) – patients who need more than 24 hours of non-invasive ventilation should be managed in consultation with the Level 5 or higher critical care service for patient care planning • A Level 3 unit can manage postoperative patients who unexpectedly require high-dependency care including extended intubation for up to 12 hours.	A Level 4 unit provides: • care for medically unstable patients who will benefit from intensive and/or complex support, monitoring or interventions for care beyond the scope of a conventional ward • care for complex patients, including those who need invasive ventilation, simple invasive cardiac monitoring or dialysis • complex care of any duration and patients needing invasive ventilation for more than 48 hours – this should be managed in consultation with the Level 5 or higher service or retrieval service if appropriate • immediate resuscitation and short-term cardiorespiratory support for critically ill patients.	• A level 5 unit cares for patients needing complex multi-system life support (including invasive ventilation, renal replacement therapy and invasive monitoring) for an indefinite period, with access to most clinical subspecialities.	• A Level 6 unit cares for patients requiring the most complex multi-system life support, including planned and emergency management for a range of specialties and subspecialties (neurosurgery, cardiac surgery, etc.), including rare and infrequently diagnosed conditions for an indefinite period, with access to all clinical subspecialities.
Transfer	• Patients may be admitted to the Level 3 unit directly from the ward, recovery or emergency areas.	A Level 4 unit provides: • step-down care or transfer to a ward or lower-level service • timely transfer to higher level service for patients whose clinical condition warrants level 5 or 6 support in consultation with ambulance retrieval service.	• A Level 5 unit will transfer patients to a higher-level service if the required diagnostic or therapeutic services are not available at the service.	• A Level 6 unit provides referral to statewide service for specialised treatment not available onsite.

Clinical workforce

Describes the minimum clinical workforce requirements including the medical, nursing and allied health staff relevant to each capability level.
The framework does not prescribe staffing ratios, skill mix, qualifications or clerical and/or administration workforce requirements for a team providing a service, as these are best determined locally and in accordance with relevant industrial instruments.

Where minimum standards, guidelines or benchmarks are available, the requirements outlined in this section should be considered as a guide only. All staffing requirements should be read in conjunction with the relevant industrial instruments.

Requirements	Level 3	Level 4	Level 5	Level 6
Unit	• A designated medical specialist credentialled at the health service for critical care medicine is employed as the unit's lead clinician and is responsible for clinical governance. • All patients admitted to the unit are under the direction of a medical specialist/practitioner undertaking the role of an admitting officer, who is available 24/7 (may be on call). • All patients admitted to the unit must have a medical management plan including a process for escalating care and transfers reviewed daily. • Staffing numbers and composition is informed by analysis of demand, case-mix, patient needs and severity of illness. • Staff are rostered to support 2 bedside ward rounds per day conducted by the medical specialist, medical practitioner(s), nurses and allied health professionals. • Regular communication, including ward rounds, with the Level 5 or higher critical care service for referrals and clinical support are in place. • Where organisation-wide clinical support services are in scope, a health practitioner from the critical care workforce provides clinical support services 24/7.	• A designated medical specialist credentialled at the health service for intensive care medicine is employed as lead clinician and is responsible for clinical governance. • All patients admitted to the unit are referred to the medical specialist who is responsible for the unit at the time of admission. • Staffing numbers and composition is informed by analysis of demand, case-mix, patient needs and severity of illness. • Staff are rostered to support 2 bedside ward rounds per day conducted by the medical specialist, medical practitioner(s), nurses and allied health professionals. • Protocols for regular communication with the Level 5 or higher critical care service for referrals and clinical support are in place. *Where organisation-wide clinical support services in scope:* • Identified ICU staff are available to represent the unit on the Rapid Response Team.	• A medical specialist credentialled at the health service for intensive care medicine is employed as the director/head of critical care and has clinical governance responsibilities. • ICU may be combined with other critical care units such as high-dependency units or coronary care units for optimisation of equipment and staff skill. • The unit may have a formal relationship with lower-level services to support 24/7 critical care and escalation. Where organisation-wide clinical support services in scope: • A health practitioner from the intensive care workforce provides clinical support services 24/7.	• As for Level 5
Medical	• A medical specialist credentialled at the health service for critical care medicine is available 24/7. • A medical practitioner with competency in managing critical care medicine is onsite 24/7. • A medical specialist credentialled at the health service for anaesthetic management is available 24/7. • A medical specialist at a Level 5 or higher critical care health service is accessible 24/7 via virtual care to advise on critical care management. This may be supplemented by advice from ARV.	• A medical specialist credentialled at the health service for intensive care medicine is available 24/7. • A medical practitioner, with competency in intensive care medicine, is exclusively rostered to the unit 24/7.	• A medical specialist credentialled at the health service for intensive care medicine is exclusively rostered to the unit, is onsite during business hours and is available 24/7	• Medical specialists with qualifications and competency in intensive care medicine are exclusively rostered to the unit for extended hours 7 days a week and are available 24/7 • Medical practitioners with competency in intensive care anaesthetics and credentialled to manage intensive care patients are exclusively rostered to the unit 24/7

Requirements	Level 3	Level 4	Level 5	Level 6
Nursing	• A registered nurse with competency in critical care nursing is employed as the unit manager. • Nurse(s) with competency in critical care (intensive care or equivalent) and advanced life support are exclusively rostered to the unit 24/7. • Nursing staff with competence and recency of practice in administering non-invasive ventilation (continuous positive airway pressure or high-flow), invasive monitoring and vasopressors, are exclusively rostered 24//7.	• Nursing staff with competence in intensive care and advanced life support are exclusively rostered to the unit 24/7. • Patients needing ventilation, or who are similarly critically ill, should be cared for on a 1:1 nursing ratio.	• As for Level 4.	• As for Level 4.
Allied health	• Allied health staff who are competent in managing critical care patients with disciplines aligning with the case-mix and throughput of the intensive care service provided are available during standard hours.	• Allied health staff who are competent in managing intensive care patients with disciplines aligning with the case-mix and throughput of the intensive care service provided are available. This may include outside normal working hours, including weekends as needed	• As for Level 4.	• As for Level 4.

Clinical Support Services

Clinical support service requirements describe the minimum expected suite of services needed to deliver a critical care service at each capability level.
This section of the framework depicts the minimum level of capability required by the relevant services that critical care services are dependent on for the delivery of the safe, high-quality care.

Requirements	Level 3	Level 4	Level 5	Level 6
Emergency response	• Registered health practitioner(s) with competency in advanced life support are available onsite 24/7. • A recognition and rapid response system (for example, 'respond blue') is available with identified roles onsite 24/7 to respond immediately to emergencies across the health service site. • A medical practitioner is available and appropriately trained to intubate, invasively ventilate and monitor patients pending transfer to a higher-level service in consultation with ARV.	• Onsite 24/7 rapid response team includes ICU representation.	• As for Level 4.	• A recognition and response system is under the governance of the ICU, with dedicated medical and nursing staff rostered 24/7 to the rapid response team.
Higher level Intensive care unit	• A Level 3 service must have a formal relationship and regular communication channels for clinical advice (may include virtual care) or joint ward rounds) with a higher-level service. This will include access to 24/7 virtual care support and agreed escalation of care and transfer processes with the Level 5 or higher critical care service.	• An arrangement is made with a higher-level service for patient advice, referral and transfer when clinically indicated. This may be supplemented by ARV advice.	• As for Level 4.	
Medical imaging	• A comprehensive range of general imaging examinations, including an onsite x-ray service, is available during standard hours *or* available 24/7 where emergency surgery is provided • CT is accessible – this may be offsite or provided by an external provider • limited basic angiography may be available	• A range of onsite imaging services are available during extended hours. • 24-hour onsite access to diagnostic radiology services, including urgent x-rays, in theatre image intensifier, computed tomography (CT) and complex ultrasound. • May have access to onsite or offsite MRI.	• 24/7 access to MRI. • Access to a defined scope of interventional radiology procedures (for example, all vascular interventional procedures availability may be limited to a 12-hour window such as 0800–2000).	• A comprehensive range of adult specialty and subspecialty imaging and interventional radiology services are onsite and available 24/7. • Access to emergency and complex onsite interventional radiology procedures is available 24/7. • May provide the full range scope of interventional radiology procedures (including trauma, intracranial and extracranial neuro-interventional procedures).
Medical specialties	A medical specialist credentialled at the health service is available 24/7 for: • general medicine • anaesthesia	A medical specialist credentialled at the health service is available 24/7 for: • general medicine • anaesthesia	Medical specialists credentialled at the health service are available 24/7 for: • oncology • respiratory medicine • cardiology • gastroenterology • nephrology • neurology • infection control (availability may be limited to a 12-hour window – for example, 0800–2000).	• Medical specialty and subspecialty services relevant to the services provided and support services are available 24/7.

Requirements	Level 3	Level 4	Level 5	Level 6
Perioperative Services	• Medical specialists aligning with the case-mix and the throughput of the perioperative service provided (typically Level 3) are available.	• Medical specialists aligning with the case-mix and throughput of the perioperative service provided (typically Level 4) are available.	• Medical specialists aligning with the case-mix and throughput of the perioperative service provided (typically Level 5) are available.	• Medical specialists aligning with the case-mix and throughput of the perioperative service provided (typically Level 6) are available.
Pathology and blood/blood products	• A range of common biochemistry, haematology and microbiology testing and reporting for patients in the unit is available during business hours. • The service uses a limited on-call service for biochemistry, haematology and/or point-of-care testing units • Access to arterial blood gas and lactate analysis is available 24/7 • Blood and blood products including a cross-matching service are available onsite	Onsite pathology including: • common/core biochemistry, haematology and microbiology testing and reporting for patients in the ICU 7 days a week and extended hours • access to arterial blood gas and lactate analysis available within an appropriate timeframe (for example, one hour) • an on-call service for biochemistry, haematology, microbiology and/or point-of-care testing units used by the ICU.	• 24/7 access to comprehensive pathology services, either onsite or through networked arrangements to support the health service's clinical services and case-mix. • 24/7 onsite access to arterial blood gas and lactate analysis. • Access to a range of blood products (for example, platelets and frozen products). • Appropriate response times for all urgent requests. • Referral for non-urgent rare and complex testing to a Level 6 service.	There is onsite access to pathology services 24/7 for: • biochemistry • haematology • microbiology • serology and blood bank • access to non-urgent rare and complex testing
Pharmacy and medicines management	• All services needed for medicines dispensing, distribution, administration and pharmacy management support for high-dependency patients are available. • Pharmacy services are available during standard hours, with on-call access 24/7. • Access to clinical advice, inpatient supply and possibly compounding supply is available over extended hours from an appropriate pharmacy service.	• Clinical pharmacy service for all admitted ICU patients available during standard hours with an extended service to provide clinical advice, inpatient supply and compounding supply and to ensure patients at high risk of medication-related harm are provided appropriate and timely services.	• An onsite pharmacy service that provides clinical pharmacy, medicines information, clinical trial support, ICU medication management services, medicines procurement, sterile compounding, dispensing and distribution services is available 7 days a week during standard hours and accessible 24/7. • Support is available for defined site-specific clinical speciality services (for example, oncology and haematology) including processes for aseptic manufacturing and cytotoxic medicines where clinically necessary (may be a networked or external arrangement).	• As per Level 5.
Sociocultural support	• The relevant ACCO is involved in discharge planning for Aboriginal patients.	• AHLO services are available during standard hours. • The AHLO and care services team have an established engagement process, with a designated support officer/team in the local ACCO for resources and referral and for continuum of care support services, as needed, including for weekends, urgent discharge planning and handover.	• Protocols are in place to support care for people with disability, multicultural communities and LGBTIQA+ patients	• AHLO services are available during standard hours and accessible 24/7.
Mental health	• Guidelines are in place for referring patients to clinical mental health practitioners and community mental health services.	• Guidelines are in place for referral to clinical mental health practitioners and community mental health services	• Onsite access, during business hours, to a clinical mental health consultation-liaison service	• An onsite clinical mental health consultation-liaison service is available during business hours and mental health consults available 24/7.

Infrastructure

This section identifies the minimum required infrastructure requirements for each capability level all-encompassing of the facility construction and spatial arrangement (the facility), as well as the fixtures, fittings and equipment, (including medical, non-medical and ICT)

Requirements	Level 3	Level 4	Level 5	Level 6
Unit	• A dedicated space and equipment with a minimum of 2 bed spaces that can support higher (than ward) levels of intervention, observation and monitoring.	• A dedicated ICU with a minimum of 4 dedicated bed spaces.	• A dedicated ICU with a minimum of 6 equipped physical bed spaces and the ability to staff these.	• A dedicated ICU with a minimum of 15 equipped beds spaces. • Larger ICUs should be structured into organisational units or 'pods' of 8 to 12 beds.
Equipment	• Necessary equipment to support the scope of practice and clinical interventions available onsite. This may include providing additional medical gases, power and data, appropriate monitoring systems and higher visibility of patients compared with standard ward service. • Equipment is available to manage emergencies. • Equipment is available to support regular communication with a higher-level service (virtual care support).	• All required equipment supporting the continuous, invasive ventilation of a minimum of 2 patients simultaneously. All points of care must be capable of accommodating this requirement. • The type and quantity of equipment must be appropriate to the workload of the unit. All required equipment to support ICU care should be available in each dedicated space. This includes, but is not limited to, medical services panels, gases, suction, power, data/communications and mobile and fixed equipment for monitoring and procedures.	• The equipment availability to simultaneously manage 4 or more complex and/or invasively ventilated patients • Appropriate equipment levels to support ICU requirements for specialties and subspecialties relevant to the organisation. • Equipment available to support communication with other services (virtual care support). • 24/7 access to electrocardiography, echocardiography, bronchoscopy and point-of-care ultrasound.	• 24/7 access to arterial blood gas analysis in the unit. • 24/7 access to electrocardiography, echocardiography, bronchoscopy and point-of-care ultrasound in the unit.
Retrieval and transfer		• All required equipment supporting the safe transfer of patients via all methods of transfer for intra and/or interhospital movement of intensive care patients are ready and available 24/7. • ICT and records management systems enabling the safe and efficient transfer of patient care, including medication orders and treatment plans are ready and available 24/7.	• Will receive patients from facilities with lower levels of capability • Patients will receive treatment in the Level 5 unit unless relevant diagnostic or therapeutic services are not available at the health service site.	

Section 2B: Paediatric Critical care capability levels

Section 2B of the Critical care service capability framework provides detailed descriptions of the minimum capability for each of the four paediatric levels (3-6) of critical care. Level 3 (ward-based high acuity care), Levels 4 and 5 (care for children within an adult ICU), and Level 6 (specialist paediatric ICU). Minimum requirements are outlined for each level, based on best available evidence and guidance. Capability requirements are incremental and cumulative from Level 4 to Level 6 and must be met to deliver safe, high-quality critical care services.

Paediatric critical care capability has not previously been defined consistently across Victorian health services. This framework supports each health service site to define the scope of critical care it can provide for children, and to confirm the workforce and infrastructure available to deliver that care. Health service sites are also asked to specify the paediatric age cohorts they can consistently support.

A child's age, clinical presentation and the availability of age-specific clinical skills must be considered when determining the most appropriate location for care. Child-safe infrastructure including equipment, facilities and accommodation must also be provided. For this framework, paediatric cohorts are defined as:

- 0–2 years (excluding newborns)
- 3–5 years
- 6–10 years
- 11–15 years
- 16 years and over

Adolescents (young people aged 14 to 17 years) who require escalation to critical care services may be managed in an adult critical care environment where workforce capability and infrastructure allow. Care decisions should consider physical maturity, the presenting condition and whether management aligns with adult clinical pathways (for example, respiratory conditions, overdose, seizures, diabetic ketoacidosis, post operative monitoring). In many circumstances, admission of patients aged 16 years and over to an adult ICU will be appropriate. Psychosocial needs for this cohort should be identified and managed appropriately.

Flexible models of care

Health services who manage large caseloads of children (e.g. >1,000 admissions/year) will have a strong rational to establish critical care services for defined cohorts as workforce capability and models of care mature. To meet a critical care capability level, infrastructure (dedicated space and equipment to manage children across age cohorts requiring increased observation, monitoring and care requirements) is available 24/7, and staffing arrangements can respond to increased needs at short notice.

Care within these dedicated spaces will temporarily flex from usual care to critical care when patient demand and clinical needs require. At Level 3, the dedicated space will shift from providing general ward care to high acuity care. In adult ICU, beds may be used for paediatric HDU (Level 4) or ICU use (Level 5) as demand requires. Level 6 (PICU) services are expected to provide continuous 24/7 paediatric intensive care.

Service description

The service description gives a summary of the minimum requirements for critical care services provided at each capability level. It gives a high-level indication of the setting, availability and complexity of care delivered at the campus.

Description	Level 3	Level 4	Level 5	Level 6
Complexity of care	A Level 3 high-acuity area provides: • the highest level of onsite paediatric critical care available at the health service site, located in a high-acuity area on a paediatric ward. • care for children of agreed age cohorts with single-system disorders – this includes increased observation and monitoring with non-invasive support that is more concentrated than conventional ward-based care but is not equivalent to an ICU. • evaluation and management for paediatric patients while pending transfer to a higher-level service in consultation with PIPER.	• A Level 4 unit provides 24/7 short-term high-dependency care to paediatric patients with single-system disorders in an adult ICU. This may include patients who also have stable chronic, congenital or developmental comorbidities (for example, cerebral palsy, down syndrome or neurodiversity) • Providing 24/7 critical care to adolescents presenting with adult conditions.	A Level 5 unit provides: • 24/7 short-term intensive care services to paediatric patients with single-system disorders in an adult ICU • short-term intensive care services for paediatric patients transferred from lower-level services.	A Level 6 unit provides: • 24/7 intensive care services to children in a designated paediatric ICU for an indefinite period • comprehensive care including complex multi-system life support for paediatric patients with intensive care interventions, which could include those provided by statewide designated services • care for time-critical patients requiring intensive care transfer from across the state

Unit Size	• A Level 3 high-acuity area is capable of managing at least 2 high-acuity patients concurrently while ensuring the continued operation of routine paediatric ward services.	• A Level 4 unit is capable of managing at least 2 high-dependency paediatric patients while also maintaining the adult ICU service.	• A Level 5 unit is capable of managing at least 2 paediatric patients requiring intensive care simultaneously.	A Level 6 unit has: • (usually) a minimum of 8 equipped beds but may be divided into smaller areas for better clinical management • the ability to staff a minimum of 8 occupied beds • more than 300 patient admissions per year.
Assessment	A Level 3 high-acuity area must: • have documented patient admission, discharge and escalation/transfer criteria, taking into consideration age, condition complexity and treatment needs (the area may accept younger or older patients contingent on clinical presentation and service capability) • have processes to support staff to recognise acute deterioration in a child, such as VICTOR charts • provide twice-daily medical review and documented care planning for each patient while admitted.	• As for Level 3 paediatric and Level 4 adult	• A Level 5 unit provides care in consultation with PIPER or a Level 6 service where the patient may deteriorate beyond the unit's capability or where it becomes clinically indicated.	• A Level 6 unit provides collaborative care with perioperative teams to identify patients at risk of requiring intensive care admission postoperatively including as part of a planned preadmission process.
Treatment	A Level 3 high-acuity area provides: • a dedicated space with continual and uninterrupted nursing observation to monitor and address patient deterioration • short-term continuous cardiac and basic physiological monitoring (for example, electrocardiogram, oxygen saturation and blood pressure) with paediatric-appropriate equipment • short-term electrolyte monitoring for conditions such as diabetic ketoacidosis • short-term respiratory support including continuous high-flow oxygen, consistent with agreed local capability • care in consultation with PIPER or a Level 6 paediatric service if a patient's condition is beyond the scope of the unit's protocols, is clinically indicated or if the patient is not improving within 24 hours.	A Level 4 unit provides: • acute non-invasive ventilation respiratory support, consistent with agreed local capability for short-term delivery • intubation and invasive ventilation pending transfer to a higher-level service • short-term simple invasive cardiovascular monitoring (for example, an arterial line) • care in consultation with PIPER or a Level 6 paediatric service if a patient's condition is beyond the scope of the unit protocols, is clinically indicated, or if the patient is not improving within 24 hours.	A Level 5 unit provides: • invasive monitoring for critically ill patients • short-term management of invasively ventilated paediatric patients – patients requiring more than 24 hours of invasive ventilation should be managed in consultation with PIPER or a Level 6 service.	A Level 6 unit provides: • care for patients requiring complex multi-system life support (including invasive ventilation and renal replacement therapy) for an indefinite period • indefinite care to subspecialty critical care patients, including postoperative patients (for example, neurosurgery, complex general surgery or plastic surgery).
Transfer	A Level 3 high-acuity area provides: • care for patients admitted directly from the ward, operating theatre, recovery or emergency areas • care for patients before transfer to an onsite ward or operating theatre • timely transfer to a higher-level service for paediatric patients whose clinical condition warrants Level 5 or 6 care via a paediatric retrieval service (in consultation with PIPER).	• As for Level 3 paediatric.	Patients may be admitted to the Level 5 beds: • as a transfer from a lower-level service to receive intensive care • from a planned paediatric retrieval service transfer • patients may be transferred from the Level 5 area to step-down care in a suitable	• Patients may be transferred from any lower-level service.

			onsite ward, or to a lower-level service for suitable patients.	

Clinical workforce

Describes the minimum clinical workforce requirements including the medical, nursing and allied health staff relevant to each capability level.
The framework does not prescribe staffing ratios, skill mix, qualifications or clerical and/or administration workforce requirements for a team providing a service, as these are best determined locally and in accordance with relevant industrial instruments.

Where minimum standards, guidelines or benchmarks are available, the requirements outlined in this section should be considered as a guide only. All staffing requirements should be read in conjunction with the relevant industrial instruments.

Requirements	Level 3	Level 4	Level 5	Level 6
Unit	• Designated medical specialist credentialled at the health service for paediatric medicine who is employed as the lead clinician and is responsible for clinical governance of the paediatric high-acuity area. • While patients are admitted to the high-acuity area, staff are rostered to support 2 bedside ward rounds per day conducted by the medical specialist, medical practitioner(s), nurses and allied health professionals. • All patients admitted to the high-acuity area are under the direction of a medical specialist credentialled in paediatric medicine, undertaking the role of an admitting officer and available 24/7. Also, and where they are not the same clinician, the onsite or on-call paediatrician should be advised of the admission. • All patients admitted to the area must have a medical management plan including a process for escalating care and for transfer that is reviewed daily. • Staffing is designed to be flexible and responsive to demand because patient throughput will fluctuate. Staffing numbers and composition is informed by an analysis of the demand, case-mix, patient needs and severity of illness. • Staff are rostered to support 2 bedside ward rounds per day conducted by the medical specialist, medical practitioner(s), nurses and allied health professionals.	• All paediatric patients admitted to the adult ICU are referred to the medical specialist taking responsibility for the unit at the time of admission and are managed under a closed collaborative model with a paediatrician. • There is a nominated clinical lead (preferably intensivist) for paediatric governance.	• As for Level 4 paediatric and Level 5 adult	• A medical specialist credentialled at the health service for paediatric intensive care medicine is employed as the director/head of critical care and has clinical governance responsibilities. • All patients admitted to the unit are referred to the medical specialist with responsibility for the unit at the time of admission.
Medical	• A medical specialist credentialled at the health service for paediatric medicine is onsite for ward rounds 7 days per week and is available 24/7. • A medical practitioner credentialled at the health service for paediatric medicine is onsite 24/7. • A medical specialist credentialled at the health service for anaesthetic management of paediatric patients aligning with the age and case-mix of admitted paediatric patients is available 24/7.	• As for Level 3 paediatric and Level 4 adult.	• A medical practitioner with competency in intensive care and paediatric patient management is exclusively rostered to the unit 24/7 while paediatric patients are admitted.	• Medical specialists credentialled at the health service for paediatric intensive care medicine are exclusively rostered to the unit, are onsite during business hours and are available 24/7. • Medical practitioners with competency in intensive care and who are credentialled to manage paediatric intensive care patients are exclusively rostered to the unit 24/7.
Nursing	A Level 3 service provides:	A Level 4 service provides: • nursing staff with competence in intensive care, paediatric advanced life	• Patients needing ventilation, or who are similarly critically ill, should be cared for on a 1:1 nursing ratio.	• Nursing staff with competence in paediatric intensive care and paediatric advanced life support are exclusively

	• A registered nurse with competency in paediatric care is employed as the unit manager of the paediatric ward. • Nurse(s) with competency in managing paediatric patients and paediatric advanced life support are exclusively rostered to the high-acuity area 24/7 when patients are admitted. • Staffing allocation in the paediatric high-acuity area must support continual and uninterrupted nursing observation.	support, as well as experience in paediatric management are exclusively rostered to the unit 24/7 while paediatric patients are admitted • for paediatric patients requiring critical care a 1:1 nursing ratio may be needed		rostered to the unit 24/7. An intensive care (nurse) liaison service operates extended hours.
Allied health	A Level 3 service provides: • Allied health staff who are competent in managing paediatric critical care patients with disciplines aligning with the case-mix and throughput of the critical care service provided are available.	• Allied health staff who are competent in managing paediatric critical care patients with disciplines aligning with the case-mix and throughput of the intensive care services provided are available. This may include allied health staff being available outside normal working hours, including on weekends.	• Allied health staff who are competent in managing paediatric intensive care patients with disciplines aligning with the case-mix and throughput of the intensive care services provided are available. This may include allied health staff being available outside normal working hours, including on weekends.	• As for Level 5 paediatric.

Clinical Support Services

Clinical support service requirements describe the minimum expected suite of services needed to deliver a critical care service at each capability level.

This section of the framework depicts the minimum level of capability required by the relevant services that perioperative services are dependent on for the delivery of the safe, high-quality care.

Requirements	Level 3	Level 4	Level 5	Level 6
Paediatric Ward	• Dedicated paediatric inpatient wards/units that accommodate multi-day stays and day stays. Typically, this service would manage 1,000 or more overnight stays per year.	• As for Level 3 paediatric.	• Typically, this service would manage 2,500 or more overnight stays per year.	• Full ward service for all paediatric subspecialties.
Newborn Care	• Can provide Level 3 newborn care being care for mildly/moderately unwell newborns ≥ 34+0 weeks' gestation including non-invasive ventilation respiratory support, incubator care, continuous cardiorespiratory and/or pulse oximetry monitoring, intravenous therapy and non-invasive blood pressure monitoring.	• As for Level 3 paediatric.	• Provides Level 4 newborn care being non-invasive ventilation respiratory support for moderately unwell newborns ≥ 32+0 weeks' gestation or newborn birthweight of ≥ 1,500 grams. Care may include managing central venous lines after transfer from a higher-capability service.	• A formal relationship with a Level 6 newborn care service being specialist newborn care (including intensive care) for critically unwell newborns of any gestation.
Emergency response	• There is a rapid response system (for example, 'respond blue') with identified roles onsite 24/7 to respond immediately to paediatric emergencies across the health service site. • Registered health practitioner(s) with competency in paediatric advanced life support are available onsite 24/7.	• A documented local escalation procedure for managing deterioration in high-dependency paediatric patients, integrated into the health service site's rapid response system	• As for Level 3 paediatric and Level 5 adult.	• A recognition and response system is under the governance of the PICU, with dedicated PICU staff rostered 24/7 to the rapid response team • Staff rostered to the rapid response team are credentialled in paediatric intensive care medicine.
Medical imaging	• Staff providing medical imaging services are experienced in managing paediatric patients.	• As for Level 3 paediatric and Level 4 adult.	• As for Level 3 paediatric and Level 5 adult.	• A comprehensive range of paediatric specialty and subspecialty imaging and radiology services are onsite and available 24/7.

Medical specialties	• A medical specialist credentialled at the health service for managing paediatric patients is available 24/7 for anaesthesia.	• As for Level 3 paediatric and Level 4 adult.	• As Level 3 paediatric and Level 5 adult.	• A paediatric specialty and subspecialty workforce relevant to the services provided is available 24/7.
Perioperative Services	• Medical specialists aligning with the case-mix and throughput of the paediatric perioperative service provided (typically Level 4) are available.	• As for Level 3 perioperative paediatric.	• As for Level 5 perioperative paediatric.	• A paediatric surgical specialty and subspecialty workforce relevant to the services provided is available 24/7.
Pathology and blood/blood products	• As for Level 4 adult.	• As for Level 3 paediatric and Level 4 adult.	• As for Level 3 paediatric and Level 5 adult.	• As for Level 3 paediatric and Level 6 adult.
Pharmacy and medicines management	• As for Level 4 adult.	• As for Level 3 paediatric and Level 4 adult.	• As for Level 3 paediatric and Level 5 adult.	• As for Level 3 paediatric and Level 5 adult.
Sociocultural support	• Staff providing sociocultural support services are experienced in managing paediatric patients aligned with the scope of paediatric service provision at the site.	• As for Level 3 paediatric and Level 4 adult.	• As for Level 3 paediatric and Level 5 adult.	• As for Level 3 paediatric and Level 6 adult.
Mental health	• Staff providing mental health support services are experienced in managing paediatric patients aligned with the scope of paediatric service provision at the site.	• As for Level 3 paediatric and Level 4 adult.	• As for Level 3 paediatric and Level 5 adult.	• As for Level 3 paediatric and Level 6 adult.

Infrastructure

This section identifies the minimum required infrastructure requirements for each capability level.

Requirements	Level 3	Level 4	Level 5	Level 6
Unit	• A dedicated space on a paediatric ward, with a minimum of 2 equipped[12] bed spaces for high-acuity care based on demand. The location must allow for uninterrupted observation.	• All ICU points of care are equipped and organised to accommodate paediatric high-acuity care as demand arises	• All points of care are equipped and organised to accommodate paediatric intensive care as demand arises.	• A dedicated paediatric ICU with a minimum of 8 equipped physical bed spaces. • Larger paediatric ICUs should be divided into smaller areas or ‘pods’ of 8 to 15 beds.
Equipment	Specific consideration is given to the needs of paediatric patients and facilities and equipment are available, including: • paediatric-specific equipment to support the clinical interventions available onsite • access to a paediatric emergency equipment trolley • 24/7 access via telephone or video link to PIPER.	• As for Level 3 paediatric critical care requirements plus necessary paediatric equipment for non-invasive ventilation respiratory support.	• As for Level 4 paediatric and Level 5 adult.	• Equipment available to simultaneously manage 4 or more complex and/or invasively ventilated patients. • Appropriate equipment levels to support paediatric specialties and subspecialties relevant to that organisation 24/7. Access to arterial blood gas analysis in the unit • 24/7 access to electrocardiography and point-of-care ultrasound in the unit.
Retrieval and transfer	• Where patient complexity exceeds the capabilities of the health service site, paediatric patients will be retrieved in collaboration with PIPER. • Equipment and medication for interhospital movement of paediatric critical care patients are ready and available 24/7.	• As for Level 3 paediatric.	• Will receive patients from facilities with lower levels of capability who need critical care	• Will receive patients from facilities with lower levels of capability for intensive care.

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