

Module Overview

Please note: This module must be read in conjunction with the [Fundamentals of the Framework](#) (including the glossary and acronym list), [Children’s Services - Preamble](#) and [Intensive Care Services](#) module.

The availability of, and access to, children’s intensive care services is vital to the health of children. Children’s intensive care services provide specialist expertise and facilities for the support of children and their families, using the skills of medical, nursing and other staff qualified and experienced in the management of critically ill children. A paediatric intensive care unit (PICU) is a specially staffed and equipped, separate and self-contained section of a hospital for the management of children with life-threatening (or potentially life-threatening), reversible (or potentially reversible) organ failure. The PICU may also provide and supervise outreach services such as Resuscitation teams and Medical Emergency Teams (MET)¹

The level of intensive care services available should support the levels of other clinical services provided within a particular facility. The capacity of a children’s intensive care service will vary depending on staffing expertise, facilities and support services, as well as the severity of illnesses and the number of patients’ admitted. Children’s Intensive Care provides care to patients from the neonatal period up to and including the young adult.¹

Children’s intensive care service levels commence at Level 4 and progress to Level 6. A Level 4 or 5 children’s intensive care service may have a mix of adult and paediatric patients. A Level 6 paediatric intensive care service is an intensive care unit (ICU) dedicated to paediatric service only.

Service Requirements

In addition to the requirements outlined in the [Fundamentals of the Framework](#), specific service requirements include:

- > provide relevant clinical indicator data to satisfy accreditation and other statutory reporting obligations
- > specific guidelines to facilitate appropriate and timely referral to local child protection services, in addition to health workers demonstrating knowledge of pathways for child protection.
- > compliance with SA Health policy directives and guidelines that are referenced at:
 - > [SA Health Policy Directives](#)
 - > [SA Health Policy Guidelines](#)
 - > [SA Health Clinical Directives and Guidelines](#)

Workforce Requirements

The CSCF does not prescribe staffing ratios, absolute skill mix, 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 module should be considered as a guide only. All staffing requirements should be read in conjunction with the *Health Care Act 2008*, Awards and relevant Enterprise Agreements including, but not limited to:

- > SA Health Salaried Medical Officers Enterprise Agreement 2013
- > SA Health Visiting Medical Specialists Enterprise Agreement 2012
- > SA Health Clinical Academics Enterprise Agreement 2014
- > Nursing/Midwifery (South Australian Public Sector) Enterprise Agreement 2013
- > SA Ambulance Service Enterprise Agreement 2011
- > SA Public Sector Wages Parity Enterprise Agreement Salaried 2014

In addition to the requirements outlined in the [Fundamentals of the Framework](#), specific workforce requirements include:

- > sufficient suitably trained workforce with credentials and competencies to provide evidence-based, safe, high-quality intensive care practice¹. This includes capacity to provide the necessary outreach services that may include medical retrievals, as well as ensuring capacity for teaching and training as well as research activities^{1,2}

Intensive Care Services - Childrens	Level 4	Level 5	Level 6
<p>Service description</p>	<ul style="list-style-type: none"> > primarily an adult intensive care service capable of providing comprehensive critical care, including multisystem paediatric life support, to: <ul style="list-style-type: none"> – children greater than 12 years of age for indefinite period. – children 12 years of age and younger requiring intensive care-specific intervention and/or invasive monitoring with: <ul style="list-style-type: none"> • these children being managed in consultation and early collaboration (within 12 hours of admission) with paediatric intensive care specialist if it is anticipated admission will be for more than 24 hours • children’s intensive care service collaborating with local registered medical specialists with credentials in general paediatrics within 12 hours of admission. – children 12 years of age and younger requiring close observation, with these children managed in consultation and early collaboration (within 12 hours of admission) with paediatric intensive care specialist if it is anticipated admission will be for more than 24 hours, and close observation care beds may be provided within Level 4 intensive care service. – children up to 16 years of age with complex social issues or significant comorbidities needing combined care with specialist paediatric medical team. 	<ul style="list-style-type: none"> > capable of providing high standard of general intensive care for children in general ICU, including complex multisystem children’s life support. > capable of providing invasive ventilation and invasive cardiovascular monitoring for period of up to 7 days (more complex medical care and treatment should be provided in consultation and early collaboration with paediatric intensive care specialist within 12 hours of admission). > all children admitted to Level 5 service must have on-site paediatric consultation within 12 hours of admission. > referrals for children likely to require transfer or retrieval due to complexity of care or subspecialty availability must be managed in collaboration and consultation with paediatric intensive care specialist within 24 hours of admission. 	<ul style="list-style-type: none"> > only designated PICU and highest level of service for children requiring paediatric intensive care. > capable of providing comprehensive critical care (including complex, multisystem paediatric life support to children for indefinite period, as well as advanced cardiorespiratory support and monitoring, renal replacement therapy, complex neurological monitoring) and support for complex Level 6 and superspecialty activity. > access—24 hours—to on-site laboratory and medical imaging to support Level 6 referral role. > access—24 hours— to appropriately staffed and equipped retrieval service, as per Guidelines for Transport of Critically Ill Patients (2015)

Intensive Care Services - Childrens	Level 4	Level 5	Level 6
<p>Service requirements</p>	<p>As per module overview, plus:</p> <ul style="list-style-type: none"> > all patients admitted to unit must be referred for management to rostered registered medical specialist taking responsibility for unit at time of admission. > number of available beds based on demand, with flexibility to meet increased admissions. > daily consultation with higher level ICU for all patients ventilated for more than 24 hours and/or with multisystem failure; however, if Fellow of College of Intensive Care Medicine (CICM) is in charge of unit, this provision may be unnecessary, except to facilitate access to subspecialty services outside ICU. > ventilation and simple, invasive cardiovascular monitoring for children 12 years of age and younger until transfer to higher level paediatric intensive care service if it is anticipated admission will be for more than 24 hours. > management of children in general intensive care service in line with Level 4 children's medical service. > intensive care beds occupied by children must have age-appropriate equipment and staff who can meet needs of children. 	<p>As per Level 4, plus:</p> <ul style="list-style-type: none"> > typically can accommodate at least four ventilated children at one time with access to paediatric-appropriate equipment capable of managing ventilated infants, children and adolescents.¹ > paediatric bed space and multi-professional team supports physiological and psychological needs of child and family. > access—24 hours—to a paediatric radiologist. 	<p>As per Level 5, plus:</p> <ul style="list-style-type: none"> > typically can accommodate at least six ventilated children at one time with access to paediatric-specific intensive care beds and equipment capable of managing ventilated infants, children and adolescents.¹ > access to on-site specialty child protection service. > documented processes with children's subspecialties. > access to designated resuscitation coordinator and education program. > access to paediatric-specific modalities (e.g. simulation). > must meet standards for accreditation as CICM training unit.

Intensive Care Services - Childrens	Level 4	Level 5	Level 6
<p>Workforce requirements</p>	<p>As per module overview, plus:</p> <ul style="list-style-type: none"> > when children admitted, must be medical/nursing staff trained in advanced paediatric life support. <p>Medical</p> <ul style="list-style-type: none"> > Clinical (Service) Director of service is registered medical specialist with credentials in intensive care medicine, anaesthetics, emergency or general medicine. > support available to unit from registered medical specialist with experience in intensive care medicine; however, if registered medical specialist is simultaneously rostered for second clinical area (e.g. operating suites), second registered medical specialist with intensive care medicine experience must be identified to support ICU in event duty specialist unable to attend. > in addition to registered medical specialist, at least one on-site medical practitioner with appropriate level of experience, exclusively rostered to unit and immediately accessible 24 hours. > access—24 hours—to registered medical specialist with credentials in paediatrics. > telephone access—24 hours—to registered medical specialists with credentials in paediatric intensive care medicine who are Fellows of CICM. > identified local registered medical specialist with credentials in paediatrics to act as local paediatric expert and provide assistance in patient care until transfer to higher level service. <p>Nursing</p> <ul style="list-style-type: none"> > staffing levels in accordance with the relevant industrial instruments. <p>Allied health</p> <ul style="list-style-type: none"> > access to allied health professionals including identified dietician, occupational therapist, pharmacist, social worker and speech pathologist, as required. <p>Other</p> <ul style="list-style-type: none"> > access to technical support staff (e.g. biomedical engineers and scientific officers), as required. 	<p>As per Level 4, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> > Clinical (Service) Director is Fellow of CICM and registered medical specialist with credentials in intensive care medicine. > registered medical specialist with credentials in intensive care medicine, anaesthetics, emergency or general medicine must be rostered and accessible to cover ICU at all times. <p>Nursing</p> <ul style="list-style-type: none"> > staffing levels in accordance with the relevant industrial instruments. <p>Allied health</p> <ul style="list-style-type: none"> > extended access to physiotherapist and social work services on request 	<p>As per Level 5, plus:</p> <p>Medical</p> <ul style="list-style-type: none"> > Clinical (Service) Director is registered medical specialist with credentials in paediatric intensive care medicine and Fellow of CICM, and has clinical practice in paediatric intensive care medicine. > all registered medical specialists with credentials in paediatric intensive care medicine must be Fellows of CICM or deemed specialists in paediatric intensive care medicine. > at least one registered medical specialist with credentials in paediatric intensive care medicine. > in addition to registered medical specialist with credentials in paediatric intensive care medicine, at least one medical practitioner with paediatric intensive care experience. <p>Nursing</p> <ul style="list-style-type: none"> > staffing levels in accordance with the relevant industrial instruments.

Intensive Care Services - Childrens	Level 4	Level 5	Level 6
Specific risk considerations	> Nil	In addition to what is outlined in the Fundamentals of the Framework , specific risk management requirements include: > with regard to lead clinician, acknowledgement by CICM recruitment of Fellows to rural/ regional units may be difficult and College supports designation of Level 5 for regional ICU if this were only deficiency, genuine attempts had been made at recruitment of suitable personnel ^{1, 2} and, under such circumstances, appropriately trained and registered medical specialists (e.g. anaesthetists, general physicians, emergency medicine specialists) were able to provide required medical / specialist coverage.	> Nil

Support service requirements for children's intensive care service	Level 4		Level 5		Level 6	
	On-site	Accessible	On-site	Accessible	On-site	Accessible
Children's anaesthetic	4		4		6	
Children's medical	4		4		6	
Children's surgical	4		4		6	
Medical imaging	4			5	6	
Mental Health (child & Youth)		4		4	6	5
Nuclear medicine					6	
Pathology		4	4		6	
Perioperative (relevant section/s)	4		5		6	
Pharmacy	4		5		6	

Legislation, regulations and legislative standards	Non-mandatory standards, guidelines, benchmarks, policies and frameworks(not exhaustive & hyperlinks current at date of release of CSCF)
<p>Refer to the Fundamentals of the Framework and Children's Services - Preamble for details.</p>	<p>In addition to the Fundamentals of the Framework and Children's Services - Preamble, the following are relevant to children's intensive care services:</p> <ul style="list-style-type: none"> > Australasian College for Emergency Medicine, Australian and New Zealand College of Anaesthetists and College of Intensive Care Medicine of Australia and New Zealand. Guidelines for Transport of Critically Ill Patients (2015). http://www.cicm.org.au/CICM_Media/CICMSite/CICM-Website/Resources/Professional%20Documents/IC-10-Guidelines-for-Transport-of-Critically-Ill-Patients.pdf > Australian College of Critical Care Nurses. ACCCN Position Statement (2009) on Organ and Tissue Donation and Transplantation: The roles of the critical care nurses and the critical care units and the provision of critical care education. ACCCN; 2009. > Australian College of Critical Care Nurses. ACCCN Resuscitation Position Statement (2006): Adult and Paediatric Resuscitation by Nurses. ACCCN; 2006. www.acccn.com.au/ > Australian College of Critical Care Nurses. ACCCN ICU Staffing Position Statement on Intensive Care Nursing Staffing. ACCCN; 2003. www.acccn.com.au/images/stories/downloads/staffing_intensive_care_nursing.pdf > College of Intensive Care Medicine of Australia and New Zealand. Guidelines on intensive care specialist practice in hospitals accredited for training in intensive care medicine (2013). http://www.cicm.org.au/CICM_Media/CICMSite/CICM-Website/Resources/Professional%20Documents/IC-2-Guidelines-on-Intensive-Care-Specialist-Practice.pdf > Australian Council on Healthcare Standards. Intensive Care Indicators. ACHS; 2010. www.achs.org.au > Children's Hospitals Australasia. Charter on the Rights of Children and Young People in Healthcare Services in Australia. www.awch.org.au > South Australian Government. Charter of Rights for Children and Young People in Care. www.gcyp.sa.gov.au > College of Intensive Care Medicine of Australia and New Zealand. Intensive Care Specialist Practice in Hospitals Accredited for Training in Intensive Care Medicine. CICM; 2011. www.cicm.org.au/cms_files/ > College of Intensive Care Medicine of Australia and New Zealand. The Supervision of Vocational Trainees in Intensive Care Medicine. IC-4 CICM; 2010. www.cicm.org.au/cms_files/

Reference List

1. College of Intensive Care Medicine of Australia and New Zealand. Minimum Standards for Intensive Care Units: Review IC-1. CICM; 2010. www.cicm.org.au
2. Australian College of Critical Care Nurses. ACCCN Position Statement (2006) on the Use of Healthcare Workers other than Division 1 Registered Nurses in Intensive Care. ACCCN; 2006. www.acccn.com.au/

For more information

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