

# Children's Medical Services

## Module overview

Please note: This module must be read in conjunction with the Fundamentals of the Framework (including the glossary and acronym list) and the Preamble to Children's Services.

Children's medical services comprise many specialties and require significant support services to provide safe patient care. These services are provided by registered medical practitioners and/or a range of registered medical specialists, nursing and allied health professionals (with adequate support services) in addition to multidisciplinary teams. Additionally, a small number of patients may require superspecialist services for complex clinical issues.

Children's medical services include the following:

adolescent medicine	gastroenterology	paediatric radiology
cardiology	general paediatrics	palliative care
child development	hepatology	rehabilitation medicine
child protection	immunology	renal medicine
clinical genetics	infectious diseases	rheumatology
clinical haematology	medical oncology	sleep medicine
clinical immunology	metabolic medicine	thoracic medicine
community child health	nephrology	transplantation medicine
dermatology	neurology	
endocrinology	paediatric pathology	

In this module, the categories of medical patient risk outlined in Table 1 will enable the appropriate service to be selected on patient presentation. As a patient's diagnosis may not be clearly established on presentation, and their course may change during hospitalisation, it is essential that patient status is regularly reassessed. Where patient risk increases or their condition deteriorates, transfer to a more appropriate medical service is required. Achieving optimum patient care and management depends on timely access to required medical expertise.

*Table 1: Alignment of medical risk with patient status*

Level of risk	Medical patient status
Low	Low-acuity, single-system medical condition(s) without significant comorbidities
Medium	Low-acuity, single-system medical conditions with significant but stable comorbidities
High	High-acuity, single- or multisystem medical conditions with significant unstable comorbidities, with or without high expectation of deterioration.

## Service networks

In addition to the requirements outlined in the Fundamentals of the Framework, specific service network requirements include:

- documented processes at each level of medical service with public or licensed private health facility(s) for referral and transfer of patients to/from higher capability level services to provide safe, ongoing care and management of children.

## Level 1 Children's Medical Service

### Service description

A Level 1 service provides ambulatory care, generally during business hours, for children and their parent/carer/guardian(s), with no inpatient care. This includes initiatives for universal, selective and indicated populations to promote children's survival, development, protection and participation. Care is delivered in a variety of community settings, including child health clinics, multipurpose health clinics, schools and home-based care.

A Level 1 service is predominantly provided by a registered nurse and/or registered midwife, nurse practitioner with relevant advanced training, Aboriginal and Torres Strait Islander health worker or allied health professionals and includes the following:

- rapid health assessment for the sick child
- routine child health care
- prevention and promotion of health
- screening and early diagnosis of conditions for early intervention and treatment or referral
- chronic/long-term care and management.

Interventions may include immunisation, family assessment, parenting education and support programs, feeding support, developmental screening, sexual health programs, environmental health and disease control, and alcohol and substance abuse programs. This level of service is capable of providing limited treatment for minor injuries and illnesses, basic life support and limited stabilisation prior to transfer to a higher level of service.

### Service requirements

As per module overview, plus:

- staff competent in assessment, care and management and delivery of health promotion activities and programs for children and their families in:
  - growth, development and behavioural stages
  - nutritional requirements
  - linking families with appropriate services for Aboriginal and Torres Strait Islander health, family support and wellbeing
  - providing advice and referral to relevant services for family wellbeing
  - supporting families through transition, including facilitating access to programs that build on emotional health, resilience and coping skills
- referral pathway must exist to provide access to:
  - hearing assessment services
  - paediatric specialty services for advice/referral
  - maternal, child health, development and neonatal services for infants up to 28 days of age
  - allied health supports, which may be adult allied health teams with links to a higher level of service for children's specific requirements
  - adult mental health services, child and youth mental health service (CYMHS), and drug and alcohol services
- telehealth for clinical and educational purposes.

## Workforce requirements

As per module overview, plus:

### Nursing

- access to registered nurses and/or registered midwives or a nurse practitioner with relevant advanced training

### Allied health

- access to allied health professionals

### Other

- links and/or contact with a child protection liaison officer with clear processes for child protection referral outlined
- may have access to Aboriginal and Torres Strait Islander health worker, where appropriate.

## Support service requirements

A Level 1 service requires:

Service	On-site	Accessible
medication		1
mental health (child and youth)		4
neonatal		1
pathology		1

## Level 2 Children's Medical Service

### Service description

A Level 2 service primarily provides planned ambulatory care for healthy children, usually in rural and remote locations. This level service provides a limited inpatient service with short-term coverage, which can provide low-risk acute care and treatment to a child. The service is capable of providing basic life support for children and provides limited stabilisation of children who require transfer to a higher level of service within a relevant children's service network.

This service has documented consultation and referral links with higher level services within the relevant children's service network, and particularly with retrieval and outreach services such as the Royal Flying Doctor Service and visiting Level 4 services.

### Service requirements

As per Level 1, plus:

- no planned admissions of children; however, children may be admitted short-term for acute health and/or protection concerns (e.g. rehydration, tonsillitis, otitis media) using relevant management protocols (e.g. health management protocols)
- children may be admitted awaiting transfer or retrieval
- may provide medical ambulatory clinics with visiting clinician groups/individuals (e.g. the Royal Flying Doctor Service).

### Workforce requirements

As per Level 1, plus:

- healthcare practitioners include, but are not limited to, registered medical practitioners, registered nurses, nurse practitioners with relevant advanced training, enrolled nurses, Aboriginal and Torres Strait Islander health workers, allied health professionals, registered midwives and lactation consultants

#### Medical

- registered medical practitioner available by telephone 24 hours

#### Nursing

- registered nurse or nurse practitioner with relevant advanced training coverage 24 hours

#### Other

- as per Level 1 service.

**Support service requirements**

A Level 2 service requires:

Service	On-site	Accessible
medical imaging		2
medication	2	
mental health (child and youth services)		4
neonatal		1
pathology		2

## Level 3 Children's Medical Service

### Service description

A Level 3 service provides definitive planned and unplanned ambulatory and/or inpatient care for children and may provide a subspecialty ambulatory referral system. General practitioner ambulatory services may also be provided.

Children's inpatient services at this level usually treat single-system disorders for children with low-acuity medical conditions. Children with complex social issues and pre-existing significant comorbidities are typically not admitted at this level. An allocated bed area or a bay of inpatient children's beds is available.

A Level 3 service is capable of providing advanced life support for children and can stabilise children who require transfer to a higher level of service within a relevant children's service network. The service has documented consultation and referral links with higher-level services within the relevant children's service network. Medical and surgical outreach services may visit on a day basis, and the service capability may increase during this time, where formally approved.

### Service requirements

As per Level 2, plus:

- members of the multidisciplinary team have experience, knowledge and skills in general paediatric principles and practice
- access—during business hours—to mental health services for consultation and/or liaison
- no children admitted to general intensive care beds, except for stabilisation prior to transfer
- use of a paediatric physiological observational and severity tool, such as the Children's Early Warning Tool, is desirable
- some visiting specialist outreach ambulatory services may be provided.

### Workforce requirements

As per Level 2, plus:

#### Medical

- a registered medical practitioner, who may be on-site or in close proximate call for inpatient services to provide paediatric resuscitation, available 24 hours
- registered medical practitioners who are competent in providing advanced paediatric life support
- a designated medical officer (however titled) is available to enact a 'Care and Treatment Order for a Child' 24 hours for inpatient facilities

## Nursing

- senior registered nurse (however titled) in charge of each shift with relevant clinical knowledge and experience, and demonstrated evidence of ongoing clinical competency appropriate to the service being provided
- registered nurses with relevant clinical knowledge, demonstrated evidence of ongoing clinical competency and experience appropriate to the service being provided
- one registered nurse present in inpatient unit at any one time

## Allied health

- allied health professionals may not be on-site or specialise in paediatrics, but can provide treatment to children in both community clinics and inpatient settings

## Other

- as per Level 1 service.

## Support service requirements

A Level 3 service requires:

Service	On-site	Accessible
children's anaesthetic	3	
children's intensive care		4
medical imaging		3
medication	3	
mental health (child and youth)		4
neonatal		3
pathology		3

## Level 4 Children's Medical Service

### Service description

A Level 4 service provides ambulatory and/or inpatient care. Ambulatory care may occur within the community and/or service facility, and provides a multidisciplinary team approach to a broad range of conditions (e.g. developmental assessment teams). An inpatient service provides a designated children's ward, and all children up to the age of 14 years should be admitted to a children's ward in this level of care. Flexibility with adolescents should be exercised. There may be some exceptions to the ages specified in this document dependent on local policies and circumstances. All admitted infants of less than 3 months of corrected age must be involved with a paediatric medical services team on admission. Admitted children with complex social issues or significant comorbidities must have combined care with a paediatric medical team.

A registered medical specialist with credentials in paediatrics is available 24 hours to support inpatient services.

### Service requirements

As per Level 3, plus:

- multidisciplinary team approach used in the care/treatment of children including community-based multidisciplinary team
- access to well-established community child developmental health services
- documented processes between ambulatory and inpatient paediatric medical service teams
- clear links to Level 5 and Level 6 children's medical services for both clinical and educational support and referral
- paediatric support for emergency departments where an emergency department is located on-site
- access to child and youth mental health services for consultation and/or liaison during business hours, and access to general mental health services for consultation and/or liaison after hours
- clear governance by the facility to allow clinical leaders to develop and implement workplace policies and guidelines specific to children
- clear transition guidelines to adult services for both ambulatory and inpatient services
- lung function services as per modules A-C in the Thoracic Society of Australia and New Zealand (TSANZ) guidelines, Accreditation of Paediatric Respiratory Function Assessment Services
- designated child protection advisor who provides child protection-specific consultation and liaison, and who participates in local intergovernmental suspected child abuse and neglect (SCAN) meetings (private facilities must have clear local workplace guidelines to enable referral and reporting to the Department of Communities—Child Safety Services)
- conducts 3-monthly mortality and morbidity meetings
- children at certain ages may be admitted to a Level 4 or 5 children's intensive care service
- may provide non-invasive ventilation care
- may provide a Hospital in the Home service.

## Workforce requirements

As per Level 3, plus:

- access to clinical educators (however titled) across disciplines

### Medical

- a designated registered medical specialist with credentials in paediatrics as the lead clinician responsible for the clinical governance of paediatric medical services in the public sector
- a registered medical specialist with credentials in paediatrics available 24 hours
- a registered medical practitioner dedicated to paediatrics (junior or senior house officers, however titled) available in the hospital during business hours or accessible after hours in the public sector
- in the private sector, the specialist or locum caring for the patient must be immediately available by telephone at all times or have appropriate locum cover

### Nursing

- designated nurse manager (however titled) who may have management and/or postgraduate qualifications in paediatric nursing and has relevant clinical nursing experience commensurate with the position
- senior registered nurse in charge of shift competent in providing paediatric advanced life support and has evidence of ongoing clinical competency with experience appropriate to the service being provided
- all registered nurses working within the service competent in providing paediatric life support
- minimum of two registered nurses at any one time in the inpatient unit
- access to lactation consultation during business hours
- established paediatric education program for all nursing staff

### Allied health

- well-developed, multidisciplinary, allied health team approach to managing care, with some allied health professionals holding paediatric specific qualifications and/or experience
- access—during business hours—to allied health professionals with relevant competencies for paediatric service delivery, including, but not limited to, a dietician, occupational therapist, physiotherapist, psychologist, speech pathologist and social worker
- inpatient units have access to a general physiotherapist 7 days a week
- inpatients requiring non-invasive ventilation must have access to a general physiotherapist 24 hours

### Other

- access—during business hours—to biomedical support for equipment maintenance.

## Support service requirements

A Level 4 service requires:

Service	On-site	Accessible
children's anaesthetic	4	
children's intensive care		4
children's surgical		4
medical imaging	4	
mental health (child and youth)		4
medication	4	
neonatal		4
pathology		4

## Level 5 Children's Medical Service

### Service description

A Level 5 service provides definitive ambulatory and/or inpatient care with some subspecialty services available. A Level 5 service will have stand-alone multidisciplinary teams in some specialties (e.g. rehabilitation, child protection and developmental services). Neonatal services at this level are provided separately from children's medical services with access to a Level 6 neonatal service. Any child under the age of 3 months admitted overnight for a procedure that is not general paediatric surgery should have a medical consultation by a registered medical specialist with credentials in paediatrics. Level 5 community child health residential facilities do not require on-site medical imaging and pathology services.

### Service requirements

As per Level 4, plus:

- members of the multidisciplinary team have demonstrated experience, and advanced knowledge and skills, in the delivery of children's services pertaining to the specialty/subspecialty area (e.g. children's surgical service)
- well-developed, dedicated, child development specialist service
- designated close observation care area/beds managed by paediatric specialists available—these may be in the paediatric inpatient unit or a general intensive care unit
- neonatal services must be provided by a separate sustainable roster
- dedicated consultation-liaison child psychiatry service available with dedicated child and youth mental health beds
- dedicated clinical intake officer (in the public sector) for child development services during business hours
- designated paediatric-specific day-stay treatment area available
- well-developed Hospital in the Home service
- access to on-site electro-encephalography (EEG)
- lung function services as per modules A–I in TSANZ Guidelines, Accreditation of Paediatric Respiratory Function Assessment Services
- well-developed children's ambulatory service, which may be provided in a stand-alone environment
- well-developed child protection service, which may act as a support to other services
- may have a Level 4 or Level 5 children's intensive care service.

### Workforce requirements

As per Level 4, plus:

#### Medical

- some registered medical specialists with credentials for specialty paediatrics (e.g. paediatric rehabilitation, child protection, child development)
- dedicated registered medical practitioners (registrar/senior house officer) on-site 24 hours with these staff not responsible for special care nursery or the neonatal intensive care service

- community child health residential facilities provide a registered medical practitioner who is accessible 24 hours
- dedicated child development registered medical specialist with credentials in paediatrics supports ambulatory child development service
- clinically engaged academic appointment

### Nursing

- other nursing staff roles (e.g. case manager, clinical nurse consultant or nurse practitioner with relevant advanced training) relevant to specialties (e.g. oncology, rehabilitation)

### Allied health

- paediatric allied health professionals available during business hours
- general physiotherapist to support inpatient service available 24 hours

### Other

- school teacher available during school hours.

## Support service requirements

A Level 5 service requires:

Service	On-site	Accessible
children's anaesthetic	5	
children's intensive care	4	
children's surgical	4	
medical imaging	5	
medication	5	
mental health (child and youth)		4
neonatal		5
nuclear medicine	4	
pathology	5	

## Level 6 Children's Medical Service

### Service description

A Level 6 service provides the most complex medical services to children on a statewide and interstate basis. Level 6 children's specialties include adolescent medicine, cardiology, child development, child protection, clinical genetics, community child health, dermatology, endocrinology, gastroenterology, general paediatrics, infectious diseases, immunology, medical imaging, metabolic medicine, nephrology, neurology, oncology and haematology, palliative care, pathology, rehabilitation medicine, respiratory medicine, rheumatology and transplantation medicine. Where appropriate, these specialties are accessible 24 hours a day.

This level of service supports children's Level 6 surgical, intensive care, emergency and child and youth mental health services. A Level 6 children's medical service is supported by a Level 6 paediatric intensive care service, which is appropriately staffed, rostered and equipped for retrieval support 24 hours a day.

### Service requirements

As per Level 5, plus:

- members of the multidisciplinary team have demonstrated experience, and advanced knowledge and skills, in children's services pertaining to specific specialty and/or subspecialty area/s, some with postgraduate qualifications
- adolescent-based ambulatory service with defined transition to adult service
- a designated adolescent inpatient service with adolescent trained nursing staff
- a paediatric pain-management service
- links with all other paediatric services, ensuring care is provided locally in a coordinated manner
- links with Level 6 neonatal services, in particular, maternal foetal medicine services
- psychiatric emergency service with access to a registered medical specialist with credentials in child and adolescent psychiatry who is available for consultation 24 hours
- leading and coordinating a well-defined paediatric telehealth service
- statewide telephone support for relevant specialties 24 hours
- a statewide approach to outreach and coordination of care provided by each specialty service, where relevant
- specialty support for all Level 6 neonatal services and maternal foetal medicine units
- access to on-site school
- support for statewide mortality and morbidity meetings
- support and advice to statewide paediatric root cause analysis
- leadership role in the development and implementation of statewide clinical guidelines for children
- active involvement in national and international benchmarking
- links with other national services
- may be a nationally funded centre providing care for funded patients from interstate or overseas.

## Workforce requirements

As per Level 5, plus:

### Medical

- lead clinician responsible for clinical governance of medical services with qualifications in paediatrics
- lead clinicians in all specialty units
- senior registrar with a significant role in junior staff management and leadership
- accessible service is provided 24 hours for all specialties where clinically relevant

### Nursing

- nominated nursing leader/s (however titled) for the service have relevant managerial experience commensurate with the position
- all specialties have a designated paediatric specialist nurse (however titled)
- all service units have a designated nurse manager (however titled) who has relevant clinical nursing experience commensurate with the position

### Allied health

- lead clinician responsible for clinical governance of allied health services with paediatric experience
- lead clinicians in all specialty disciplines

### Other

- as per Level 5 service.

## Support service requirements

A Level 6 service requires:

Service	On-site	Accessible
children's anaesthetic	6	
children's intensive care	6	
children's surgical	6	
medical imaging	5	
medication	6	
mental health (child and youth)	5	
neonatal		6
nuclear medicine	5	
pathology	5	

## Legislation, regulations and legislative standards

Refer to the Fundamentals of the Framework and the Preamble to Children's Services for details.

## Non-legislative standards, guidelines, benchmarks, policies and frameworks

In addition to what is outlined in the Fundamentals of the Framework and the Preamble to Children's Services, the following are relevant to children's medical services:

- Australian College of Midwives. National Midwifery Guidelines for Consultation and Referral, 2nd ed. ACM; 2008.
- Queensland Government. Child and Youth Health Practice Manual for Child Health Nurses and Indigenous Child Health Workers. Queensland Health; 2007.  
[http://www.health.qld.gov.au/health\\_professionals/childrens\\_health/child\\_youth\\_health.asp](http://www.health.qld.gov.au/health_professionals/childrens_health/child_youth_health.asp)
- The Royal Australasian College of Physicians. National Standards for the Care of Children and Adolescents in Health Services. Sydney: RACP; 2008.  
<http://www.racp.edu.au/page/child-adol>
- Thoracic Society of Australia and New Zealand. Accreditation of Paediatric Respiratory Function Assessment Services. TSANZ; 2006.