

Module Overview

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

Content in this module has been adapted from the *Service capability framework: A guide for Victorian health services providing primary treatment and shared care to children and adolescents with cancer* (Paediatric Integrated Cancer Service, 2014).

Treating a child or adolescent with cancer comes with a high degree of risk. Despite overall survival rates of greater than 80 per cent,¹ treatment modalities for Paediatric cancer are often prolonged and complicated and have a narrow therapeutic index. Side effects of systemic therapy for treating cancer can be severe, including acute organ toxicities, prolonged immunodeficiency and infection. Providing therapy and managing toxicities can be extremely demanding on health services that do not have the capability to accept and manage these. High-quality evidence-based care is required not only to deliver therapy and supportive care but also for diagnosis, post-treatment surveillance and long-term follow-up care.

The rarity and complexity of child and adolescent cancer provides a real challenge in delivering optimal care. As a result of this, in South Australia and the Northern Territory care is managed and directed from a single specialised health service. A ‘shared care’ model, to provide supportive care closer to home, is utilized in a small proportion of cases, however opportunities exist to expand this particularly in the areas of long term follow up and transition. Shared care services need to have a defined scope of practice, reporting/communicating strategies including support and education for health professionals/health care centres caring for this patient population.

This field also demands a high degree of participation in clinical trials to meet research targets both nationally and internationally. Clinical trials promote collaboration but also increase demands on health services to remain compliant in the conduct of trials. Paediatric cancer services need to meet the needs of the child, delivering a family-centred model of care in an environment that is safe and appropriate for children and adolescents.

Evidence shows that best outcomes demand a well-coordinated, timely, multidisciplinary approach requiring effective collaboration of health services working together as a team.^{2,3} Integrated care is fundamental to paediatric cancer care and service delivery.

The emphasis of the Cancer Services Children’s module is to define the level of paediatric cancer care and oncology services provided at various health services across different time points in a child’s care. This will support health services to plan, develop and deliver a high level of safe and effective paediatric cancer care within an agreed scope of practice. By documenting minimum service requirements, health services will be assisted to deliver services that meet the local needs of the community and build confidence in shared care referrals between health services

The module focuses on the overall care and appropriate management of children and adolescents with cancer. The management of patients with non-malignant haematological disorders (such as haemophilia, bleeding and thrombotic disorders, and non-aplastic anaemia, and patients requiring transfusions) are not covered in the Cancer Services Children’s module.

Radiation oncology services are an integral but specialised component of children’s cancer services and are addressed in the [Radiation Oncology Services Children’s](#) module. Similarly, surgical services for children with cancer are addressed in the [Surgical Services - Children’s](#) module.

Children with cancer need to be treated by staff with particular skills and expertise. Children’s cancer services are best provided under the care of an appropriately trained, qualified and credentialed children’s service at a specialist Tertiary Paediatric Referral Centre.

Diagnosis and initiation of treatment for a child with cancer is generally undertaken in consultation with a paediatric oncologist. Best practice is based on the concept of integrated multidisciplinary care. Multidisciplinary teams of specialist children’s medical, nursing and allied health professionals provide care and services to meet the clinical, physical, social and psychological needs of children with cancer and their families. This multidisciplinary approach is directed towards maximising quality-of-life outcomes associated with cancer treatments and long-term survival. The clinical service is supported by a range of subspecialty children’s services.

Children's cancer services involve the close interaction between medical, imaging, anatomical pathology, radiation oncology services and surgical services. Children's radiation services are provided within the adult radiotherapy facility by registered medical specialists with credentials in radiation oncology. Surgical oncology services for children include the initial biopsy of a tumour, tumour resection and insertion of venous access devices. Surgical services for children are provided by paediatric surgeons, orthopaedic surgeons and specialist neurosurgeons. Further reference to services for children may be found in the CSCF Children's Services modules.

Treatment for childhood cancer is multimodal and can include chemotherapy, haematopoietic stem cell transplantation, surgery, radiation, biological therapies and immunotherapy. The management and administration of systemic therapy for childhood cancers is complex. Systemic therapy is best prescribed and dispensed in line with clinical trial protocols or published regimens by staff credentialed in the administration and prescription of cytotoxic therapy. Severe and sometimes life-threatening side effects, including multi-organ toxicity, immunosuppression and infection, can occur as a result of the highly toxic nature of the drugs used.

Children's cancer service activities may include:

- > diagnosis and assessment
- > psychosocial evaluation and support
- > management of newly diagnosed or recurrent cancer
- > prescription, preparation and administration of therapy
- > management of side effects of treatment
- > planning and delivery of radiation therapy in conjunction with a radiotherapy service
- > planning of surgical treatments in conjunction with surgical services
- > transfusion of blood and blood products
- > apheresis
- > allogeneic and autologous haematopoietic stem cell transplantation
- > ongoing assessment and follow-up of patients during therapy
- > ongoing assessment and follow-up of patients after completion of therapy
- > transition
- > rehabilitation planning in conjunction with appropriate services
- > provision of palliative care.

Chemotherapy should be prescribed, dispensed and administered in line with published guidelines and standards on the safe handling and disposal of chemotherapeutic drugs and related waste. Chemotherapy may be prescribed only by registered medical practitioners and/or other persons authorised under legislation with an understanding of the common and unusual toxicities associated with cytotoxic therapy.

The CSCF recognises three levels of complexity for children's cancer service provision: Levels 4 to 6. The different service levels address the complexity and risk associated with delivery of treatments. Currently in SA/NT we have Level 6 and level 4 facilities.

The factors contributing to levels of risk in administration of systemic chemotherapy include:

- > education and experience of medical staff, nurses and pharmacists
- > the service's capacity to protectively isolate immunocompromised patients
- > access to pathology services for processing of blood counts and microbiology
- > access to supportive care (e.g. blood products and antibiotics)
- > patient / carer understanding of treatment and side effects.
- > emergency department services
- > subspecialty supports
- > paediatric intensive care

Service Networks

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

- > delivery of services in accordance with the Paediatric Haematology / Oncology Network model, where relevant
- > consultative cancer services provided by a Level 6 oncology service on-site, or off-site at a Level 4 and/or 5 cancer service.

Table 1: Levels of complexity for children’s cancer services

Children’s cancer services			
Service complexity	Level 4	Level 5	Level 6
			Primary provider of diagnostic and treatment services. Provides consultative / outreach services to a lower level service.
	Consults with specialist service (Level 6) for delivery of services for children with cancer.		

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.

Service Descriptions And Total Activity

Level 4 Service

A level 4 service will provide a shared care service that delivers supportive care to children and adolescents with cancer. A level 4 service may also provide a low-complexity chemotherapy service to children and adolescents with cancer, under the guidance of a level 5 or 6 service. The main aim of a level 4 service is to provide safe and coordinated shared care closer to home, in collaboration with a level 5 or 6 service.

Level 5 Service

A level 5 service will provide comprehensive care for the majority of paediatric oncology presentations within its catchment area, with direct links to a level 6 service. A level 5 service is recognised as a primary treatment centre and will provide diagnostic services and/or management of at least 30 new patients per year.

Level 6 Service

A level 6 service is a state-wide referral centre for paediatric oncology. A level 6 service is recognised as a primary treatment centre and will provide diagnostic services and/or management from the local catchment as well as referrals from other geographical regions. A level 6 service provides state-wide, national and international leadership in paediatric oncology, including research, clinical guidance, education and policy development. A level 6 service will also assess and manage risk in new therapies and supportive care interventions, providing leadership and planning for other service levels.

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:

- > all chemotherapy is initially prescribed in a Level 6 centre and subsequently supervised by a registered medical specialist with credentials in children's oncology
- > all staff involved in administration, handling and disposal of chemotherapy drugs and related waste must have an understanding of the common and unusual toxicities associated with chemotherapy, and must complete relevant, competency-based education including safe handling and disposal of chemotherapy agents and related waste
- > all staff with the potential to have contact with patients undergoing chemotherapy must be educated in safe handling practices
- > all healthcare workers caring for children in health facilities are competent in paediatric life support.

Cancer services Children	Level 4	Level 5	Level 6
Service description			
Diagnosis	<ul style="list-style-type: none"> > Communication and consultation with a level 5 or 6 service for all pre-diagnosis tests and investigations undertaken. > Definitive diagnosis, staging and/or risk assessment will be provided at a level 5 or 6 service. 	<ul style="list-style-type: none"> > Provision of, or timely referral pathways for all tests and investigations to complete the definitive diagnosis and risk assessment of all malignancies in children and adolescents, including participation at diagnosis with a centralised multidisciplinary meeting hosted by a level 6 service. 	<ul style="list-style-type: none"> > Provision of, or timely referral pathways for all tests and investigations to complete the definitive diagnosis and risk assessment of all malignancies in children and adolescents.
Treatment and supportive care	<ul style="list-style-type: none"> > Provides a low-complexity day case paediatric chemotherapy service, as required, within a shared care model with a level 5 or 6 service. > Provides supportive care measures along the paediatric oncology treatment pathway for patients and their families, defined within a shared care model with a level 5 or 6 service 	<ul style="list-style-type: none"> > Provision of, or timely referral pathways for all therapeutic interventions in the management of paediatric cancer including chemotherapy, biotherapy, radiotherapy and surgery, in both the inpatient and outpatient setting. New and investigative therapies and supportive care interventions may be initially introduced within a shared care collaborative model with a level 6 service. > All care requiring the use of a haematopoietic stem cell transplant (HSCT) service as an adjunct to treatment for cancer in children will be either referred to or shared with a level 6 service. > Enrolment and coordination of paediatric oncology patients in clinical trials. > Provides all supportive care measures along the paediatric oncology treatment pathway for patients and their families. > Adolescents with 'adult-type' malignancies should have links to or advice from adult oncology and the relevant multidisciplinary team, where appropriate. 	<ul style="list-style-type: none"> > Provision of, or timely referral pathways for all therapeutic interventions in managing paediatric cancer, including chemotherapy, biotherapy, radiotherapy and surgery, in both the inpatient and outpatient settings. > Provides a paediatric haematopoietic stem cell transplant (HSCT) service. > Enrolment and coordination of paediatric oncology patients on clinical trials, including phase 1 and 2 clinical trials. > Provides all supportive care measures along the paediatric oncology treatment pathway for patients and their families. > Adolescents with 'adult-type' malignancies should have links to or advice from adult oncology and the relevant multidisciplinary team, where appropriate.
Surveillance	<ul style="list-style-type: none"> > Provides limited tests, investigations and appointments in collaboration with a level 5 or 6 service during surveillance. 	<ul style="list-style-type: none"> > Provides all tests, investigations and appointments according to relevant protocols and, for children following HSCT, in collaboration with the level 6 service. > Established referral pathways for the shared care of children undergoing surveillance with other level centres. 	<ul style="list-style-type: none"> > Provides all tests, investigations and appointments according to the respective protocol delivery map for all paediatric malignancies and following HSCT. > Established referral pathways for the shared care of children undergoing surveillance with other level centres.

Survivorship	> Provides limited tests, investigations and appointments in collaboration with a level 5 or 6 service in the long-term follow-up of children following treatment for cancer.	> As per level 4	> As per level 5
Palliative care	> Support, as guided by the level 5 or 6 service, for managing the care of children with cancer closer to home where there is no longer a curative or control regimen.	> Provision of, or timely access to services required for managing cancer in children and adolescents where there is no longer a curative or control regimen.	> As per level 5
Service requirements			
Emergency care	> An emergency department with paediatric trauma and resuscitation facilities with the ability to stabilise acutely unwell children or adolescents, with appropriate escalation and transfer guidelines to a level 5 or 6 service. Immediate availability of staff on site who are competent in accessing a central venous access device to ensure timely administration of fluid, blood products, antibiotics and other life-saving interventions.	> A paediatric emergency department with paediatric trauma and resuscitation facilities with the ability to diagnose and stabilise acutely unwell children or adolescents. Immediate availability of staff on site who are competent in accessing a central venous access device to ensure timely administration of fluid, blood products, antibiotics and other life-saving interventions.	> As per level 5
Environment	> Child- and family-friendly inpatient and outpatient environment in line with the Royal Australasian College of Physicians <i>Standards of care for children and adolescents in health services</i> .	> As per level 4	> As per level 5
Intensive care	> Documented processes for inter-hospital transfers of acutely unwell patients to a level 5 or 6 paediatric intensive care centre.	> Paediatric intensive care unit providing comprehensive care including complex multi-system life support for an indefinite period to children younger than 18 years of age, in line with the College of Intensive Care Medicine minimum standards. ⁴	> As per level 5

Information technology	<ul style="list-style-type: none"> > Access to pathology, radiology and hospital patient records available to all staff collocated in the clinical areas. Dedicated IT support personnel on site. Systems in place to support the communication of shared paediatric oncology care across services, including the communication of the care of children in clinical trials. > Videoconference systems to support telehealth opportunities with a level 5 or 6 service. Ability to access multidisciplinary meetings hosted by a level 5 or 6 service. 	<ul style="list-style-type: none"> > Electronic access to tests, investigations, policies, procedures and patient records (as applicable). Dedicated IT support personnel on site. Systems in place to support the electronic communication of shared care across services. > Videoconference systems to support the delivery of telehealth as well as the hosting of multidisciplinary meetings across health services. Data systems integrated with relevant cancer registries and clinical trial partners to facilitate information sharing. 	<ul style="list-style-type: none"> > As per level 5 > As per level 5
Inpatient services	<ul style="list-style-type: none"> > Dedicated paediatric ward with an appropriate isolation room for caring for an immunocompromised child. 	<ul style="list-style-type: none"> > Dedicated paediatric oncology ward environment with appropriate facilities to provide sufficient isolation of patients from airborne pathogens (such as HEPA filtration and positive/negative pressure rooms), delivering comprehensive paediatric cancer care across each of the time points. 	<ul style="list-style-type: none"> > Dedicated paediatric oncology ward with appropriate facilities to provide sufficient isolation of patients from airborne pathogens (such as HEPA filtration and positive/negative pressure rooms), delivering comprehensive paediatric oncology care across each of the time points.
Outpatient services	<ul style="list-style-type: none"> > Dedicated paediatric ambulatory department with capacity to deliver a low-complexity chemotherapy and supportive care service for children and adolescents with cancer. Area available to host regional outreach paediatric oncology clinics. 	<ul style="list-style-type: none"> > Dedicated paediatric oncology outpatient department with the capacity to deliver comprehensive chemotherapy and supportive care across each of the time points. Dedicated procedure rooms and isolation rooms for managing infectious ambulatory patients with an identified waiting area located away from the general population. 	<ul style="list-style-type: none"> > Dedicated paediatric oncology outpatient department with capacity to deliver a comprehensive ambulatory chemotherapy and supportive care service across each of the time points, with dedicated procedure rooms, isolation rooms for managing infectious ambulatory patients as well as an identified waiting area separately located from the rest of the population for patients following a bone marrow transplant.
Family accommodation		<ul style="list-style-type: none"> > Suitable access to accommodation options for caregivers available within or close to the institution. 	<ul style="list-style-type: none"> > As per level 5

Service requirements			
Multidisciplinary meeting	<ul style="list-style-type: none"> > Access to a multidisciplinary meeting structure hosted by a level 5 or 6 service, to enable discussions about new diagnoses within its catchment area. As necessary, be able to access centralised discussions across critical time points in the patient's care. 	<ul style="list-style-type: none"> > Supports and contributes to a multidisciplinary meeting structure presenting all new patients at diagnosis and, as necessary, across critical time points in their care. 	<ul style="list-style-type: none"> > Provides leadership in hosting and coordinating a multidisciplinary meeting structure to discuss all new malignant cancer diagnoses and, as necessary, across critical time points in their care as required, across all service levels.
Chemotherapy and biotherapy	<ul style="list-style-type: none"> > Provides a low-complexity paediatric chemotherapy service including (in collaboration with the level 5 or 6 service) the necessary governance, education and infrastructure. 	<ul style="list-style-type: none"> > Provides a paediatric chemotherapy and biotherapy service to meet the demands of all treatment protocols delivered in the service, with demonstrated referral pathways and collaboration with a level 6 service for new investigative therapies or haematopoietic stem cell transplantation, that falls outside scope. > Provides the necessary governance, education and infrastructure to deliver local chemotherapy and biotherapy, as well as having resources to support the introduction of any new agents, in collaboration with a level 6 service. 	<ul style="list-style-type: none"> > Provides a comprehensive paediatric chemotherapy and biotherapy service to meet the demands of all treatment plans across all paediatric oncology diagnoses, including necessary governance, education and infrastructure, in both the inpatient and the outpatient setting, as well as having resources to introduce new therapies.
Homecare	<ul style="list-style-type: none"> > Home-based healthcare program for children and adolescents, with referrals from the cancer service to local services. Homecare staff have access to paediatric oncology education programs and clinical governance. 	<ul style="list-style-type: none"> > Access to home-based healthcare, with direct links and referrals from the cancer service to local and state-wide services, including access for homecare staff to paediatric oncology education programs and clinical governance documentation. 	<ul style="list-style-type: none"> > As per level 5
Laboratory	<ul style="list-style-type: none"> > Access to real-time laboratory services for managing supportive care and surveillance for the paediatric oncology patient. 	<ul style="list-style-type: none"> > Provides 'real-time' referral pathways to the diagnostic testing, clinical and consultative laboratory services required in to deliver paediatric oncology care. 	<ul style="list-style-type: none"> > As per level 5
Medical imaging	<ul style="list-style-type: none"> > Provision of, or access to, paediatric radiologists and radiographers with paediatric experience, as well as access to an anaesthetic service to deliver these interventions in real time to younger children or infants. 	<ul style="list-style-type: none"> > Provides a medical imaging service, including a paediatric radiologist and anaesthetist, to meet the needs of paediatric oncology care. 	<ul style="list-style-type: none"> > As per level 5

Pharmacy	<ul style="list-style-type: none"> > Designated pharmacist(s) to provide paediatric pharmacy services, with access to local oncology pharmacists and established links to a level 6 service, to support the provision of low-complexity chemotherapy > On-site clinical pharmacy, dispensary and sterile manufacturing pharmacy services (or demonstrated processes to outsource sterile manufacturing). 	<ul style="list-style-type: none"> > Provides a clinical pharmacy service to inpatients and outpatients of the paediatric oncology service. > Supports the needs of the institution's oncology clinical trials service. > On-site dispensary and sterile manufacturing pharmacy services (or demonstrated processes to outsource sterile manufacturing) > Established linkages with the level 6 paediatric oncology pharmacy. 	<ul style="list-style-type: none"> > Provides a paediatric oncology pharmacy service which provides guidance and leadership for all service levels in chemotherapy and biotherapy. > Provides a clinical pharmacy service to inpatients and outpatients of the paediatric oncology service. > Supports the needs of the institution's oncology clinical trials service. > On-site dispensary and sterile manufacturing pharmacy services.
Palliative care	<ul style="list-style-type: none"> > Provision of, or access to a paediatric palliative care program. 	<ul style="list-style-type: none"> > Provides a paediatric palliative care service supporting both inpatient and community-based care 	<ul style="list-style-type: none"> > Provides an on-site dedicated paediatric palliative care service for both inpatient and community-based care.
Procedural pain	<ul style="list-style-type: none"> > Staff with demonstrated evidence of learning to support children and adolescents with cancer during medical procedures. 	<ul style="list-style-type: none"> > Paediatric therapist(s) with training and expertise to provide a comprehensive procedural pain management program. 	<ul style="list-style-type: none"> > Paediatric therapist(s) with training and expertise to provide a comprehensive procedural pain and management program.
Psychosocial care	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > Provides services to meet the practical, social and mental health needs of children with cancer and their families. 	<ul style="list-style-type: none"> > As per level 5
Radiotherapy	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > Provides timely referral pathways to and specialised treatments for paediatric radiation oncology that meets the demands of providing care to children (see cancer services – radiation oncology – children for more details). 	<ul style="list-style-type: none"> > As per level 5
Telehealth	<ul style="list-style-type: none"> > Dedicated resources to participate in telehealth consultations with level 5 and 6 services. 	<ul style="list-style-type: none"> > Dedicated resources to participate in telehealth consultation with level 3, 4 and 6 services. 	<ul style="list-style-type: none"> > Timely access to a service to support telehealth consultations with other level services in SA/NT and remote and rural centres.
Transition	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > Timely referral pathways to adult health services for transitioning adolescent patients. 	<ul style="list-style-type: none"> > referral pathways to adult health services for transitioning adolescent patients. Coordinators responsible for coordinating transition.
Translation services	<ul style="list-style-type: none"> > Timely access to translation services to ensure effective communication of care and education for linguistically diverse children and their families. 	<ul style="list-style-type: none"> > As per level 4. 	<ul style="list-style-type: none"> > As per level 5.

<p>Medical</p>	<p>Paediatrics</p> <ul style="list-style-type: none"> > A paediatrician is appointed as medical head of the department. > Consultant paediatrician available on-call 24 hours a day. > Designated paediatric registrar. <p>Anaesthetics</p> <ul style="list-style-type: none"> > Access to a consultant anaesthetist with paediatric subspecialty. > Consultant anaesthetist available on-call 24 hours a day. > Anaesthetic registrar on site 24 hours a day. <p>Medical imaging</p> <ul style="list-style-type: none"> > Access to a paediatric radiologist available 24 hours a day 	<p>Paediatric oncology</p> <ul style="list-style-type: none"> > A specialist paediatric oncologist is appointed as head of the department. > Specialist paediatric oncologist available on-call 24 hours a day. <p>Anaesthetics</p> <ul style="list-style-type: none"> > Paediatric anaesthetic consultant available on-call 24 hours a day. > Anaesthetic registrar on site 24 hours a day. <p>Medical imaging</p> <ul style="list-style-type: none"> > Paediatric radiologist available on site during business hours and on-call 24 hours a day. <p>Radiation oncology</p> <ul style="list-style-type: none"> > Access to a radiation oncologist with paediatric subspecialty during business hours. > Access to a radiation oncologist 24 hours a day and to phone consultations with a radiation oncologist with a paediatric subspecialty. <p>Surgery</p> <ul style="list-style-type: none"> > Access to on-site paediatric specialty surgical services including orthopaedics, neurosurgery, cardiothoracic, ophthalmology, otolaryngology, plastics, urology, maxillofacial and general paediatric surgery expertise. <p>Medical specialties</p> <ul style="list-style-type: none"> > Access to on-site paediatric consultant physicians including neurology, cardiology, nephrology, respiratory, ophthalmology, endocrinology, genetics, infectious diseases, psychiatry, rehabilitation, pathology, haematology, immunology, fertility and transfusion. <p>Oral health</p> <ul style="list-style-type: none"> > Access to on-site paediatric dentist. 	<p>Paediatric oncology</p> <ul style="list-style-type: none"> > A specialist paediatric oncologist is appointed as head of the department. > Specialist paediatric oncologist available on-call 24 hours a day. > Paediatric HSCT speciality consultant available on-call 24 hours a day. <p>Anaesthetics</p> <ul style="list-style-type: none"> > Paediatric anaesthetic consultant available on-call 24 hours a day. > Paediatric anaesthetic registrar available on site 24 hours a day. <p>Medical imaging</p> <ul style="list-style-type: none"> > As per level 5 <p>Radiation oncology</p> <ul style="list-style-type: none"> > As per level 5 <p>Surgery</p> <ul style="list-style-type: none"> > As per level 5 <p>Medical specialties</p> <ul style="list-style-type: none"> > As per level 5 <p>Oral health</p> <ul style="list-style-type: none"> > As per level 5
-----------------------	---	---	--

Paediatrics

- > All staffing in accordance with relevant industrial instruments
- > Identified nursing lead in paediatric services.
- > Paediatric nursing staff with low-complexity chemotherapy competency as defined by the level 5 or 6 service rostered for outpatient episodes of chemotherapy. Paediatric nursing staff across all shifts in the inpatient setting.

Pharmacy

- > An identified paediatric and/or oncology pharmacist to support low complexity chemotherapy is available during business hours and via the on-call pharmacist after hours.
- > Sterile pharmacist(s) with competence in cytotoxic manufacturing available during business hours and via the on-call pharmacist after hours **or** a demonstrated process to outsource chemotherapy.

Allied Health

- > Access to specific allied health services on site including speech pathology and physiotherapy.
- > Dietitian with paediatric responsibilities available during business hours.
- > Social worker with paediatric portfolio available during business hours and on-call social work service available after hours.

Other

- > Access to staff responsible for infection control. Compliance with national hand hygiene initiative and access to staff vaccination programs.

Paediatric oncology

- > All staffing in accordance with relevant industrial instruments
- > Identified nursing lead in cancer services.
- > Paediatric nursing staff across all shifts in the outpatient setting with paediatric chemotherapy competence.
- > Dedicated paediatric nursing staff across all shifts in the inpatient setting with paediatric chemotherapy competence.

Radiation oncology

- > Access to an experienced paediatric oncology nurse responsible for radiation oncology.

Surgery

- > Nursing staff with postoperative paediatric surgical experience, including neurosurgery.

Pharmacy

- > Paediatric oncology pharmacist(s) available during business hours and via the on-call pharmacist after hours
- > Sterile pharmacist(s) with competence in cytotoxic manufacturing available during business hours and via the on-call pharmacist after hours **or** a demonstrated process to outsource chemotherapy.

Allied Health

- > Access to paediatric specific allied health services on site including speech pathology, occupational therapy, prosthetics, and physiotherapy.
- > Dietitian responsible for paediatric oncology available during business hours.
- > Social workers with experience in paediatric oncology available during business hours and on-call 24 hours a day.
- > Access to experienced, on-site staff to teach and deliver procedural pain management strategies.
- > Paediatric psychologist responsible for providing a mental health service to children and adolescents with cancer and their families.

Paediatric oncology

- > All staffing in accordance with relevant industrial instruments
- > Identified nursing lead in cancer services.
- > Paediatric nursing staff across all shifts in the outpatient setting with paediatric chemotherapy competence.
- > Paediatric nursing staff across all shifts in the inpatient setting with demonstrated paediatric chemotherapy and HSCT nursing competence.

Radiation oncology

- > As per level 5

Surgery

- > As per level 5

Pharmacy

- > Identified paediatric oncology lead pharmacist
- > Paediatric oncology pharmacists available during business hours and via the on-call pharmacist after hours
- > Sterile pharmacists with competence in cytotoxic manufacturing available during business hours and via the on-call pharmacist after hours.

Allied Health

- > As per Level 5.

Education and research

<p>Education</p>	<p>Medical</p> <ul style="list-style-type: none"> > Access to a level 5 or 6 service to support mentoring of consultant paediatricians in managing children and adolescents with cancer. <p>Nursing</p> <ul style="list-style-type: none"> > Access to an orientation, training and credentialing program for senior nursing staff caring for children with cancer and providing a low-complexity chemotherapy service. <p>Pharmacy</p> <ul style="list-style-type: none"> > Access to a level 6 service to support training and mentoring of local paediatric and oncology pharmacists providing pharmacy services and low complexity chemotherapy to children and adolescents with cancer. <p>Allied health</p> <ul style="list-style-type: none"> > Access to an allied health education program for staff caring for children and adolescents with cancer. <p>Patient and family</p> <ul style="list-style-type: none"> > Access to education materials for patients and families, provided by level 5 and 6 services. 	<p>Medical</p> <ul style="list-style-type: none"> > Collaborates with the level 6 service in developing and delivering a paediatric oncology education agenda to medical staff. Demonstrated orientation, training and credentialing program for junior medical staff. <p>Nursing</p> <ul style="list-style-type: none"> > Collaborates with the level 6 service in developing and delivering a paediatric oncology education program to nursing staff. Demonstrated orientation, training and credentialing program for junior nursing staff. Engagement at both the state and the national level in improving nursing education in paediatric oncology. <p>Pharmacy</p> <ul style="list-style-type: none"> > Collaborates with the level 6 service in developing and delivering an up-to-date paediatric oncology education program to pharmacy staff. Provides an orientation and training program for junior pharmacy staff. Engagement at both the state and the national level in improving pharmacist education in paediatric oncology. <p>Allied health</p> <ul style="list-style-type: none"> > Collaborates with a level 6 service in delivering support and education to allied health staff in paediatric oncology. <p>Patient and family</p> <ul style="list-style-type: none"> > Provides leadership and support in the review and development of an education program tailored for patients and their families. 	<p>Medical</p> <ul style="list-style-type: none"> > Provides leadership to all levels of service in developing and delivering an up-to-date paediatric oncology education program to medical staff. Provides an orientation, training and credentialing program for junior medical staff. <p>Nursing</p> <ul style="list-style-type: none"> > Provides leadership to all levels of service in developing and delivering an up-to-date paediatric oncology education program to nursing staff. Provides an orientation, training and credentialing program for junior nursing staff. Engagement at both the state and the national level in improving nursing education in paediatric oncology. <p>Pharmacy</p> <ul style="list-style-type: none"> > Provides leadership to all levels of service in developing and delivering an up-to-date paediatric oncology education program to pharmacy staff. Provides an orientation and training program for junior pharmacy staff. Engagement at both the state and the national level in improving pharmacist education in paediatric oncology. <p>Allied health</p> <ul style="list-style-type: none"> > Provides leadership to all levels in supporting education to allied health staff in paediatric oncology. <p>Patient and family</p> <ul style="list-style-type: none"> > As per level 5
<p>Research</p>	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > Actively supports innovations in research in paediatric oncology. Works with the level 6 service and national and international bodies in the development and translation of research into the clinical setting. 	<ul style="list-style-type: none"> > Provides leadership at a state-wide level in supporting innovations in research in paediatric oncology. Works with national and international bodies to develop and translate research into the clinical setting.

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, Children's Services - Preamble and Cancer Services - Preamble for details.</p>	<p>In addition to what is outlined in the Fundamentals of the Framework, Children's Services - Preamble and Cancer Services - Preamble, the following are relevant to Cancer Services - Children's:</p> <ul style="list-style-type: none"> > Association of Pediatric Haematology/Oncology Nurses. Pediatric oncology nursing: Scope and standards of practice for paediatric oncology nursing. APHON; 2007. > Australian Confederation of Paediatric and Child Health Nurses. Competencies for the specialist paediatric and child health nurse, 2nd ed. ACPCHN; 2006. www.accypn.org.au/downloads/competencies.pdf > Cancer Australia. The National Cancer Nursing Education Project (EdCaN): A National Professional Development Framework for Cancer Nursing. Canberra: Cancer Australia; 2008. > Cancer Nurses Society of Australia. Central venous access devices: Principles for nursing practice and education. CNSA; 2007. www.cnsa.org.au > National Collaborating Centre for Cancer. Improving Outcomes in Children and Young People with Cancer: The Manual. London: National Institute for Health and Clinical Excellence; 2005. www.nice.org.uk/guidance/CSGCYP > National guidelines on medication safety (The Australian Commission on Safety and Quality in Health Care) Organ-specific treatment guidelines and standards published by the National Health and Medical Research Council.

Cancer Services – Children’s Appendix 1

Quality and Clinical Governance

Table 2 describes the quality and clinical governance characteristics for children’s cancer services.

Table 2: Quality and clinical governance characteristics

	Level 4	Level 5	Level 6
Guidelines	<ul style="list-style-type: none"> > Access to level 5 or 6 clinical guidelines for providing low-complexity chemotherapy and supportive care management for children and adolescents with cancer. 	<ul style="list-style-type: none"> > Collaborates with the level 6 service in developing and implementing evidence-based clinical guidelines addressing the management of key interventions and supportive care in paediatric oncology, ensuring consistency of care across service levels. 	<ul style="list-style-type: none"> > Provides leadership in developing evidence-based clinical guidelines addressing the management of key interventions and supportive care in paediatric oncology for all service levels.
Patient review	<ul style="list-style-type: none"> > Access to a multidisciplinary meeting structure coordinated and hosted by a level 5 or 6 service to discuss, as required, patients within the local service catchment. > Demonstrated process for morbidity and mortality review as part of a quality process (as necessary), with collaboration and communication with the level 5 or 6 service for adverse event reporting. 	<ul style="list-style-type: none"> > Active participation in a multidisciplinary meeting structure, to discuss all new patients and along critical time points in their care, as required. > Provides a locally hosted comprehensive care multidisciplinary meeting structure to discuss ongoing care of patients, including their psychosocial care and interventions. > Demonstrated process for morbidity and mortality review as part of a quality improvement process. 	<ul style="list-style-type: none"> > Provides a dedicated multidisciplinary meeting structure (including administrative support), coordinated and hosted by the service, to discuss all new patients at diagnosis and, as necessary, at critical time points during their treatment, with the ability for external access to these meetings for other primary treating and shared care services. > Demonstrated process for morbidity and mortality review as part of a quality improvement process.
Quality activity	<ul style="list-style-type: none"> > Demonstrated health service quality or clinical governance unit to support any quality initiatives in paediatric oncology. 	<ul style="list-style-type: none"> > Participation in quality initiatives, including documented, regular quality meetings with key stakeholders, with reportable actions and outcomes. > Staff on site who are responsible for quality coordination, collaborating with a level 6 service in establishing quality measures for paediatric oncology services, as well as measuring compliance to quality initiatives. 	<ul style="list-style-type: none"> > Participation in quality initiatives, including documented, regular quality meetings with key stakeholders, with reportable actions and outcomes. > Staff on site who are responsible for quality coordination, establishing quality measures for paediatric oncology services and measuring compliance with quality initiatives.
Transplant	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > N/A 	<ul style="list-style-type: none"> > Provides leadership in developing clinical governance and standards to meet national and international regulations for a Haematopoietic Stem Cell Transplant (HSCT) program.

Cancer Services – Children’s Appendix 2

Service Links and Networks

Table 3 describes the service links and networks required for children’s cancer services.

Table 3: Service links and networks

	Level 4	Level 5	Level 6
Clinical trials	> Mechanisms in place for reporting any local chemotherapy encounters to the level 5 or 6 service for patients enrolled in clinical trials.	> Active membership and accreditation with national and international study groups, with established referral mechanisms for the conduct and coordination of paediatric oncology clinical trials.	> Active participation and accreditation with national and international study groups, with established communication pathways in the conduct and coordination of paediatric oncology clinical trials.
Community engagement	> Relationships with relevant local community support groups for children and families with cancer and/or chronic/acute illness.	> Demonstrated relationships with established community support groups for children and families with cancer.	> Demonstrate relationships and referral pathways with community support groups for children with cancer and their families.
Consumer engagement	> Evidence of the use of consumer engagement in the local health service.	> Evidence of consumer engagement in the cancer service with attendance on relevant steering groups and committees.	> As per level 5
Inter-hospital linkages	> Demonstrated linkages with other service levels, including referral mechanisms both in and out of the hospital.	> Demonstrated linkages with other service levels and reporting bodies, including referral mechanisms both in and out of the hospital.	> Demonstrated linkages with other service levels, including referral mechanisms both in and out of the hospital.
Medical imaging	> Access to image-sharing software for communicating medical imaging between sites.	> Access to electronic image sharing software for the communication of medical images between sites.	> As per level 5

Reference List

1. National Institute for Health and Clinical Excellence 2005, Guidance on cancer services: improving outcomes in children and young people with cancer: the manual.NHS
2. Corrigan, J.J & Fieg, S.A.2004, Guidelines for pediatric cancer centres, American Academy of Paediatrics Policy Statement.*Pediatrics*.113, 1833.
3. Children’s Oncology Group.2012.Personnel and service requirements for member institutions. Online: https://members.childrensoncologygroup.org/files/admin/MI_PersonServiceRequirementsFINAL.pdf, accessed 3 Oct 2013
4. College of Intensive Care Medicine of Australia and New Zealand. Minimum Standards for Intensive Care Units: Review IC-1. CICM; 2003.

For more information

SA Health
Telephone: 08 8226 6891
www.sahealth.sa.gov.au/CSCF

Public I1-1A



Acknowledgement: adapted from the Service capability framework: A guide for Victorian health services providing primary treatment and shared care to children and adolescents with cancer (Paediatric Integrated Cancer Service, 2014).