

Capability Framework for Victorian Children's Cancer Services

Statement of acknowledgement

We acknowledge the Traditional Owners of Country throughout Australia and their continuing connection to the land, sea and community. We pay our respects to them and their cultures and to Elders past, present and emerging.

This work is available from the PICS website at www.vics.org.au/pics

Third edition, November 2023.

ISBN 978-0-6459417-1-5 (pdf/online/MS word)

© Victorian Paediatric Integrated Cancer Service 2023.

Paediatric Integrated Cancer Service (2023). *Capability Framework for Victorian Children's Cancer Services*. 3rd ed. Paediatric Integrated Cancer Service, Melbourne, Australia.

Enquires about this publication can be sent to picsadmin@rch.org.au



The Paediatric Integrated Cancer Service is supported by the Victorian Government.

Disclaimer: The information within this document is considered to be true and correct at the date of publication, however, changes in circumstances after the time of publication may impact on the accuracy of this information. The document is intended to support health services to decide how best to organise service delivery to achieve the best outcomes. The framework is not intended to constitute medical advice or replace clinical judgement.

Contents

About this document	2
Scope	3
Why a framework for childhood cancer?	3
Victoria's children's cancer service system	3
State-wide plans and key policy documentation	3
Safety and quality	4
Care pathways	4
National and international experience	4
How to use the framework	5
Children's cancer capability levels	7
Level 1 children's cancer service	7
Level 2 children's cancer service	8
Level 3 children's cancer service	11
Level 4 children's cancer service	14
Level 5 children's cancer service	18
Level 6 children's cancer service	22
References	26

About this document

The *Capability framework for Victorian children's cancer services* (the framework) describes the requirements for providing safe and high-quality cancer care to children and adolescents, from diagnosis and treatment through to follow up care, for public health services. It includes the *minimum* workforce, infrastructure, equipment, clinical support services and governance requirements that should be always met to maintain service capability.

This document replaces the *Service Capability Framework: A guide for Victorian health services providing primary treatment and shared care to children and adolescents with cancer* 2nd ed. (Paediatric Integrated Cancer Service 2020). This version update also aligns to the adult cancer service capability frameworks currently being developed.

The framework:

- is a network of services and an enduring commitment to safety and quality that provides the foundation of Victoria's cancer service system.
- assists health services to make informed decisions about the resources, partnerships and protocols required to manage different complexities of patient care.
- enables a transparent approach to planning and service development at a local level, considering community need.
- supports health service regions and the Victorian Department of Health to plan and manage the cancer service system.
- supports clinicians to partner with patients and their carers to plan for their care from diagnosis and treatment through to follow-up.
- supports sustainable and equitable healthcare across Victoria.
- provides a clear and consistent language across the state wide services.

The framework is informed by the following principles:

- Cancer care is delivered through a multidisciplinary approach.
- Care is guided by a supportive care model designed around the needs of the child or adolescent, their family, carers and support persons.
- Health services support choice and cultural safety.
- Service delivery is focussed on the continuum of care, from diagnosis, treatment, through to survivorship and if applicable, end of life care.
- Care is provided as close to home as is safe and practicable and includes prompt transfer to local and/or specialised services as appropriate, delivered through formal shared care arrangements.
- Consultation, referral and transfer processes are established to support clinical decision making and are agreed and documented by health services (through clinical governance arrangements) within appropriate geographical boundaries.
- Health services within the system in Victoria make informed decisions about the resources, partnerships and protocols required to manage different complexities of care and respond to supportive care needs throughout the continuum of care.

- Capability refers to the level of care (including the required workforce, infrastructure, equipment, and clinical support services) a health service can continually meet.
- Health service's capability is clearly communicated to individuals accessing the service, the community and other service providers.

Scope

The framework is applicable to all infants, children and adolescents diagnosed with cancer from birth up to 18 years of age, noted herein as "children".

Why a framework for childhood cancer?

Acute and late side effects of treatment can be severe, including acute organ toxicities, infection and the development of long-term chronic health conditions. Providing effective anti-cancer therapy whilst minimising toxicities and treatment burden can be extremely demanding on health services that do not have the capability to accept and manage these.

The rarity and complexity of child and adolescent cancer provides a real challenge in delivering optimal care. As a result, care is managed and directed from specialised tertiary health services to ensure higher case volumes. Although not consistent across all disease types in childhood cancer, this 'high-volume effect' has been shown to improve outcomes in some studies,¹⁻⁴ and has general consensus across the paediatric oncology community internationally. Care is also provided under a 'shared care' model to provide supportive care closer to home when it is safe to do so. Because of the challenges it presents, shared care services also need to have a defined scope of practice in caring for this patient population.

Care informed by a family-centred philosophy is also required in the design, promotion, communication and delivery of all aspects of care for children with cancer and their families, and is endorsed by the Australian paediatric healthcare community more broadly.⁵

Victoria's children's cancer service system

Each year in Victoria there are over 240 new diagnoses of childhood cancer. About 35 percent of these families reside outside of metropolitan Melbourne. Currently, there are two main referral centres for the diagnosis and treatment of cancer in children, Royal Children's Hospital, Parkville, and Monash Children's Hospital, Clayton. All radiotherapy planning and delivery with curative intent in children with cancer is performed at Peter McCallum Cancer Centre. Work is currently underway to expand the location of radiotherapy services in the paediatric palliative care setting. There are also nine regional health services that participate in a formal shared model of care for families that live outside Melbourne. The Royal Children's Hospital Parkville also provides a referral service for children from Tasmania who require higher complexity cancer care.

State-wide plans and key policy documentation

The framework does not replace or amend current legislation, mandatory standards or accreditation processes. The document expects health services to provide care in accordance with:

- Safer Care Victoria, Delivering high-quality healthcare – Victorian clinical governance framework (2017).⁶
- National Safety and Quality Health Service (NSQHS) Standards.⁷
- NSQHS Standards: User Guide for Medication Management in Cancer Care.⁸
- NSQHS Standards: User Guide for Acute and Community Health Service Organisations that Provide Care for Children.⁹

Safety and quality

While Victoria and Australia have some of the best cancer survival rates for children internationally; regular monitoring, reviews and sharing of lessons learnt are vital for improving safety and quality of care. There are a number of other mechanisms to support health services to monitor and review their services to optimise outcomes.

Paediatric Integrated Cancer Service¹⁰ (PICS) is Victoria's children's cancer service improvement network. The PICS works collaboratively with people affected by cancer and those delivering cancer care, to promote high-quality, equitable clinical practice across Victoria, with the focus of improving outcomes for children with cancer, and their families.

Safer Care Victoria¹¹ was established in 2017 to oversee and support health services to provide safe and high-quality care. Safer Care Victoria works with the Department of Health, health services and other bodies to improve the quality and safety of healthcare across the state, to achieve its aim of outstanding healthcare for all Victorians, always. Safer Care Victoria works with clinicians and consumers to develop best practice clinical guidance and resources to improve outcomes and minimise patient harm.

The **Victorian Health Services Performance Monitoring Framework¹²** provides public health service managers with regular reports on selected health service performance indicators.

The **Victorian Patients' Experience of Cancer Care survey¹³** is a questionnaire designed to collect information about care experiences of patients treated for cancer in Victorian hospitals.

Care pathways

The framework is designed to describe the *minimum* health service requirements for the safe delivery of care to children and adolescents with cancer. In 2019, the PICS also released the **Victorian paediatric oncology care pathways: Providing optimal care for children and adolescents- Acute leukaemia, central nervous system tumours and solid tumours¹⁴**, a series of tumour-specific care pathways for delivering optimal care to children and adolescents with cancer. Subsequently, in 2021, the Leukaemia Foundation supported the publication of the **Optimal care pathway for children, adolescents and young adults with acute leukaemia¹⁵**. These pathways were designed to describe an evidence-based, best-practice optimal care pathway that is designed to minimise variability, inform quality improvement initiatives and improve patient outcomes. In 2022, the PICS, in collaboration with Victorian Youth Cancer Service, developed the **Optimal Care Pathway for Adolescents and Young Adults with Cancer¹⁶**. This was developed to address the unique needs of adolescents and young adults, providing evidence-based and nationally-informed, consensus-driven recommendations for best practice. These pathways build on the minimum requirements described herein.

National and international experience

Several key documents have been published both nationally and internationally advocating and defining minimum requirements in caring for children with cancer.¹⁷⁻²⁴ Many of these have informed and supported the development of this document and are acknowledged here.

How to use the framework

The framework is cumulative in design. This means that all hospitals providing planned care for children with cancer will meet the requirements outlined for lower levels, with additional requirements provided for each advancing capability level.

Victorian children's cancer services are categorised into six service levels with Level 1 supporting the least complex patient activity and Level 6 managing the highest level of complexity (see figure 1).

In the context of paediatric oncology, supportive care specifically encompasses the recognition and management of symptom burden in cancer care (e.g., fever, nausea, mucositis, transfusion support) as well as the adult cancer definition of services that may be required according to the five domains of care (physical, psychological, social, physical, informational and spiritual needs).

Figure 1: Cancer care by treatment, service & patient complexity

Complexity of cancer care						
Specialties: • comprehensive Complexity: advanced						Level 6
Specialties: • most • shared care for some Complexity: advanced					Level 5	
Specialties: • same-day infusion SACT* • shared care for all Complexity: intermediate				Level 4		
Specialties: • outpatient bolus SACT • shared care for all Complexity: low			Level 3			
Specialties: • supportive care only • shared care for all Complexity: low		Level 2				
Specialties: • reviews only • shared care for all Complexity: low	Level 1					

*SACT: systemic anti-cancer treatment

For **advanced/intermediate complexity** cancer services, key factors to consider include the:

- volume of patients, tumour types and access to clinical trials and treatment protocols
- availability of providers (nursing, medical and pharmacy) with evidence of ongoing competency to provide local support in the administration of systemic anti-cancer treatment and supportive care of patients in accordance with current best practice.
- level and availability of clinical support services, including laboratory services.
- appropriate level of staffing, expertise and equipment to assist in diagnosis, staging, planning treatment, therapy and multidisciplinary team discussion.
- health service capacity to maintain and assess the knowledge and skills of staff delivering care to patients.

Factors that may escalate an **increased service level demand** in childhood cancer include:

- any child requiring haematopoietic stem cell therapy (HSCT) as part of their treatment.
- any patient receiving radiotherapy.
- the degree of perceived or real toxicities and level of supportive care interventions.
- age of the child, particularly those under 12 months of age.
- distinct supportive care considerations for adolescent patients.
- the psychosocial needs of the patient and family.
- concurrent morbidities and pre-existing medical conditions.
- access to early phase clinical trials.
- mandatory competency requirements for delivering specialised therapy such as off-label therapies within the context of a clinical trial.

Children's cancer capability levels

Level 1 children's cancer service

A level 1 service provides a shared care model for low-complexity tests, investigations and surveillance reviews, most commonly after treatment has finished.

Part A: Service description

Service	Description
Patient review	Provides low-complexity physical examination, tests and investigations within a primary care model. Facilitates assisted-telehealth consultations with a level 5 or 6 service.
Referral process	Initial assessment and management of new diagnoses may often be delivered by a general practitioner. Has established process for escalating care and/or discussions with local emergency department and/or paediatric services.
Supportive care	Refers patients requiring supportive cancer care. May provide some support and/or referral of care for the child and their immediate family.
Survivorship	When clinically appropriate, provides cancer survivorship reviews according to the defined roadmap developed by childhood cancer survivorship service, including the transition to adult care.
Emergency response	Process for escalating care and/or discussions in managing emergencies.

Part B: Clinical workforce

Service	Requirements
Medical	Credentialed general practitioner onsite during business hours. Access to a registered medical specialist (FRACP) credentialed in paediatric oncology care, via telehealth, for the conduct of surveillance reviews.
Mental health	Guidelines for referral to community mental health supports.

Part C: Clinical support services

Service	Requirements
Pathology	Local access to blood and specimen collection facilities with processing available for biochemistry, haematology and microbiology available during business hours. Should be able to demonstrate access to capillary blood sampling for children.
Medical imaging	Local access to plain film imaging and ultrasound during business hours.
Cultural safety	Access to local Aboriginal liaison officer services.
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	Equipment to provide comprehensive primary care and emergency resuscitation according to the RACGP standards for general practice. ²⁶
Waiting space	Ability or scheduling that provides a temporally and/or spatially separate waiting environment for children with potential immunocompromise, and their family.

Level 2 children's cancer service

As for level 1, in addition: a level 2 service provides a shared model of supportive care under the direction of a level 5 or 6 children's cancer service.

Part A: Service description

Service	Description
Patient review	Provides physical examination, tests and investigations within a hospital-based or outpatient setting. Facilitates assisted-telehealth consultations with a level 5 or 6 service.
Referral process	Assessment and management of new diagnoses are delivered under the supervision of a paediatrician. Established process for escalating care and/or discussions with a higher-level cancer service.
Supportive care	Provides supportive care interventions (e.g., transfusion, fever neutropenia) to patients and their families within a shared care model under the guidance of the level 5 or 6 service.
Treatment	Does not directly provide any anti-cancer treatment.
Survivorship	Provides cancer survivorship consultations according to the defined roadmap developed by a childhood cancer survivorship service.
Palliative care	Provision of, or access to, a palliative care program with experience in treating children.
Emergency response	Systems in place to manage common complications of cancer treatment in children. Capacity to provide inpatient care locally (with paediatrician supervision) or stabilise and transfer to higher level service if requiring more intensive/complex interventions and/or clinical deterioration.

Part B: Clinical workforce

Service	Requirements
Medical	<p>A registered medical specialist (FRACP- General Paediatrics) credentialed at the health service for paediatric care is available onsite for patient rounds seven days a week and on-call 24/7.</p> <p>Registered medical practitioner with experience in acute paediatric care onsite 24/7.</p>
Nursing	<p>Nursing staff with experience in acute paediatric care, staffed in accordance with the Safe Patient Care Act 2015 (Nurse patient ratios).²⁷</p> <p>Nurses providing regular, direct care to children should meet minimum education standards.²⁸</p> <p>Nurses regularly providing care to children with cancer should also undertake paediatric oncology nursing foundations training.</p>
Pharmacy	Pharmacist with paediatric responsibilities available during business hours and on-call 24/7.
Allied Health	Nutrition, social work and physiotherapy services are available for admitted patients during business hours.
Mental Health	Guidelines for referral to community-based mental health supports.

Part C: Clinical support services

Service	Requirements
Pathology	<p>Onsite blood and specimen collection with processing available for biochemistry, haematology, microbiology and therapeutic drug monitoring. Should be able to demonstrate access to capillary blood sampling for children.</p> <p>Results accessible to clinicians in real time when clinically relevant.</p> <p>Timely access to a transfusion service onsite that can provide leucodepleted, irradiated blood products.</p> <p>NATA accreditation to ISO/IEC 17025 for all laboratory facilities.²⁹</p>
Diagnostic imaging	<p>Timely access to a radiologist with paediatric experience during business hours and on-call after hours.</p> <p>Access to plain film, ultrasound, magnetic resonance and computerised tomography imaging during business hours and on-call 24/7 for urgent imaging.</p> <p>Access to services that can provide sedation and/or general anaesthesia to younger children requiring imaging.</p> <p>Picture archiving and communication system (or similar) for the real-time transfer of images. Calibration, dosimetry and quality assurance of imaging systems including expertise in the ALARA (as low as reasonably achievable) principle of dose reduction.</p>
Cultural safety	Access to hospital-based Aboriginal liaison officer services (male and female).
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵
Infection prevention and control	<p>Access to staff responsible for infection control.</p> <p>Staff compliance with national hand hygiene initiative and staff vaccination program.</p>

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	<p>An emergency department with paediatric trauma and resuscitation facilities with the ability to stabilise acutely unwell children and adolescents, with appropriate escalation and transfer guidelines to a level 5 or 6 service.</p> <p>Use of validated paediatric early-warning tools and rapid response system (e.g., medical emergency team/code blue) with identified roles, available onsite 24/7 to respond to paediatric emergencies across the facility.</p> <p>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.</p>
Environment	<p>Child and family-centred care environment in line with the Royal Australian College of Physician's Consensus standards for the care of children and adolescents in Australian health services⁵ and the Australian Commission on Safety and Quality in Health Care's User guide for acute and community health service organisations that provide care for children.⁹</p> <p>Dedicated paediatric inpatient beds in accordance with the Australasian health facilities guidelines for paediatric and adolescent units.³⁰</p> <p>Appropriate inpatient facilities to provide sufficient isolation from airborne pathogens for the immunocompromised patient.</p>

Part E: Clinical governance

Service	Requirements
Service guidance	A service agreement that defines the scope of practice and minimum requirements for delivering shared care to children with cancer.
Guidelines	Real-time access to, and application of, clinical practice guidelines, where published, across the defined scope of practice.
Competence and credentialing	Defined processes to assess staff delivering supportive care (e.g., advanced paediatric life support, central venous access device management, transfusion practices).
Quality activity	Onsite health service quality or clinical governance unit to support quality initiatives. Demonstrated process for patient morbidity and mortality review as part of a quality process.

Level 3 children's cancer service

As for level 2, in addition: a level 3 service provides low-complexity, limited scope, outpatient-based, bolus systemic anti-cancer treatment (SACT) to children under the direction of a level 5 or 6 children's cancer service.

Part A: Service description

Service	Description
Patient review	Provides physical examination, tests and investigations within a hospital-based or outpatient setting. Facilitates assisted-telehealth consultations with a level 5 or 6 service.
Referral process	Assessment and management of new diagnoses is delivered under the supervision of a paediatrician. Established process for escalating care and/or discussions with a higher-level cancer service.
Supportive care	Provides supportive care interventions (e.g., transfusion, fever neutropenia) to patients and their families within a shared care model under the guidance of the level 5 or 6 service.
Treatment	Low-complexity limited scope outpatient-based bolus SACT directed by a level 5 or 6 service. The list of SACT delivered will be clearly noted in the service agreement and updated according to clinical demand and/or changes in therapy plans.
Survivorship	Provides cancer survivorship consultations according to the defined roadmap developed by a childhood cancer survivorship service.
Palliative care	Provision of, or access to, a palliative care program with experience in treating children.
Emergency response	Systems in place to manage common complications of cancer treatment in children. Capacity to provide inpatient care locally (with paediatrician supervision) or stabilise and transfer to higher level service if requiring more intensive/complex interventions and/or clinical deterioration.

Part B: Clinical workforce

Service	Requirements
Medical	Registered medical specialist (FRACP- General Paediatrics) credentialed at the health service for paediatric care available onsite for patient rounds seven days a week and on-call 24/7. Registered medical practitioner with experience in acute paediatric care onsite 24/7.
Nursing	Nursing staff with experience in acute paediatric care, staffed in accordance with the Safe Patient Care Act 2015 (Nurse patient ratios). ²⁷ Nurses providing regular, direct care to children should meet minimum education standards. ²⁸ Nurses can demonstrate competency in the Paediatric Antineoplastic Drug Administration Course (ADAC) ³¹ (or equivalent) for all SACT administered (within the defined scope of practice for the service). Nurses regularly providing care to children with cancer should also undertake paediatric oncology nursing foundations training.
Pharmacy	Pharmacist with paediatric responsibilities available during business hours and on-call 24/7. Pharmacist with oncology responsibilities available during business hours and on-call 24/7
Allied Health	Nutrition, social work and physiotherapy available for admitted patients during business hours.
Mental Health	Guidelines for referral to community-based mental health supports.

Part C: Clinical support services

Service	Requirements
Pathology	<p>Onsite blood and specimen collection with processing available for biochemistry, haematology, microbiology and therapeutic drug monitoring. Should be able to demonstrate access to capillary blood sampling for children.</p> <p>Results accessible to clinicians in real time when clinically relevant.</p> <p>Timely access to a transfusion service onsite that can provide leucodepleted, irradiated blood products.</p> <p>NATA accreditation to ISO/IEC 17025 for all laboratory facilities.²⁹</p>
Diagnostic imaging	<p>Timely access to a radiologist with paediatric experience during business hours and on-call after hours</p> <p>Access to plain film, ultrasound, magnetic resonance and computerised tomography imaging during business hours and on-call 24/7 for urgent imaging.</p> <p>Access to services that can provide sedation and/or general anaesthesia to younger children requiring imaging.</p> <p>Picture archiving and communication system (PACS) for the real-time transfer of images. Calibration, dosimetry and quality assurance of imaging systems including expertise in the ALARA (as low as reasonably achievable) principle of dose reduction.</p>
Palliative care	Provision of, or access to, a palliative care program with experience in treating children.
Cultural safety	Access to hospital-based Aboriginal liaison officer services (male and female).
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵
Infection prevention and control	<p>Timely access to staff responsible for infection control.</p> <p>Staff compliance with national hand hygiene initiative and staff vaccination program.</p>

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	<p>An emergency department with paediatric trauma and resuscitation facilities with the ability to stabilise acutely unwell children and adolescents, with appropriate escalation and transfer guidelines to a level 4, 5 or 6 service.</p> <p>Use of validated paediatric early-warning tools and rapid response system (e.g., medical emergency team/code blue) with identified roles available onsite 24/7 to respond to paediatric emergencies across the facility.</p> <p>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.</p>
Environment	<p>Child and family-centred care environment in line with the Royal Australian College of Physician's Consensus standards for the care of children and adolescents in Australian health services⁵ and the Australian Commission on Safety and Quality in Health Care's user guide for acute and community health service organisations that provide care for children.⁹</p> <p>Dedicated paediatric inpatient beds in accordance with the Australasian health facilities guidelines for paediatric and adolescent units.³⁰</p> <p>Appropriate inpatient facilities to provide sufficient isolation from airborne pathogens for the immunocompromised patient.</p>

Part E: Clinical governance

Service	Requirements
Service guidance	A service agreement that defines the scope and minimum requirements for delivering shared care to children with cancer.
Guidelines	<p>Real-time access to, and application of, clinical practice guidelines, where published, across the defined scope of practice.</p> <p>A policy/procedure that defines the process for the safe administration of SACT to children (within the defined scope of practice).</p> <p>Staff prescribing and administering SACT should undergo Good Clinical Practice Training to support the conduct of clinical trials.</p>
Competence and credentialing	<p>Defined processes to assess staff delivering supportive care (e.g., advanced paediatric life support, central venous access device management, transfusion practices).</p> <p>Process to assess competency in staff administering SACT.</p> <p>Utilising a professional development framework for paediatric oncology nursing.³²</p>
Quality activity	<p>Onsite health service quality or clinical governance unit to support quality initiatives.</p> <p>Demonstrated process for patient morbidity and mortality review as part of a quality process.</p>

Level 4 children's cancer service

As for level 3, in addition; a level 4 service provides intermediate complexity, day-stay bolus and infusional systemic anti-cancer treatment (SACT) to children under the direction of a level 5 or 6 children's cancer service.

Part A: Service description

Service	Description
Patient review	Provides physical examination and routine tests and investigations within a hospital-based or outpatient setting. Facilitates assisted-telehealth consultations with a level 5 or 6 service when required.
Referral process	Assessment and management of new diagnoses are usually delivered under the supervision of a paediatrician. Established process for escalating care and/or discussions with a level 5 or 6 cancer service.
Supportive care	Provides supportive care interventions (e.g., transfusion, fever neutropenia) to patients and their families within a shared care model under the guidance of the level 5 or 6 service.
Treatment	Intermediate complexity, outpatient-based day-stay bolus and infusional SACT directed by a level 5 or 6 service. Planned episodes of SACT should be supervised onsite by a medical specialist credentialed in paediatric oncology care.
Survivorship	Provides cancer survivorship consultations according to the defined roadmap developed by a childhood cancer survivorship service.
Palliative care	Provision of, or access to, a palliative care program with experience in treating children.
Emergency response	Systems in place to manage common complications of cancer treatment in children. Capacity to provide inpatient care locally (with paediatrician supervision) or stabilise and transfer to higher level service if requiring more intensive/complex interventions and/or clinical deterioration.

Part B: Clinical workforce

Service	Requirements
Medical	<p>Registered medical specialist (FRACP- General Paediatrics) credentialed at the health service for paediatric oncology care available for dedicated outpatient oncology clinics, with joint appointments at a level 5 or 6 service. This will also incorporate backfill. This role will provide medical leadership and responsibility for the oncology service.</p> <p>Registered medical specialist (FRACP- General paediatrics) credentialed at the health service for paediatric care available onsite for patient rounds seven days a week and on-call 24/7.</p> <p>Registered medical practitioner with experience in acute paediatric care onsite 24/7.</p> <p>Registered medical specialist (ANZCA) credentialed at the health service for anaesthetic care available on-call 24/7.</p>
Nursing	<p>An advanced practice nurse with experience and expertise in paediatric oncology care and joint appointments at a level 5 or 6 service. This will also incorporate backfill. This role will provide nursing leadership, care coordination and responsibility for the oncology service.</p> <p>Nursing staff with recency of experience in acute paediatric care, staffed in accordance with the Safe Patient Care Act 2015 (Nurse patient ratios).²⁷</p> <p>Nurses providing regular, direct care to children should meet minimum education standards.²⁸</p> <p>Nurses with demonstrated competency in the Paediatric Antineoplastic Drug Administration Course (ADAC)³¹ (or equivalent) are available for all planned encounters.</p> <p>Nurses regularly providing care to children with cancer should also undertake paediatric oncology nursing foundations training.</p>
Pharmacy	<p>Pharmacist with paediatric responsibilities available during business hours and on-call 24/7.</p> <p>Designated oncology pharmacist available during outpatient clinic hours and available on-call 24/7.</p>
Allied Health	Nutrition, social work and physiotherapy available for admitted patients during business hours.
Mental Health	Guidelines for referral to community-based mental health supports.
Clinical trials	Established pathways, governance and access to a shared cancer research workforce locally to support the conduct of clinical trials led by a level 5 or 6 service.

Part C: Clinical support services

Service	Requirements
Pathology	<p>Onsite blood and specimen collection with processing available for biochemistry, haematology, microbiology and therapeutic drug monitoring performed on paediatric samples. Should be able to demonstrate access to capillary blood sampling for children.</p> <p>Results accessible to clinicians in real time when clinically relevant.</p> <p>Timely access to a transfusion service onsite that can provide leucodepleted, irradiated blood products.</p> <p>NATA accreditation to ISO/IEC 17025 for all laboratory facilities.²⁹</p>
Diagnostic imaging	<p>Timely access to a radiologist with paediatric experience during business hours and on-call after hours</p> <p>Access to plain film imaging, ultrasound and computed tomography during business hours and on-call 24/7 for urgent imaging.</p> <p>Access to services that can provide sedation and/or general anaesthesia to younger children requiring imaging.</p> <p>Picture archiving and communication system (PACS) for the real-time transfer of images. Calibration, dosimetry and quality assurance of imaging systems including expertise in the ALARA (as low as reasonably achievable) principle of dose reduction.</p>
Palliative care	Provision of, or access to, a palliative care program with experience in treating children.
Cultural safety	Access to hospital-based Aboriginal liaison officer services (male and female).
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵
Infection prevention and control	<p>Timely access to staff responsible for infection control.</p> <p>Staff compliance with national hand hygiene initiative and staff vaccination program.</p>
Clinical trials	Established pathways, governance and access to a shared cancer research workforce locally to support the conduct of clinical trials led by a level 5 or 6 service.

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	<p>An emergency department with paediatric trauma and resuscitation facilities with the ability to stabilise acutely unwell children and adolescents, with appropriate escalation and transfer guidelines to a level 5 or 6 service.</p> <p>Use of validated paediatric early-warning tools and rapid response system (e.g., medical emergency team/code blue) with identified roles available onsite 24/7 to respond to paediatric emergencies across the facility.</p> <p>Immediate availability of staff onsite who are competent in accessing a central venous access device to ensure timely administration of fluid, blood products, antibiotics and other life-saving interventions.</p>
Environment	<p>Child and family-centred care environment in line with the Royal Australian College of Physician's Consensus standards for the care of children and adolescents in Australian health services⁵ and the Australian Commission on Safety and Quality in Health Care's User guide for acute and community health service organisations that provide care for children.⁹</p> <p>Dedicated paediatric inpatient beds with appropriate facilities to provide sufficient isolation from airborne pathogens for the immunocompromised patient.</p> <p>Dedicated paediatric outpatient environment for assessment and administration of SACT.</p>

Part E: Clinical governance

Service	Requirements
Service agreement	A service agreement that defines the scope and minimum requirements for delivering shared care to children with cancer, signed at an executive level between the health service and the responsible level 5 or 6 children's cancer service.
Guidelines	<p>Real-time access to, and application of, clinical practice guidelines, where published, across the defined scope of practice.</p> <p>A policy/procedure that defines the process for the administration of SACT to children, within the defined scope of practice.</p> <p>Staff prescribing and administering SACT should undergo Good Clinical Practice Training to support the conduct of clinical trials.</p>
Competence and credentialing	<p>Defined processes to assess staff delivering supportive care (e.g., advanced paediatric life support, central venous access device management, transfusion practices).</p> <p>Process to assess competency in staff administering SACT.</p> <p>Utilising a professional development framework for paediatric oncology nursing.³²</p>
Quality activity	<p>Onsite health service quality or clinical governance unit to support quality initiatives.</p> <p>Demonstrated process for patient morbidity and mortality review as part of a quality process.</p>

Level 5 children's cancer service

As for level 4, in addition: A level 5 service will provide care for most of the children within its catchment area, with direct links to a level 6 service as needed. A level 5 service is recognised as a primary treatment centre for childhood cancer.

Part A: Service description

Service	Description
Referral	<p>Tertiary referral centre for most diagnoses within the catchment area.</p> <p>Network linkages to a level 6 service for very-high complexity (e.g., allogeneic haematopoietic stem cell transplantation (HSCT)) or low-volume cases that may benefit from centralised care with specific sub-speciality demands (e.g., retinoblastoma, osteosarcoma).</p> <p>May have a regional referral role for supervision, advice and consultancy, or direct a shared model of care with a level 1-4 service.</p>
Multidisciplinary care	<p>Hosts and/or contributes to a state-wide multidisciplinary meeting structure that presents new patients at diagnosis and at other critical time points as necessary.</p>
Treatment	<p>Provides a comprehensive suite of high-complexity systemic anti-cancer therapy (SACT). Novel or investigative therapies (particularly within the context of early phase trials) may at times be referred to a level 6 service.</p> <p>May consider development of an autologous transplantation service for high-intensity treatment protocols.</p> <p>Supportive care and surveillance for children who have undergone HSCT.</p> <p>Radiotherapy in all curative protocols will ideally be centralised for volume effect.</p> <p>Provides timely access to all paediatric specialty surgical services. High complexity or rare surgical interventions may be centralised at a level 6 service.</p>
Supportive care	<p>Admitted care for all supportive care interventions, including high-complexity and/or unstable patients requiring paediatric intensive care.</p>
Survivorship care	<p>Delivers and/or hosts a formal, onsite childhood cancer survivorship program.</p>
Palliative care	<p>Provision of, or access to, a paediatric palliative care program.</p>

Part B: Clinical workforce

Service	Requirements
Medical	<p>The head of unit is a registered medical specialist (FRACP- General Paediatrics) credentialed with the health service for paediatric oncology care.</p> <p>A registered medical specialist (FRACP- General Paediatrics) credentialed with the health service for paediatric oncology care is available onsite during business hours, aligned with junior medical staff, and accessible 24/7.</p> <p>A registered medical practitioner with experience in paediatric oncology care is available onsite 24/7.</p> <p>Timely access to medical specialists, credentialed with the health service in providing care of children, including neurology, cardiology, nephrology, gastroenterology, respiratory, ophthalmology, endocrinology, genetics, infectious diseases, intensive care, anaesthesia, psychiatry, rehabilitation, haematology, pathology, immunology and fertility.</p> <p>Timely access to paediatric surgical services, credentialed at the health service in providing care of children, including orthopaedics, neurosurgery, cardiothoracic, ophthalmology, otolaryngology, plastics, urology, gynaecology, maxillofacial and general paediatric surgery</p>
Nursing	<p>Identified nursing lead for the service (with backfill) with experience and expertise in childhood cancer care.</p> <p>Specialist nurse(s) with an identified responsibility for each of the tumour streams.</p> <p>Nursing staff with experience in acute paediatric care, staffed in accordance with the Safe Patient Care Act 2015 (Nurse patient ratios).²⁷</p> <p>Nurses providing regular, direct care to children should meet minimum education standards.²⁸</p> <p>Nurses with demonstrated competency in the Paediatric Antineoplastic Drug Administration Course (ADAC)³¹ (or equivalent) are available for all planned encounters of SACT.</p> <p>Nurses providing care to children with cancer should undertake training in paediatric oncology nursing foundations.</p> <p>Nurses providing care to children requiring autologous transplantation should undertake specific training in this treatment modality.</p>
Pharmacy	<p>Pharmacists with a dedicated paediatric oncology portfolio and experience in childhood cancer are available during business hours and on-call after hours.</p>
Allied Health	<p>Allied health teams available for admitted patients and/or via referral during business hours include nutrition, social work, psychology, music therapy, child life therapy, exercise physiology, occupational therapy, prosthetics and physiotherapy.</p>

Part C: Clinical support services

Service	Requirements
Pathology	<p>Onsite blood and specimen collection with processing available for biochemistry, haematology, microbiology and therapeutic drug monitoring performed on paediatric samples.</p> <p>Onsite transfusion service that can provide leucodepleted, irradiated blood products suitable for immunocompromised children.</p> <p>On-site anatomic pathology for the immediate handling and storage of tumour specimens.</p> <p>Onsite diagnostic techniques (undertaken by clinicians with specific expertise) that align with current internationally recognised tools including molecular diagnostics and cytogenetics.</p> <p>If applicable, on-site laboratory services required to deliver a FACT-accredited cellular therapy program (within context of autologous stem-cell supported chemotherapy).</p> <p>NATA accreditation to ISO/IEC 17025 for all laboratory facilities.²⁹</p>
Medical imaging	<p>On-site radiologist with specific expertise in the reporting of diagnostic imaging of children is available during business hours and on-call after hours.</p> <p>Timely access to the full range of standard of care medical imaging services onsite to provide cancer care.</p> <p>Reporting of all results within clinically relevant timeframes.</p> <p>Access to interventional radiology services onsite.</p> <p>Access to sedation and general anaesthesia to younger children requiring imaging.</p> <p>Picture archiving and communication system (PACS) for the real-time transfer of images.</p> <p>Calibration, dosimetry and quality assurance of imaging systems including expertise in the ALARA (as low as reasonably achievable) principle of dose reduction.</p> <p>Medical imaging staff member identified as responsible investigator for clinical trials.</p>
Consumer engagement	Evidence of the use of consumer engagement and co-design in the cancer service, with remunerated attendance on steering groups and committees
Cultural safety	Access to hospital-based Aboriginal liaison officer services (male and female). Culturally safe care is provided in line with national guidance. ³³
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵
School and education	Access to primary and secondary school education programs and dedicated teachers available onsite.
Infection prevention and control	<p>Timely access to staff responsible for infection control.</p> <p>Staff compliance with national hand hygiene initiative and staff vaccination program.</p>
Clinical trials	Onsite cancer research workforce to support the conduct of clinical trials and research.
Patient and family education	Provides resources in the development and delivery of an education program tailored for patients and their families

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	<p>An emergency department with paediatric trauma and resuscitation facilities and the ability to diagnose, stabilise and treat acutely unwell children.</p> <p>Acts as a tertiary referral centre for escalation of care for level 1-4 services.</p> <p>Use of validated paediatric early-warning tools and rapid response system (e.g., medical emergency team/code blue) with identified roles available onsite 24/7 to respond to paediatric emergencies across the facility.</p> <p>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.</p>
Environment	<p>Child and family-centred care environment in line with the Royal Australian College of Physician's Consensus standards for the care of children and adolescents in Australian health services⁵ and the Australian Commission on Safety and Quality in Health Care's User guide for acute and community health service organisations that provide care for children.⁹</p>
Intensive care	<p>Paediatric intensive care unit providing comprehensive care including complex multi-system life support for an indefinite period, in line with Australian standards^{34, 35}</p>
Outpatient care	<p>Dedicated oncology outpatient environment</p> <p>Dedicated procedure rooms and isolation rooms for managing infectious ambulatory patients with an identified waiting area located away from the general population</p>
Inpatient care	<p>Dedicated oncology inpatient environment with appropriate facilities to provide sufficient isolation of patients from airborne pathogens (such as HEPA filtration and positive pressure rooms)</p> <p>Adolescent-friendly environment including access to health professionals with adolescent expertise in line with national guidance.¹⁴</p>
Family accommodation	<p>Suitable access to accommodation options for caregivers available within or close to the institution.</p>

Part E: Clinical governance

Service	Requirements
Guidelines	<p>State, national and international collaboration in developing and implementing clinical practice guidelines for children with cancer.³⁶</p> <p>Development of and adherence to clinical guidelines and policies to inform consistent, high-quality cancer care.</p> <p>Staff prescribing, dispensing and administering SACT should undergo Good Clinical Practice Training to support the conduct of clinical trials.</p>
Competence and credentialing	<p>Formal orientation, training and credentialing program for junior medical staff.</p> <p>Defined processes to assess staff delivering supportive care (e.g., advanced paediatric life support, central venous access device management, transfusion practices).</p> <p>Process to assess competency in staff administering SACT.</p> <p>Providing support and advice to other health services with participating shared care agreements.</p> <p>Process to assess competency in staff providing care to children undergoing autologous HSCT, if applicable.</p> <p>Utilising a professional development framework for paediatric oncology nursing.³²</p>
Quality activity	<p>Onsite health service quality or clinical governance unit to support quality initiatives.</p> <p>Demonstrated process for patient morbidity and mortality review as part of a quality process.</p>

Level 6 children's cancer service

A level 6 service will provide comprehensive cancer care for all childhood cancer diagnoses as a state-wide referral centre, including a paediatric allogeneic stem cell transplantation service and other cellular therapies used in cancer care. A level 6 service provides state-wide, national and international leadership, including research, clinical guidelines, supervision, education and policy development.

Part A: Service description

Service	Description
Referral process	Tertiary referral centre for all diagnoses, including high-complexity therapies and rare tumours.
Multidisciplinary care	Hosts and/or contributes to a state-wide multidisciplinary meeting structure that presents new patients at diagnosis and at other critical time points as necessary.
Treatment	<p>Provides a comprehensive suite of high-complexity systemic anti-cancer therapy (SACT), including novel or investigative therapies within the context of early phase trials.</p> <p>Provides a comprehensive haematopoietic stem cell transplantation (HSCT) and cellular therapy service for children.</p> <p>Radiotherapy in all curative protocols will ideally be centralised for volume effect.</p> <p>Provides timely access to all paediatric specialty surgical services.</p>
Supportive care	Admitted care for all supportive care interventions, including high-complexity and/or unstable patients requiring paediatric intensive care.
Survivorship care	Delivers and/or hosts a formal, onsite childhood cancer survivorship program.
Palliative care	Provision of, or access to, a paediatric palliative care program.

Part B: Clinical workforce

Service	Requirements
Medical	<p>The head of unit is a registered medical specialist (FRACP- General Paediatrics) credentialed at the health service for paediatric oncology care.</p> <p>A registered medical specialist (FRACP- General Paediatrics), credentialed with the health service in paediatric oncology, is available onsite during business hours, aligned with junior medical staff, and accessible 24/7.</p> <p>A registered medical specialist (FRACP- General Paediatrics) credentialed with the health service in paediatric HSCT, is available onsite during business hours, aligned with junior medical staff, and accessible 24/7.</p> <p>A registered medical practitioner with experience in paediatric oncology care is available onsite 24/7.</p> <p>Timely access to medical specialists, credentialed with the health service in providing care of children, including neurology, cardiology, nephrology, gastroenterology, respiratory, ophthalmology, endocrinology, genetics, infectious diseases, intensive care, anaesthesia, psychiatry, rehabilitation, haematology, pathology, immunology and fertility.</p> <p>Timely access to paediatric surgical services, credentialed with the health service in providing care of children, including orthopaedics, neurosurgery, cardiothoracic, ophthalmology, otolaryngology, plastics, urology, gynaecology, maxillofacial and general paediatric surgery.</p>
Nursing	<p>Identified nursing lead for the service (with backfill) with experience and expertise in childhood cancer care.</p> <p>Specialist nurses identified for all tumour streams and for HSCT.</p> <p>Nursing staff with experience in acute paediatric care, staffed in accordance with the Safe Patient Care Act 2015 (Nurse patient ratios).²⁷</p> <p>Nurses providing regular, direct care to children should meet minimum education standards.²⁸</p> <p>Nurses with demonstrated competency in the Paediatric Antineoplastic Drug Administration Course (ADAC)³¹ (or equivalent) are available for all planned encounters of SACT.</p> <p>Nurses providing care to children with cancer should undertake training in paediatric oncology nursing foundations.</p> <p>Nurses providing care to children undergoing HSCT should undertake specific training in this treatment modality.</p>
Pharmacy	<p>Pharmacists with a dedicated paediatric oncology portfolio and experience in childhood cancer are available during business hours and on-call after hours</p>
Allied Health	<p>Allied health teams available for admitted patients and/or via referral during business hours include nutrition, social work, psychology, music therapy, child life therapy, exercise physiology, occupational therapy, prosthetics and physiotherapy</p>

Part C: Clinical support services

Service	Requirements
Pathology	<p>Onsite blood and specimen collection with processing available for biochemistry, haematology, microbiology and therapeutic drug monitoring performed on paediatric samples.</p> <p>Onsite transfusion service that can provide leucodepleted, irradiated blood products suitable for immunocompromised children.</p> <p>On-site anatomic pathology for the immediate handling and storage of tumour specimens.</p> <p>Onsite diagnostic techniques (undertaken by clinicians with specific expertise) that align with current internationally recognised tools including molecular diagnostics and cytogenetics.</p> <p>NATA accreditation to ISO/IEC 17025 for all laboratory facilities.²⁹</p> <p>On-site laboratory services required to deliver a comprehensive FACT-accredited cellular therapy program</p>
Medical imaging	<p>On-site paediatric radiologist with specific expertise in the reporting of diagnostic imaging of children available during business hours and on-call after hours</p> <p>Timely access to the full range of medical imaging services onsite to provide cancer care.</p> <p>Reporting of all results within clinically relevant timeframes.</p> <p>Access to interventional radiology services onsite.</p> <p>Access to sedation and general anaesthesia to younger children requiring imaging.</p> <p>Picture archiving and communication system (PACS) for the real-time transfer of images.</p> <p>Calibration, dosimetry and quality assurance of imaging systems including expertise in the ALARA (as low as reasonably achievable) principle of dose reduction.</p> <p>Medical imaging staff member identified as responsible investigator for clinical trials.</p>
Consumer engagement	Evidence of the use of consumer engagement and co-design in the cancer service, with attendance on steering groups and committees
Cultural safety	Access to hospital-based Aboriginal liaison officer services (male and female). Culturally safe care provided in line with national guidance. ³³
Interpreter services	Access to accredited interpreters in accordance with Department of Health policy. ²⁵
School and education	Access to primary and secondary school education programs and dedicated teachers available onsite.
Clinical trials	Onsite, funded, cancer research workforce to support the conduct of clinical trials.
Patient and family education	Provides leadership and support in the development and delivery of an education program tailored for patients and their families
Infection prevention and control	Timely access to staff responsible for infection control. Staff compliance with national hand hygiene initiative and staff vaccination program.

Part D: Equipment and infrastructure

Service	Requirements
Resuscitation	<p>A paediatric emergency department with paediatric trauma and resuscitation facilities and the ability to diagnose, stabilise and treat acutely unwell children.</p> <p>Acts as a tertiary referral centre for escalation of care for level 1-4 services.</p> <p>Use of validated paediatric early-warning tools and rapid response system (e.g., medical emergency team/code blue) with identified roles available onsite 24/7 to respond to paediatric emergencies across the facility.</p> <p>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.</p>
Environment	<p>Child and family-centred care environment in line with the Royal Australian College of Physician's Consensus standards for the care of children and adolescents in Australian health services⁵ and the Australian Commission on Safety and Quality in Health Care's User guide for acute and community health service organisations that provide care for children.⁹</p>
Intensive care	<p>Paediatric intensive care unit providing comprehensive care including complex multi-system life support for an indefinite period, in line with Australian standards^{34, 35}</p>
Outpatient care	<p>Dedicated oncology outpatient department.</p> <p>Dedicated procedure rooms and isolation rooms for managing infectious ambulatory patients with an identified waiting area located away from the general population</p>
Inpatient care	<p>Dedicated oncology inpatient ward with appropriate facilities to provide sufficient isolation of patients from airborne pathogens (such as HEPA filtration and positive pressure rooms)</p> <p>Adolescent-friendly environment including access to health professionals with adolescent expertise in line with national guidance.¹⁴</p>
Family accommodation	<p>Suitable access to accommodation options for caregivers available within or close to the institution.</p>

Part E: Clinical governance

Service	Requirements
Guidelines	<p>State, national and international leadership in developing and implementing clinical practice guidelines for children with cancer.³⁶</p> <p>Development of and adherence to relevant clinical guidelines and policies to inform consistent, high-quality cancer care.</p> <p>Staff prescribing, dispensing and administering SACT should undergo Good Clinical Practice Training to support the conduct of clinical trials.</p>
Competence and credentialing	<p>Formal orientation, training and credentialing program for junior medical staff.</p> <p>Defined processes to assess staff delivering supportive care (e.g., advanced paediatric life support, central venous access device management, transfusion practices).</p> <p>Process to assess competency in staff administering SACT.</p> <p>Process to assess competency in staff providing care to children requiring HSCT.</p> <p>Providing support and advice to other health services with participating shared care agreements.</p> <p>Utilising a professional development framework for paediatric oncology nursing.³²</p>
Quality activity	<p>Onsite health service quality or clinical governance unit to support quality initiatives.</p> <p>Demonstrated process for patient morbidity and mortality review as part of a quality process.</p>

References

1. Knops, R. R. G.; van Dalen, E. C.; Mulder, R. L.; Leclercq, E.; Knijnenburg, S. L.; Kaspers, G. J. L.; Pieters, R.; Caron, H. N.; Kremer, L. C. M., The volume effect in paediatric oncology: a systematic review. *Annals of oncology : official journal of the European Society for Medical Oncology* **2013**, *24* (7), 1749-1753.
2. Roy, P.; van Peer, S. E.; de Witte, M. M.; Tytgat, G. A. M.; Karim-Kos, H. E.; van Grotel, M.; van de Ven, C. P.; Mavinkurve-Groothuis, A. M. C.; Merks, J. H. M.; Kuiper, R. P.; Hol, J. A.; Janssens, G. O. R.; de Krijger, R. R.; Jongmans, M. C. J.; Drost, J.; van der Steeg, A. F. W.; Littooij, A. S.; Wijnen, M.; van Tinteren, H.; van den Heuvel-Eibrink, M. M., Characteristics and outcome of children with renal tumors in the Netherlands: The first five-year's experience of national centralization. *PLoS one* **2022**, *17* (1), e0261729.
3. Youngwirth, L. M.; Adam, M. A.; Thomas, S. M.; Roman, S. A.; Sosa, J. A.; Scheri, R. P., Pediatric thyroid cancer patients referred to high-volume facilities have improved short-term outcomes. *Surgery* **2018**, *163* (2), 361-366.
4. Johnson, K. J.; Barnes, J. M.; Delavar, A.; O'Connell, C. P.; Wang, X., Facility patient volume and survival among individuals diagnosed with malignant central nervous system tumors. *Journal of neuro-oncology* **2023**, *161* (1), 117-126.
5. Hill, M. K.; Pawsey, M.; Cutler, A.; Holt, J. L.; Goldfeld, S. R., Consensus standards for the care of children and adolescents in Australian health services. *Medical Journal of Australia*. **2011**, *194* (2), 78-82.
6. Safer Care Victoria, Delivering high-quality healthcare: Victorian clinical governance framework. Victorian Department of Health, Ed. Victorian Government. : Melbourne., **2017**.
7. Australian Commission on Safety and Quality in Healthcare The NSQHS Standards. <https://www.safetyandquality.gov.au/standards/nsqhs-standards>.
8. Australian Commission on Safety and Quality in Healthcare, National Safety and Quality Health Service Standards: User Guide for Medication Management in Cancer Care. ACSQHC: Sydney, **2020**.
9. Australian Commission on Safety and Quality in Healthcare, NSQHS standards: User guide for acute and community health service organisations that provide care for children. ASCSQH: Sydney, **2018**.
10. Paediatric Integrated Cancer Service www.vics.org.au/pics.
11. Safer Care Victoria <https://www.safercare.vic.gov.au/>.
12. Victorian Government Department of Health Performance monitoring framework **2023**. <https://www.health.vic.gov.au/funding-performance-accountability/performance-monitoring-framework>.
13. Victorian Government Department of Health Cancer Patient Experience Survey **2016**. <https://www.health.vic.gov.au/health-strategies/victorian-cancer-patient-experience-survey-tool-project>.
14. Paediatric Integrated Cancer Service, Victorian Paediatric Oncology Care Pathway: Providing Optimal Care for Children and Adolescents – Acute Leukaemia, Central Nervous System Tumours and Solid Tumours. PICS: Melbourne, **2019**.
15. Leukaemia Foundation and Australian Government Department of Health, Optimal care pathway for children, adolescents and young adults with acute leukaemia. Foundation, L., Ed. **2021**.

16. Victorian Paediatric Integrated Cancer Service, Optimal care pathway for adolescents and young adults with cancer. PICS: Melbourne, Australia., **2022**.
17. South Australia Health, Clinical Services Capability Framework: Cancer Services - Children's Department of Health and Ageing, Government of South Australia,; Adelaide., **2017**.
18. Queensland Health, Cancer Services- Children's CSCF v.3.2. Queensland Government: **2014**.
19. National Health Service England, Specialist cancer services for children and young people Sub-Heading: Teenage and Young Adults Principal Treatment Centre Services. NHS: **2023**.
20. National Health Service England, Service Specification: Children's Cancer Network Principal Treatment Centres,. NHS, Ed. **2021**.
21. National Health Service England, Children's cancer services: Paediatric oncology shared care unit service specification. NHS: **2021**.
22. Hord, J.; Feig, S.; Crouch, G.; Hale, G.; Mueller, B.; Rogers, Z.; Shearer, P.; Werner, E., Standards for Pediatric Cancer Centers. *Pediatrics* **2014**, *134* (2), 410-414.
23. Childrens Oncology Group. Personnel and Service Requirements for Member Institutions. **2014**. https://cogmembers.org/_files/admin/MI_PersonServiceRequirementsFINAL.pdf.
24. Schladerer, S. P.; Otth, M.; Scheinmann, K., Quality criteria for pediatric oncology centers: A systematic literature review. *Cancer Medicine*. **2023**, 1-14.
25. Department of Health and Human Services, Language Services Policy. Victorian Government: Melbourne Australia, **2017**.
26. Royal Australian College of General Practice, Standards for General Practices 5th edition. RACGP: East Melbourne, Victoria., **2023**.
27. Department of Health and Human Services, Guide to implementation of amendments to the Safe Patient Care (Nurse to Patient and Midwife to Patient Ratios) Act 2015. Victorian Government: Melbourne., **2020**.
28. Australian College of Children and Young People's Nurses, Position Statement: Minimum Standards for Nurses Caring for Children and Young People. . ACCYPN: **2018**.
29. National Association of Testing Authorities Testing & Calibration. <https://nata.com.au/accreditation/laboratory-accreditation-iso-iec-17025/>.
30. Australian Health Infrastructure Alliance, Australasian Health Facility Guidelines. Part B: Health Facility Briefing and Planning 0540, Paediatric / Adolescent Unit. 6 ed.; AHIA: **2016**.
31. EviQ Education Paediatric Antineoplastic Drug Administration Course. <https://education.eviq.org.au/courses/anti-cancer-drug-administration-course-adac/paediatric-antineoplastic-drug-administration-course>.
32. Paediatric Integrated Cancer Service, A framework for continuing professional development for nurses working with children and adolescents with cancer. PICS: Melbourne, Australia, **2023**.
33. Cancer Australia, Optimal Care Pathway for Aboriginal and Torres Strait Islander People with Cancer. Australian Government: **2018**.
34. College of Intensive Care Medicine of Australia and New Zealand, Minimum Standards for Intensive Care Units. CICM: **2016**.
35. Chamberlain, D.; Pollock, W.; Fulbrook, P., ACCCN Workforce Standards for Intensive Care Nursing: Systematic and evidence review, development, and appraisal. *Australian critical care : official journal of the Confederation of Australian Critical Care Nurses* **2018**, *31* (5), 292-302.
36. Loeffen, E. A. H.; Kremer, L. C. M.; Mulder, R. L.; Font-Gonzalez, A.; Dupuis, L. L.; Sung, L.; Robinson, P. D.; van de Wetering, M. D.; Tissing, W. J. E., The importance of evidence-based supportive care practice guidelines in childhood cancer-a plea for their development and implementation. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer* **2017**, *25* (4), 1121-1125.

Paediatric Integrated Cancer Service

Telephone +61 3 9345 4433

Email pics.admin@rch.org.au

Website www.vics.org.au/pics