



## Levels of Care - Impact Assessment

# Treatment Phase of Care

District Health Authority: \_\_\_\_\_

Hospital: \_\_\_\_\_

## Assessed Level of Care for Treatment Phase of Care

\_\_\_\_\_

Completed by: \_\_\_\_\_

DHA designate: \_\_\_\_\_

Date: \_\_\_\_\_

Contact Information: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Physical Facilities</b>								
Safe, child friendly area to isolate child from nosocomial infections [ED/ambulatory care]	<b>Basic to Advanced</b>							
Pediatric Inpatient unit ( may be shared) with isolation rooms	<b>Intermediate</b>							
Controlled quiet environment for chemotherapy administration								
Pediatric inpatient unit with appropriate isolation rooms [dedicated pediatric unit preferred; able to provide other advanced level resources]	<b>Advanced</b>							
Intensive Care Unit able to stabilize critically ill child/adolescent for transportation to a Sub-Specialty Centre								
In-patient and ambulatory care areas with appropriate isolation and reverse isolation capabilities	<b>Sub-Specialty</b>							
Sub-Specialty care pediatric Emergency Department services with advanced pediatric appropriate resuscitation equipment available on- site 24 hours/day, 7 days per week								
Pediatric Intensive Care Unit; pediatric operating rooms								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel</b>								
A family physician or pediatrician in the home community willing to manage the care of a child/adolescent with cancer or a serious haematological disorder which includes:	<b>Basic</b>							
1.) Carrying out dose adjustments of oral chemotherapy doses according to the appropriate toxicity/ therapeutic guidelines after consultation with a pediatric hematologist/oncologist, appropriate professional* (see page 29 LoC Approach) at the Sub-Specialty centre or an oncology clinic nurse with delegated medical function certification in dose modification for oral chemotherapy and								
2.) Managing the side-effects or complications of oral chemotherapy. Able to recognize or have access to information to anticipate common chemotherapy-related toxicities (e.g. bleeds and febrile neutropenia).								
Health professionals able to provide pediatric care and monitoring such as immunizations, subcutaneous injections, insertion of nasogastric tube, GCSF administration and vital signs monitoring.								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel cont'd</b>								
Physician or nurse with 24/7 coverage in emergency department to initiate treatment or stabilize patient and arrange for transfer as necessary.	<b>Basic cont'd</b>							
Health and/or psychosocial professionals able to provide family support and assist with arrangements for transfer as required.								
A pediatrician (or GP in certain circumstances) able to manage the care of a child/adolescent with cancer or a serious hematologic disorder in collaboration with a pediatric hematologist/ oncologist. This includes supervision of chemotherapy administration and provision of onsite or immediate response for agents with risk of hypersensitivity reactions and/or extravasation.	<b>Intermediate</b>							
Nurses with competencies to access CVADs 24/7								
Nurses with APPHON-RROHPA established competencies to care for this patient population at the Intermediate level.*								
Pharmacists on site with expertise and understanding of chemotherapy and treatment protocols/ roadmaps, able to provide chemotherapy order verification.								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel cont'd</b>								
Pharmacist/s or pharmacy technician/s with direct supervision by pharmacist/s, competent in safe handling, preparation, dispensing and disposal of chemotherapy agents.	<b>Intermediate cont'd</b>							
Pharmacists and/or nurses able to provide drug information, monitoring, clinical support and patient teaching.								
All nurses giving Chemotherapy to this population to have completed the <u>APHON Pediatric Chemotherapy Biotherapy Provider Course</u>								
Access to social worker and/or psychologist able to provide psycho-social support								
Dietician with applicable expertise able to provide nutritional assessment, monitoring and support, including enteral feeds, in liaison with tertiary dietician.								
Access to an occupational, respiratory and physio therapists able to provide care in collaboration with the Sub-Specialty centre.								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel cont'd</b>								
Pediatricians prepared to manage the care of a child with cancer or a serious hematologic disorder in collaboration with a pediatric hematologist/ oncologist. This includes: -Preventing common complications and treating oncologic emergencies such as metabolic disturbances or hemorrhagic complications, etc. -Supervision of chemotherapy administration and provision of onsite or immediate response for agents with risk of hypersensitivity reactions and/or extravasation.	<b>Advanced</b>							
Pediatrician on call 24/7								
Pediatrician able to administer Intra-thecal chemotherapy (IT) using procedural sedation service provided by an anesthetist.								
Nurses with the APPHON-ROHPPA established competencies to care for this patient population at the advanced level.								
All Nurses giving Advanced chemotherapy to this population to have the <u>APHON Pediatric Chemotherapy and Biotherapy Provider Course</u>								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel cont'd</b>								
On-site pharmacist/s able to provide monitoring and consultation about the treatment plan, in collaboration with the Sub-Specialty Centre	<b>Advanced cont'd</b>							
Social worker and/or psychologist available to provide applicable psychosocial support at diagnosis and regular followup if required.								
Child Life Specialist								
Dietician as recommended in Intermediate including parenteral feeds								
Access to respiratory therapist with pediatric expertise/ experience								
Access to occupational therapist and physiotherapist with pediatric experience.								
Pediatric hematologist/oncologists** who develop a comprehensive treatment plan for each child/adolescent, available 24/7	<b>Sub-specialty</b>							
Pediatric sub-specialists in, anesthesiology, endocrinology, gastroenterology, genetics, immunology, infectious diseases, nephrology, neurology, rheumatology, rehabilitation, psychiatry, surgery, pain management.								
Radiation oncologists with pediatric expertise.								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Personnel cont'd</b>								
Pediatric nurses with additional education and expertise in the management of children/adolescents with cancer or serious hematologic disorder [e.g. CNS and /or NPs]	<b>Sub-specialty cont'd</b>							
Nurses with the APPHON/RROHPA established competencies for the subspecialty level								
All Nurses giving Sub-Specialty chemotherapy to this population to have the <u>APHON Pediatric Chemotherapy and Biotherapy Provider Course</u>								
Clinical pharmacists with pediatric hem/onc expertise.								
Psychologist, social worker with pediatric hematology/onc expertise;								
Child life specialist*, school intervention/education support personnel with pediatric hem/onc expertise.								<b>* Required for Holistic Care</b>
Dieticians and dentists with pediatric hematology/oncology expertise.								
Occupational therapist, physiotherapist, respiratory therapist with pediatric hematology/oncology expertise.								
Physicians who are Clinical research associates with expertise in data management support of cooperative research								



	Level Of Care	Required			Recommended			Action / Comments
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		F	P	N	F	P	N	
<b>Pharmacy</b>								
Ready access to pharmacy with appropriate antibiotics, anti-emetics, pain medications and other drugs required for provision of basic level care.	<b>Basic</b>							
Hospital pharmacy available on site with access to level appropriate antineoplastic and supportive agents	<b>Intermediate &amp; Advanced</b>							
Expertise in anti-neoplastic agents and therapies for serious hematologic disorders. Pharmacy capable of accurately and safely preparing, dispensing and documenting administration and disposal of investigational medications.	<b>Sub-specialty</b>							
<b>Equipment/Resources</b>								
24/7 Emergency Department services with basic resuscitation equipment. Basic investigations to ensure child can be transferred safely.	<b>Basic</b>							
Able to obtain appropriate blood samples, including micro-samples and peripheral venous blood from children and transport blood samples to lab for testing if not available on site.								
Able to do urine dipstick.								

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Equipment/Resources cont'd</b>								
Class II biological hood externally vented, chemo precautions equipment; chemo spill kit readily available; appropriate pumps for chemotherapy administration; rapid access to resuscitation, anaphylaxis and extravasation treatment drugs and equipment.	<b>Intermediate</b>							
24 /7 on site ED with pediatric appropriate resuscitation equipment, medications, and dosing and on site physician; applicable supportive care guidelines and pre printed orders.								
As above plus access; deep sedation/anesthesia resources to perform LPs.	<b>Advanced</b>							
Regularly held Tumour Boards to discuss treatment planning Data collection and transfer systems** to support clinical research trials Membership in an international cooperative clinical trials group Access to radiotherapy equipment for state-of-art treatment of children, including rotational lineal accelerator, dedicated simulator Anaesthetic resources for procedural deep and conscious sedation services Access to hematopoietic stem cell transplant services, cytopheresis, plasmapheresis; dialysis.	<b>Sub-specialty</b>							

	Level Of Care	Required			Recommended			Action / Comments
		Full	Partial	No congruence	Full	Partial	No congruence	
		F	P	N	F	P	N	
<b>Lab/Diagnostic Imaging</b>								
Not Applicable	<b>Basic</b>							
DI: equipment and personnel able to obtain and interpret ECGs, chest x-rays, abdominal films and Ultra-sounds - able to adjust to deliver lower doses of radiation for diagnostic imaging tests to pediatric patients	<b>Intermediate</b>							
Able to transmit ECG images to Sub Specialty centre.								
Lab: CBC/diff, BUN, Na, K, Creat, gluc stat [within 1 hour] if needed; PT PTT, access to fg test results within two days if needed; uric acid, Ca, Phos Mg, AST, ALT, bili T/D, amylase within 24 hours; creatinine clearance.								
Microbiology: aerobic and anaerobic bacterial cultures.								
Blood bank: FFP, CMV negative, irradiated PRBC onsite; access to cryo and on site if caring for at risk patient; CMV irradiated platelets within 24 hrs; access to appropriate blood product filters, factor concentrates, IVIG, VZIG.								
Diagnostic Imaging: nuclear medicine facilities for GFR [or creatinine clearance], WMEF [or echocardiogram]; experienced in pediatric CT scanning, able to adjust dosage for pediatric patients.	<b>Advanced</b>							

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		F	P	N	F	P	N	
<b>Lab/Diagnostic Imaging cont'd</b>								
Lab: access to bacterial culture on site and a process for timely fungal culture results	<b>Advanced cont'd</b>							
Blood Bank: access to CMV irradiated platelets for transfusion with 12 hours.								
Diagnostic Imaging: all-inclusive nuclear medicine, MRI angiography; interventional radiology.	<b>Sub-specialty</b>							
Pediatric expertise in audiology, EEG, and ECG testing and interpretation.								
Lab: expertise in the assessment and diagnosis of pediatric hematology/oncology disorders including cell flow cytometry*, bone marrow aspirate and biopsy histological analysis**, immunohistochemistry*, cytogenetic analysis*, hemoglobinopathy diagnosis by protein and molecular methods*, specialized coagulation testing*, specialized analysis of immune function*, microbiology**/virology* services and clinical chemistry expertise in monitoring antibiotic, antineoplastic and immunosuppressant drug levels*, blood gas, routine chemistry, hematology and coagulation assays on small samples**, immediate. interpretation of infectious organisms stains**, histopathology*								

	Level Of Care	Required			Recommended			Action / Comments
				No congruence			No congruence	
		Full	Partial		Full	Partial		
		F	P	N	F	P	N	
<b>Education/Certification</b>								
Health professionals with commitment to ongoing education applicable to basic/foundation level of care, [i.e. patient specific, "just-in-time" education.]	<b>Basic</b>							
Health professionals with experience and education applicable to intermediate level of care; RN -APPHON chemotherapy provider qualifications & other competencies, MD - pediatric oncology education.	<b>Intermediate</b>							
Experience and education applicable to advanced level of care.	<b>Advanced</b>							
Tertiary education qualifications and maintenance of ongoing education; support of educational endeavours for other health professionals as needed.	<b>Sub-specialty</b>							
<b>Communication links</b>								
Identification of a primary contact able to forward necessary documentation to the tertiary centre	<b>Basic</b>							
Ready access to pediatrician referral and access to contact numbers at Sub Specialty centre for; ED, Clinic, Inpatient unit and Pediatric hematologist/oncologist								
As for Basic level plus designated pharmacist contact	<b>Intermediate &amp; Advanced</b>							

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		F	P	N	F	P	N	
<b>Communication links cont'd</b>								
Established community links. Designated contact persons for all involved disciplines; able to forward necessary communication to appropriate health professional in the community in timely manner	<b>Sub-specialty</b>							
<b>Institution Support</b>								
All Chemotherapy orders originate at the Sub-Specialty Centre	<b>Intermediate</b>							
Able to provide Institutional policies for oral and parenteral chemotherapy ordering, preparation administration, disposal, management of spills etc. even if they are borrowed from another institution								
Local Institutional policies for oral and parenteral chemotherapy ordering, preparation administration, disposal, management of spills etc.								
As recommended at Intermediate level; local Institutional policies for oral and parenteral chemotherapy ordering, preparation administration, disposal, management of spills etc.	<b>Advanced &amp; Sub-specialty</b>							

\* see "Practice Standards and Competencies for Nurses Providing Pediatric Cancer Care in Atlantic Canada (2007)" and "Practice Standards and Competencies for Nurses Providing Pediatric Non-malignant Hematology Care in Atlantic Canada (2008)."