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Quick Reference Guideline for the Management of Febrile Neutropenia in Children

APPHON/ROHPPA supportive care guidelines are developed by Atlantic Provinces health professional specialists using evidence-based or best practice references. Format and content of the guidelines will change as they are reviewed and revised on a periodic basis. Care has been taken to ensure accuracy of the information. However, any physician or health professional using these guidelines will be responsible for verifying doses and administering medications and care according to their own institutional formularies and policies and acceptable standards of care.

The **purpose** of this Quick Reference Guide is to provide health professionals with a summary of the recommendation outlined in the full version of the APPHON Guideline for the Management of Febrile Neutropenia in Children.

These guidelines apply to the management of patients:

1. With fever and neutropenia as a result of a known or suspected malignancy or the use of antineoplastic agents
2. Hematopoietic stem cell transplant (HSCT) patients who present with fever or evidence of infection within 6 months of their transplant, regardless of their actual neutrophil count
3. HSCT patients who continue to receive immunosuppressant agents after transplant, regardless of their actual neutrophil count or the length of time post-HSCT.
4. Children with fever or evidence of infection who are receiving antineoplastics or who have completed cancer therapy within 3 months even if they are not neutropenic.
5. Children with neutropenia who do not have a cancer diagnosis but present with fever.

Quick Reference Table

Key Points	Recommendations: Refer to Febrile Neutropenia PPO and Algorithm
During therapy and up to 3 months post therapy	<ul style="list-style-type: none"> All hematology/oncology patients who are febrile should immediately go to the closest emergency Discuss post bone marrow transplant/underlying immunodeficiency with Oncologist on call
Fever criteria	Fever <ul style="list-style-type: none"> Temperature taken at home by parent MUST be taken into account Mouth/Ear <ul style="list-style-type: none"> 38.3°C & over - 1 reading 38°C & over - 2 readings 1 hour apart Armpit (Axilla) <ul style="list-style-type: none"> 37.8°C & over - 1 reading 37.5°C & over - 2 readings 1 hour apart
Venous access	<ul style="list-style-type: none"> Immediately access the central venous catheter/peripheral IV site regardless of whether anesthetic cream is applied
Bloodwork and Blood cultures	<ul style="list-style-type: none"> Draw lactate level, CBC & differential within 30 mins of arrival at the hospital One set of blood cultures required from CVAD. If CVAD cannot be accessed, obtain peripheral culture Obtain aerobic blood cultures from all lumens of indwelling venous lines or if specific focus of infection is present
Neutropenia criteria	<ul style="list-style-type: none"> ANC less than $0.5 \times 10^9/L$ or expected to fall below $0.5 \times 10^9/L$ within the next 72 hours.
Other tests and evaluations	<ul style="list-style-type: none"> If clinically warranted
Initiation of antibiotics	<ul style="list-style-type: none"> Start antibiotics within 60 minutes of arrival at the hospital Refer to treat promptly card and preprinted orders and management algorithm Antibiotics should be given prior to patient transfer and prior to administration of blood products
Management of fever in who have completed therapy and/or are on therapy but not neutropenic	<ol style="list-style-type: none"> If the child is neutropenic or is known to be hypogammaglobulinemic secondary to rituximab: <ul style="list-style-type: none"> refer to febrile neutropenia protocol obtain blood culture treat with piperacillin-tazobactam If the child is not neutropenic but is unwell: <ul style="list-style-type: none"> obtain blood culture treat with piperacillin-tazobactam OR appropriate antibiotics for clinical illness (e.g. pneumonia) If the child is not neutropenic and not unwell but has a central line: <ul style="list-style-type: none"> obtain blood culture Physician should assess the need to initiate antibiotic treatment based on clinical judgement. If an antibiotic is required, start Ceftriaxone until cultures available unless specific focus of infection is present If the child is not neutropenic, and not unwell, does not have a central line, and has not received rituxumab: <ul style="list-style-type: none"> the child should be treated like any other child with a fever.

FEBRILE NEUTROPENIA ORDERS AND ALGORITHM

