4.1.3 Outpatient Fever and Neutropenia in POGO Satellites

Preamble

Fever and neutropenia (F&N) in pediatric cancer patients is a medical emergency. It is crucial to ensure there is rapid assessment and initiation of antibiotics in these patients. It has become clear, however, that a large portion of low-risk patients may be safely treated as outpatients using oral antibiotics and close ambulatory follow-up. The purpose of this document is to outline the required prerequisites to allow for safe outpatient management of fever and neutropenia in POGO satellites. Importantly, an outpatient F&N program should be initiated only after agreement between the satellite and with the referring specialized childhood cancer program. Communication remains essential, and it is important satellites be aware of patients who have high risk features that may not be apparent to satellites and make them ineligible for outpatient F&N management.

Defining Low Risk

In general, 'low risk' Fever and Neutropenic episodes are defined by the absence of high-risk features. These include features on history, disease status and clinical presentation.

Patient History High Risk Factors

- History of sepsis syndrome in past 6 months
- Age < 12 months
- Down Syndrome
- HSCT past 6 months OR still on immunosuppressants

Underlying Diagnosis High Risk Factors

- AML
- Burkitt's Lymphoma
- ALL in Induction or Delayed Intensification (and other high-risk blocks in therapy for ALL patients with special populations such as Ph+ ALL)
- High Risk Neuroblastoma
- Relapsed leukemia
- Progressive solid tumour with bone marrow involvement
- CNS Tumour patients receiving aggressive radiation sparing protocols (i.e., 99703 or HEADSTART)

Clinical Presentation High Risk Factors

- Sepsis Syndrome
- Hypotension
- Tachypnea
- Hypoxia (0_2 Sat <92%? on room air)
- New CXR infiltrate
- Altered mental status
- Severe Mucositis
- Vomiting unresponsive to anti-emetics
- Abdominal Pain not responsive to oral analgesic

- Focus of Local Infection (such as Tunnel Infection, Peri-rectal abscess, cellulitis)
- Recent Surgery/Wound concerns
- Focal, unexplained pain

Family Factors for Outpatient Management

For patients with FN deemed to be low risk, it is crucial that the family situation be adequate to ensure safe ambulatory follow-up of patients with febrile neutropenia. The factors include:

- Access to Hospital
  - Live within 1 hour travel time as per Google Maps (May also include access to POGO Satellite within 1 hour)
  - Immediate Access to Transportation to allow urgent return to hospital if necessary
- Communication:
  - Family Has a working phone
  - Family speaks English or has immediate access to an adult to translate
- Thermometer
  - Family has a working thermometer
- Caregiver /Family Structure
  - Adult available at home 24-hrs a day
  - Consistent functional dynamic amongst care givers if multiple are involved
  - Agrees to follow-up clinic visit and phone contact schedule and demonstrates adherence
- Patient
  - Able to tolerate medications by mouth or by enteral tube (oral liquids, capsules or tablets)
  - Remains home from school/daycare
- Adherence
  - History of compliance/adherence

Outpatient Antibiotic Therapy

It is crucial that any patient considered for outpatient management of febrile neutropenia has access and tolerates oral antibiotics:

- For Patients that Can Swallow Tablets
  - Levofloxacin PO
- For Patients Unable to swallow Tablets
  - Levofloxacin suspension (must ensure that it can be made by the retail pharmacy the prescription is sent to)
  - Ciprofloxacin and Amoxicillin/Clavulanic Acid

Proposed Flow of Patients for Outpatient Febrile Neutropenia Management

- Any patient considered for outpatient F&N management should be assessed by staff that are active in the POGO satellite. This means that those presenting after hours should generally be admitted until the primary POGO clinic team can assess and plan outpatient follow-up in working hours.

Documentation

The assessment of risk status and discussion of families agreement with the follow-up plan should be documented prior to discharge.

Follow Up Management of Outpatient Febrile Neutropenia

Outpatient Surveillance

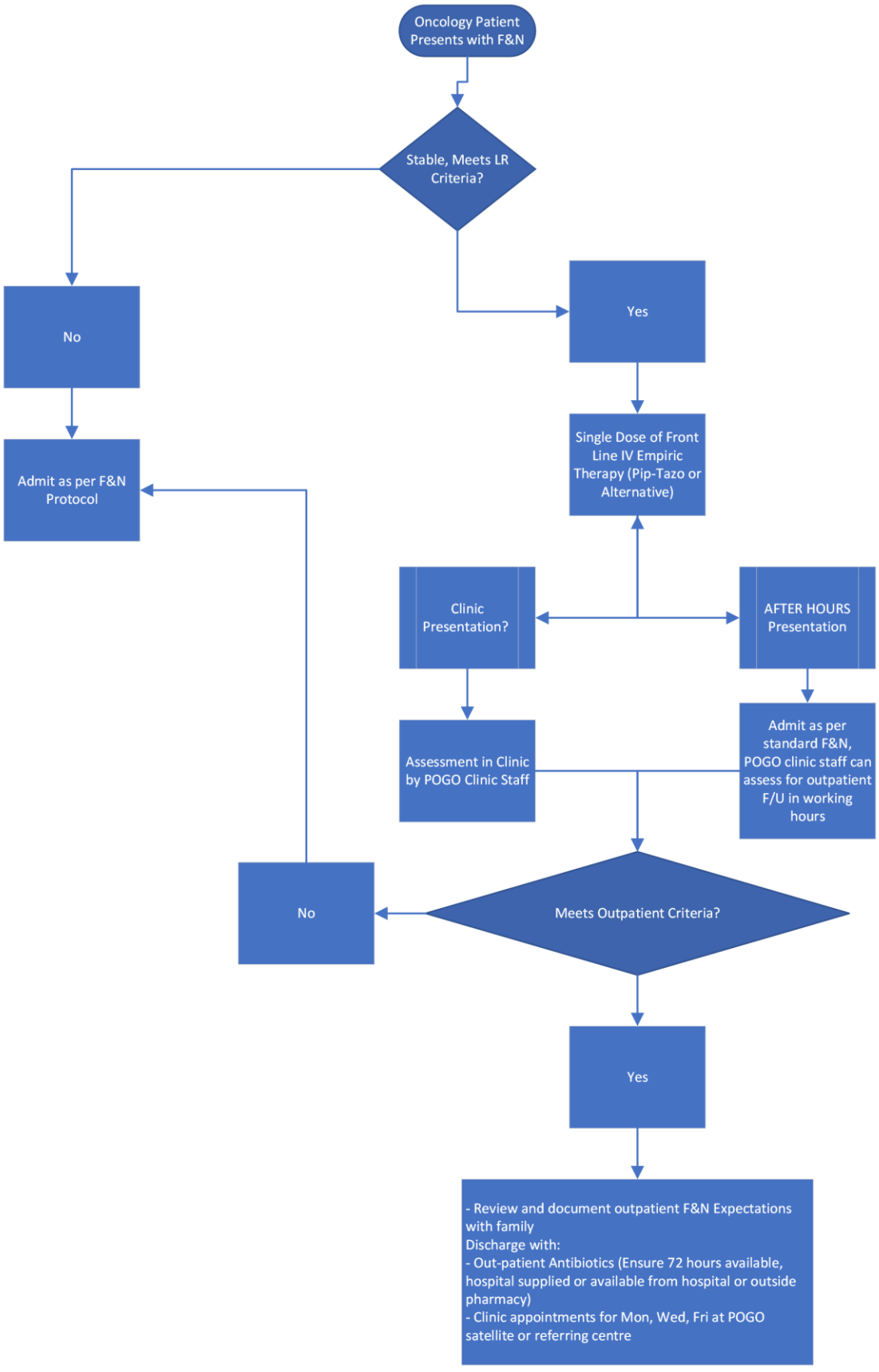
- Patients will be given appointments for outpatient clinic assessments by clinic physician or NP on Mondays, Wednesdays and Fridays
- CBC will be repeated with each visit
- On Tuesdays and Thursdays: Satellite nursing team will contact family and document symptoms and oral med compliance
- On Weekends and Holidays: Families will be instructed to contact on call staff to review symptoms and compliance

Criteria for Subsequent Readmission:

- Unable to tolerate and/or remember PO antibiotics
- Positive Blood Culture
- Clinical Deterioration
- Fever persisting beyond 5 days without focus (i.e., no viral focus) may require admission for further assessment

Discontinuing Antibiotic Therapy

- Antibiotics should be discontinued when the following criteria are met:
  - Cultures negative 48 hours
  - Afebrile 24 hours
  - Evidence of count recovery (i.e., increasing neutrophil or monocytes count), discuss with referring centre)



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Appendix 1: Nursing Guide for Outpatient Fever and Neutropenia Follow Discussions

Questions for Parent/Caregiver

1. Review temperatures over the last 24 hours with the parent/caregiver.
2. Has there been episodes of fever? If so? How many?
3. Has acetaminophen (Tylenol®, Tempra®) been given in the last 24 hours?
4. Is the child eating and drinking?
5. Has there been any emesis? Is so, how often?
6. Have all doses of antibiotics (levofloxacin or alternative) been given in the last 24 hours?
    a. Were any doses vomited, and if so, were they repeated?
    b. How many antibiotic doses does the family have left? Is this enough to last until their next clinic appointment? OR If the family was seen in the clinic, do they need a script for levofloxacin?
7. Are there any new symptoms (i.e., cough, runny nose, diarrhea) or if already present are they improving or worsening?
8. Does the child look worse than when last seen in the hospital?
9. Is an adult still able to be at home 24 hours/day with the child?
10. Remind the family of their next scheduled clinic appointment (next Monday, Wednesday or Friday whichever is closest).

These discussion points should be documented in the medical record and shared with the referring sites.

Primary author Dr. Paul Gibson, McMaster Children's Hospital, Pediatric Oncology Group of Ontario.

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Record of Updates

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