Maritime Child Health
IWK Health

# The Pediatric Pulse

*Keep your finger on the pulse of what's happening in pediatric medicine*

October 2025

## Sepsis

Sepsis is a systemic inflammatory response to a known or suspected infection and is a leading cause of morbidity and mortality worldwide. A timely and systematic approach is **KEY** to optimizing patient outcomes.

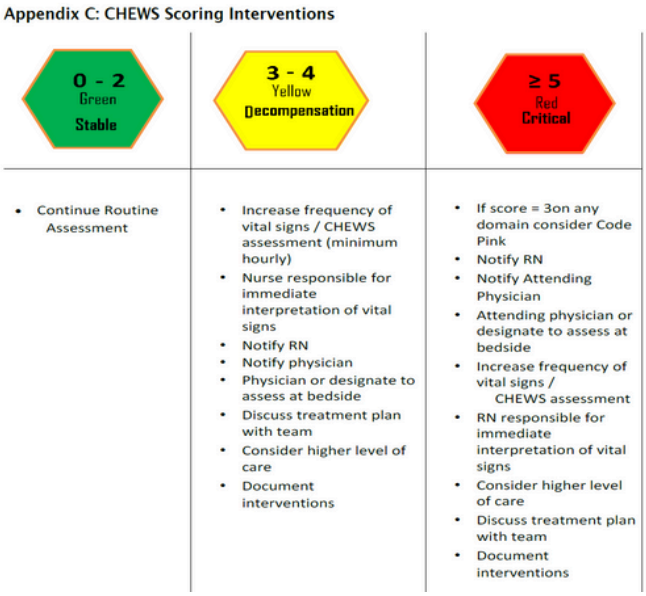
### EARLY RECOGNITION:

- Tachycardia, tachypnea and fever are classic features. Pediatric patients (especially infants) may present with hypothermia, this should be considered a red flag for sepsis.
- Altered mental status (irritability, confusion, inconsolable, lethargic).
- Impaired perfusion (cap refill > 2sec, Sp02 < 92%, mottled skin, cool extremities).

***Hypotension is a late finding in pediatric sepsis.***

### CHEWS SCORE:

- For pediatric patients the use of a validated, evidence-based tool such as the CHEWS Score is an effective way to aid healthcare professionals in the recognition and identification of patient deterioration. May prevent in-hospital arrests.
- Perform a CHEWS Assessment at the beginning of each shift, with each scheduled vital signs check, and when a change in the patient's condition prompts a full assessment.



Appendix C: CHEWS Scoring Interventions

| 0 - 2 Green Stable | 3 - 4 Yellow Decompensation | ≥ 5 Red Critical |
|---|---|---|
| • Continue Routine Assessment | • Increase frequency of vital signs / CHEWS assessment (minimum hourly)<br>• Nurse responsible for immediate interpretation of vital signs<br>• Notify RN<br>• Notify physician<br>• Physician or designate to assess at bedside<br>• Discuss treatment plan with team<br>• Consider higher level of care<br>• Document interventions | • If score = 3on any domain consider Code Pink<br>• Notify RN<br>• Notify Attending Physician<br>• Attending physician or designate to assess at bedside<br>• Increase frequency of vital signs / CHEWS assessment<br>• RN responsible for immediate interpretation of vital signs<br>• Consider higher level of care<br>• Discuss treatment plan with team<br>• Document interventions |

**CHEWS Score consists of 5 domains:**

- Respiratory
- Cardiovascular and
- Neurological parameters

The following two are subjective:

- Parent/family
- Staff concerns

**Score of 0 - 2**: Continue routine assessments
**Score > 3**: Requires an increase in the level of monitoring and involvement of the interdisciplinary team
**Score > 5**: Immediate notification of RN/AP. Consider additional resources/protocols

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### MANGEMENT PRIORITIES:

- Early vascular access - x2 IV sites. If IV sites cannot be obtained rapidly, move to IO insertion early.
- Fluid resuscitation - rapid administration of N/S boluses 20ml/kg. Boluses can be given via push-pull technique with a 3-way stopcock or via rapid infuser (check operations manual for IV gauge/weight restrictions). Boluses may need to be repeated up to 60ml/kg.
- Early metabolic correction - oxygen at 10-15L/min via non-rebreather. Check for and correct low glucose and calcium (IWK Drug Information Resource - PALS Calculator, Broslow tape for dosing).
- Early antibiotic therapy - broad spectrum **antibiotics should be administered within 1 hour** of recognition of sepsis. NEVER delay antibiotics to obtain cultures.
    - Children < 3 months: **Ampicillin** (75mg/kg/dose MAX 2g) + **Cefotaxime** (100mg/kg/dose MAX 2g).
    - Children > 3 months: **Ceftriaxone** (100mg/kg/dose MAX 2g) + **Vancomycin** - if suspected meningitis (15mg/kg/dose MAX 1g).

### SOURCE IDENTIFICATION:

- Blood culture, urine culture, CXR are standard investigations.
- CSF culture may be considered in patients who are hemodynamically stable.

### EARLY ESCALATION OF CARE:

- If signs of **shock** persist (abnormal perfusion and/or hypotension) despite fluid resuscitation with 40ml/kg of isotonic fluids, prepare inotrope infusion. Administer after 60ml/kg of fluids.
- For **cold shock** (decreased perfusion, decreased pulses) - **Epinephrine** (0.05mcg/kg/min IV, titrate up 0.02mcg/kg/min to effect).
- For **warm shock** (increased pulse pressure, bounding pulses) - **Norepinephrine** (0.05mcg/kg/min IV, titrate up 0.02mcg/kg/min to effect).

### THERAPEUTIC ENDPOINTS:

- Normalization of capillary refill (< 2 sec), pulses and pulse pressure (diastolic BP should be ⅔ systolic BP).
- Normalization of mental status.
- Urine output > 1ml/kg/hr.

**Early discussion with the pediatric tertiary care facility regarding management and need for transfer!**

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Scan the QR codes below to view the Canadian Paediatric Society's Practice Point on Diagnosis and Management of Sepsis in the Pediatric Patient, as well as TREKK's Sepsis Resources for Healthcare Providers.

**Sepsis Practice Point**

**Sepsis Resources HCP**

## MCH Comfort Corner

We are working to improve children's pain management across the Maritimes!

Solution for Kids in Pain (SKIP) is a collaborating partner of Maritime Child Health, together we have created the position of Clinical Implementation Specialist in Pediatric Pain Management. SKIP supports the implementation of HSO's National Standard on Pediatric Pain Management, along with building awareness, providing resources and mobilizing knowledge from research into practice. SKIP's goal is to ensure that new knowledge generated from children's pain research is put into practice and policy and is accessible. SKIP works to reduce suffering of children, who live with pain every day, with a network of research and clinical supports across Canada. Their network hub is based in Halifax and continues to lead us to improved pain care for all children and their families. Find out more on their website kidsinpain.ca.

Look for events during **National Pain Awareness Week** which is happening November 2-8th, 2025!

**References**


TREKK (2018). *Bottomline Recommendations: Sepsis.* https://trekk.ca/search?query=sepsis

Canadian Pediatric Society (2020). *Diagnosis and Management of Sepsis in the Pediatric Patient.* https://cps.ca/en/documents/position/diagnosis-and-management-of-sepsis-in-the-paediatric-patient

Nova Scotia Health (2021). *Children's Hospital Early Warning Score.* Policy MC-PED-005



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