NORTHERN TERRITORY GOVERNMENT — DEPARTMENT OF HEALTH

PRIMARY HEALTH CARE PAEDIATRIC SEPSIS PATHWAY

Principal name:
Other name(s):
D.O.B:
HRN:
Sex:

Patient Label

Address must be documented if patient details handwritten

Sepsis is a time-critical MEDICAL EMERGENCY
Clinical pathways never replace clinical judgment. Use this pathway for patients 0 to 12 years in conjunction with CARPA manual and Remote Early Warning Score (REWS).

Date: _____ **Time:** _____ **Initial:** _____ **Print name:** _____ **Role:** _____

Could it be sepsis?

Consider sepsis in all patients with signs/symptoms of an infection and abnormal vital signs. Presentation can vary between patients and at times may not be obvious. *Tick below all that apply.*

RECOGNISE

Are there signs/symptoms that are consistent with an infection?

- ❑ Fever or hypothermia, rigors, tachycardia, reduced alertness
- ❑ Cool peripheries, mottled skin, pallor
- ❑ **Respiratory:** cough, increased respiratory rate or work of breathing, apnoea
- ❑ **Skin:** cellulitis, increased pain and tenderness out of proportion, infected wounds, non-blanching rash
- ❑ **IV line access:** redness, pain, swelling, discharge
- ❑ **Musculoskeletal:** swollen, painful, tender, warm joints or long bones
- ❑ **Neurological:** neck stiffness, headache, photophobia, altered level of cognition or consciousness
- ❑ **Abdomen:** severe pain, tenderness, urinary tract infection, severe vomiting

Younger children may present with the following:

- ❑ Weak cry, grunting, irritable
- ❑ Decreased feeding
- ❑ Acute weight loss (associated with dehydration)

Increase your suspicion of sepsis in these patients:

- ❑ Aboriginal and Torres Strait Islander people
- ❑ High level of parental/caregiver concern
- ❑ Re-presentation
- ❑ Previous sepsis presentation
- ❑ Worsening of infection despite antibiotics treatment
- ❑ Recent surgery, invasive procedure or burns
- ❑ Immunocompromised or neutropenia
- ❑ Chronic disease or congenital disorder
- ❑ **Risk of bacteraemia:** prosthetic valves, VP shunt, indwelling medical devices
- ❑ Recent trauma including minor trauma
- ❑ Under 2 months of age

PLUS any of the following criteria:

❑ REWS 5 or more ❑ An isolated vital sign in the red zone of the REWS	❑ REWS 3 or more ❑ Increasing REWS ❑ Increasing respiratory rate ❑ Central capillary return greater than 2 seconds ❑ Lactate greater than 2 mmol/L ❑ New altered mental status ❑ Petechiae ❑ Unexplained severe/strong pain ❑ Abnormal white cell counts, where POCT is available ❑ Clinician/parental/caregiver concern	❑ Nil escalation criteria present

RESPOND & ESCALATE

Patient may have **septic shock**	Patient may have **sepsis** or have **other causes** for deterioration	Sepsis screening negative
Top End, East Arnhem & Big Rivers: Urgent escalation to on-site Rural Medical Practitioners (RMP) or Duty Medical Officer (DMO) on **8999 8666.** **Central Australia & Barkly:** Urgent escalation to Medical Retrieval and Consultation Centre (MRaCC) on **1800 167 222.**	Notify DMO, onsite RMP or MRaCC. Escalated to: _____ Time: _____	Re-screen as clinically indicated. Initial: _____

If sepsis suspected by a senior medical officer, commence the **SEPSIS BUNDLE.** Consider alternate diagnosis and simultaneous investigation and treatment for differential diagnoses.

- Sepsis/septic shock diagnosis Y / N

Time: _____ Initial: _____ Print name: _____ Role: _____

- If sepsis is not suspected **now,** document the provisional diagnosis in the medical records. Re-evaluate as clinically indicated. If patient deteriorates, re-screen by starting a new pathway.
- If to be discharged home, give patient and/or caregiver sepsis recognition education.

PHC PAEDIATRIC SEPSIS PATHWAY

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SEPSIS BUNDLE: 6 KEY ACTIONS IN 60 MINUTES*
*If patient at risk of febrile neutropenia with septic shock, administer antibiotics within 30 minutes.

Ensure management plan aligns with patient's goals of care.
If there are any clinically indicated variations in care to the pathway, document this in the patient record.

RESUSCITATE

1. Consider oxygen therapy Maintain SpO_2 94% or higher.	▪ SpO_2 maintained	Y / N
2. Establish intravenous (IV) access If unsuccessful, obtain intraosseous (IO) access.	▪ Access established	Y / N
3. Perform tests, prioritising blood taken in the following order: blood cultures prior to antibiotics, CG4+ and CHEM8+. Do not delay antibiotics if unable to collect or inadequate sample or analyser issues. Other investigations as indicated: urinalysis, sputum, wound swabs, melioidosis, pathology or stool samples. Send culture pathology with the patient to the hospital.	▪ Blood cultures collected ▪ Lactate collected Lactate level: _____ mmol/L	Y / N Y / N
4. Administer IV/IM antibiotics (check allergies) If sepsis give ceftriaxone 50mg/kg IV/IM If septic shock, give ceftriaxone 100mg/kg IV/IM and gentamicin 7.5mg/kg IV/IM (maximum 560mg) Discuss with on-call paediatrician for advice. Ensure nursing staff administer antibiotics immediately. If surgical source suspected, MRaCC/DMO to consult surgical team.	▪ 1st antimicrobial commenced ▪ 2nd antimicrobial commenced	Y / N Y / N
5. Assess fluid state and consider fluid resuscitation Use 10 mL/kg (0.9% sodium chloride or Hartmann's) bolus. Consider inotropes / vasopressors early in consultation with MRaCC or CareFlight or Emergency Specialist: Adrenaline 1 to 10mcg/kg/hour IV as per 'Adrenaline Infusion PHC Remote Guideline'. *The guideline requires the administration rate is calculated by the retrieval consultant.*	▪ Fluids administered ▪ Inotropes required	Y / N Y / N
6. Monitor signs of deterioration and urine output While waiting for the retrieval service, monitor vital signs and calculate REWS every 15 to 30 minutes (as per CARPA) and urine output every 60 minutes. If warranted, insert IDC.	▪ Fluid balance commenced ▪ IDC required	Y / N Y / N

Bundle completed. Time: _____ Initial: _____ Print name: _____ Role: _____

RE-ASSESS & MONITOR

Re-assess and monitor observations every 30 minutes. Aim for the following:

- Targeted vital signs as per medical consultation
- Lactate less than 2 mmol/L
- Central capillary return under 2 seconds
- Blood glucose greater than 3 mmol/L
- Urine output greater than 0.5mL/kg/hour

Escalate for further medical review if patient meets any of the following: *Tick below which escalation criteria apply.*

- ❑ Central capillary return more than 2 seconds
- ❑ Targeted vital signs are not improving
- ❑ Lactate not trending down
- ❑ Urine output less than 0.5mL/kg/hour
- ❑ New altered mental state
- ❑ Clinician/parental/caregiver concern

HANDOVER

Prepare for Transfer: *Tick once completed.*

- ❑ Follow local transfer procedure
- ❑ Sepsis diagnosis and management plan discussed with patient/family/caregiver and education provided, arrange an escort if required
- ❑ Use ISOBAR/ISBAR to handover to receiving team
- ❑ Handover culture pathology to the retrieval team
- ❑ Handover copy of sepsis pathway to the retrieval team

Sepsis Resources for Health Professionals