NORTHERN TERRITORY GOVERNMENT — DEPARTMENT OF HEALTH

PRIMARY HEALTH CARE ADULT 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 13 years and over, in conjunction with CARPA manual and Remote Early Warning Score (REWS).

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

RECOGNISE

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.*

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

- ❑ Fever or hypothermia, rigors, myalgia, chills
- ❑ **Neurological**: confusion, neck stiffness, headache
- ❑ **Skin**: cellulitis, increased pain, infected wounds, tenderness out of proportion
- ❑ **Respiratory**: cough, sputum, breathlessness
- ❑ **Abdomen**: severe pain, tenderness
- ❑ **Genitourinary**: dysuria, frequency, discharge
- ❑ **Intravenous (IV) line and dialysis access**: redness, pain, swelling, discharge
- ❑ **Musculoskeletal**: swollen, painful, tender, hot joints or limbs, back pain or spinal tenderness
- ❑ **Maternity**: given birth or TOP/miscarriage in the last 6 weeks AND increased vaginal bleeding OR new offensive discharge OR new abdominal pain

Increase your suspicion of sepsis in these patients:

- ❑ Aboriginal and Torres Strait Islander people greater than 45 years, non-Indigenous people greater than 65 years
- ❑ Homeless
- ❑ Alcohol misuse
- ❑ Previous sepsis admission
- ❑ Re-presentation
- ❑ Worsening of recently treated infection
- ❑ Recent surgery or invasive procedure
- ❑ **Chronic illnesses**: diabetes, renal failure, haemodialysis, cirrhosis
- ❑ **Bacteraemia risk**: prosthetic valves, IV drug use, cardiac implantable electronic device, indwelling medical devices
- ❑ **Immunocompromised**: HIV, cancer or immunosuppressive therapy
- ❑ Patient on beta-blockers
- ❑ Recent trauma including minor trauma

Maternity:

- ❑ Recent birth, operative or assisted birth and/or prolonged rupture of membranes and/or pre-term birth

PLUS any of the following criteria:

- ❑ REWS greater than 5
- ❑ A drop in systolic blood pressure (SBP) of 40 mmHg or more compared to usual SBP
- ❑ An isolated vital sign in the red zone of the REWS

- ❑ REWS of 3 or more
- ❑ Increasing REWS
- ❑ Increasing respiratory rate of 25/minute
- ❑ Lactate greater than 2 mmol/L
- ❑ New altered mental status
- ❑ White cell count greater than 12.0 x 10^9/L or less than 4.0 x 10^9/L, where POCT is available
- ❑ Petechiae
- ❑ Unexplained severe/strong pain
- ❑ Clinician/patient/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 diagnoses 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 record. Re-evaluate as clinically indicated. If patient deteriorates, re-screen by starting a new pathway.
- If to be discharged home, give patient sepsis recognition education.

PHC ADULT 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% and above (aim 88-92% for moderate/severe COPD).
- SpO_2 maintained Y / N

2. Establish intravenous (IV) access
If unsuccessful, obtain intraosseous (IO).
- 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: sputum, wound and melioid swabs, pathology or stool and urine samples. Send culture pathology with the patient to the hospital.
- Blood cultures collected Y / N
- Lactate collected Y / N

Lactate level: _____ mmol/L

4. Administer IV antibiotics (check allergies)
If source unknown, use sepsis/septic shock without clear focus antibiotic regimen. If source known, use empirical antibiotic regimen. Ensure nursing staff administer antibiotics immediately. If surgical source suspected, MRaCC/DMO to consult surgical team.
- 1st antimicrobial commenced Y / N
- 2nd antimicrobial commenced Y / N

5. Assess fluid state and consider fluid resuscitation
If SBP less than 100mmHg or lactate greater than 2mmol/L commence 250 to 500 mL fluid bolus (0.9% sodium chloride or Hartmann's) up to 30mL/kg. Use smaller volumes in renal or cardiac patients.
Consider inotropes early in consultation with MRaCC, CareFlight or ED Specialist: Metaraminol 0.5mg to 1mg (1mL to 2mL) IV as per 'Metaraminol Administration PHC Remote Protocol'
OR
Adrenaline 1 to 10 mcg/kg/hour as per 'Adrenaline Infusion PHC Remote Guideline'
- Fluids administered Y / N
- Inotropes required 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 Y / N
- IDC required 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
- Urine output greater than 0.5mL/kg/hour

Lactate level at 4 hours: Time: _____ Level: _____ mmol/L

8 hours: Time: _____ Level: _____ mmol/L

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

- ❑ Targeted vital signs are not achieved
- ❑ Lactate not trending down
- ❑ Urine output less than 0.5mL/kg/hour
- ❑ New altered mental state
- ❑ Clinician/patient/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