

Paediatric Sepsis Recognition and Management Primary Health Care NT Health Guideline

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1. Introduction

The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3):

Sepsis is life-threatening organ dysfunction due to a dysregulated host response to infection.

Septic shock is a subset of sepsis in which underlying circulatory and cellular/metabolic abnormalities are profound enough to substantially increase mortality.

Sepsis is a time-critical medical emergency that arises when the body has a dysregulated response to an infection. This results in damage to the body's own tissues and organs, which can lead to septic shock and organ failure. Sepsis can be triggered by infections caused by bacteria, viruses, fungi, and parasites. Bacterial infections are the most common triggers.

For children **under 2 months**, refer to CARPA and discuss with RMP, DMO or retrieval services.

Almost half of all global sepsis cases occur in children. The mortality rate for untreated septic shock is more than 80% and with treatment mortality rate is estimated at 15 to 20% in children. In Australia, Aboriginal and Torres Strait Islander children (median age was 1.7 years) are three times more likely to have sepsis that

requires intensive care unit (ICU) admission. This reflects the social determinants of health and remoteness of the communities, coupled with transport issues to access medical care, which can result in poor health outcomes.

Early recognition of sepsis is important in all health care settings. Majority of sepsis arises in the community, therefore the first point of contact with health care workers in primary care, ambulance services or emergency departments (ED) is a critical setting for the early detection of sepsis. Early recognition in non-acute and pre-hospital settings has been associated to faster treatment and improving outcomes. Literature suggests sepsis improvement program, which includes screening and management tools can significantly decrease the time to recognise and manage sepsis, resulting in better survival rates.

The common themes of sepsis related deaths in the Northern Territory (NT) includes: patients of a young age, fit build, and delayed or missed sepsis recognition, diagnosis and administration of appropriate antibiotics.

2. Purpose

This guideline is intended to:

- Provide guidance for best practice for sepsis recognition and management,
- Where sepsis is suspected, empower staff to escalate care to clinicians experienced in recognising and managing sepsis,
- Support the provision of education and information to patient and carers,
- Empower staff to engage duty medical officer, onsite rural medical practitioner, or the retrieval services in sepsis recognition and management of children.

Recommendations in this guideline are not intended to replace a clinician's good clinical judgement when presented with a patient with unique characteristics, and is not intended to set a standard for clinical care. The guideline should be used in conjunction with the Remote Early Warning Score (REWS) and Paediatric Sepsis Pathway for Primary Health Care Facilities (Appendix A).

3. Partnering with Consumers

The patient and/or caregiver should be involved in all the clinical decision-making and the care planning process. Prior to evacuation and on return to community, care planning should involve discussions regarding the future healthcare that may be required post acute care including information on how to access services post-discharge.

The patient and/or caregiver should be provided with the sepsis consumer resources and relevant clinical information regarding the treatment they have had or may receive. Goals of care and prognosis should be discussed and their wishes should be incorporated into the treatment and end-of-life care planning as appropriate.

4. Sepsis Recognition

Lack of recognition prevents timely therapy. Sepsis screening is associated with earlier treatment

Early recognition and prompt treatment of sepsis through a formalised screening effort is necessary to reduce mortality risk. Sepsis may not be obvious in every child, it may be non-specific and subtle. Children may exhibit different physiological abnormalities, therefore a diagnosis should be based on clinical judgment and may be supported by relevant investigations. It is important to pay attention to patient risk factors and increase your suspicion of sepsis in these patients. Concerns expressed by the patient and/or caregivers, particularly changes to mental status are also an important consideration in clinical assessment.

In the Top End, sepsis can occur due to melioidosis, especially in the wet season. Consider melioidosis in all patients presenting with sepsis or septic shock. Please refer to the [TEHS Melioidosis Guideline](#) for diagnosis and management of melioidosis.

4.1 Could it be Sepsis?

Screening for Sepsis should occur in all patients who have signs or symptoms of infection.

[Figure 1](#) outlines the features to assist in recognition of signs and symptoms of infection. If a patient meets these features it does not indicate a definitive sepsis or septic shock diagnosis, but should be considered if a patient has symptoms or signs of an infection, combined with risk factors, abnormal vitals or other signs of compensated shock (new altered mental state, lactate level greater than 2) or markers of a severe infection (petechiae suggestive of meningococcal infections and unexplained severe strong pain to suggest necrotising fasciitis, septic joints, acute abdominal sepsis). The pathway empowers clinicians to escalate to senior medical officer(s) to determine the cause of clinical deterioration on the background of a suspected infection.

Figure 1: Signs and Symptoms of Infection

| Could it be sepsis? | |
|---|---|
| Consider sepsis in all patients with an acute illness and abnormal vital signs. Presentation can vary between patients and at times may not be obvious. | |
| RECOGNISE | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Are there signs/symptoms that are consistent with an infection?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fever, rigors, tachycardia, reduced alertness <input type="checkbox"/> Cool peripheries, mottled skin, pallor <input type="checkbox"/> Respiratory: cough, increased respiratory rate or work of breathing, apnoea <input type="checkbox"/> Skin: cellulitis, increased pain and tenderness out of proportion, infected wounds, non blanching rash <input type="checkbox"/> IV line access: redness, pain, swelling, discharge <input type="checkbox"/> Musculoskeletal: swollen, painful, tender, warm joints or long bones <input type="checkbox"/> Neurological: neck stiffness, headache, meningism <input type="checkbox"/> Abdomen: severe pain, tenderness, urinary tract infection, severe vomiting <p>Younger children may present with the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Weak cry, grunting, irritable <input type="checkbox"/> Decreased feeding <input type="checkbox"/> Acute weight loss (assess for dehydration) </div> <div style="width: 45%;"> <p>Increase your suspicion of sepsis in these patients:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aboriginal and Torres Strait Islander people <input type="checkbox"/> High level of parental concern <input type="checkbox"/> Re-presentation <input type="checkbox"/> Previous sepsis presentation <input type="checkbox"/> Worsening of infection despite antibiotics treatment <input type="checkbox"/> Recent surgery, invasive procedure or burns <input type="checkbox"/> Immunocompromised or neutropenia <input type="checkbox"/> Chronic disease or congenital disorder <input type="checkbox"/> Risk of bacteraemia: prosthetic valves, VP shunt, indwelling medical devices <input type="checkbox"/> Recent trauma including minor trauma </div> </div> |

4.2 Signs that may Suggest Septic Shock and Rapid Deterioration

Warm, flushed skin may be present in the early phases of sepsis. As sepsis progresses to shock, the skin may become cool due to redirection of blood flow to core organs. Additional signs of hypoperfusion include tachycardia, altered consciousness, restlessness, and oliguria or anuria.

Figure 2: Physiological Indicators of Septic Shock and Sepsis

| PLUS any of the following criteria: | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> REWS 5 or more <input type="checkbox"/> An isolated vital sign in the red zone of the REWS | <ul style="list-style-type: none"> <input type="checkbox"/> REWS 3 or more <input type="checkbox"/> Increasing REWS <input type="checkbox"/> Increasing respiratory rate of 25/minute <input type="checkbox"/> Central capillary return greater than 2 seconds <input type="checkbox"/> Lactate greater than 2 mmol/L <input type="checkbox"/> New altered mental status <input type="checkbox"/> Petechiae <input type="checkbox"/> Unexplained severe/strong pain <input type="checkbox"/> Abnormal white cell counts, where POCT is available <input type="checkbox"/> Clinician/caregiver concerns |
|  |  |
| Patient may have septic shock | Patient may have sepsis or have other causes for deterioration |

5. Sepsis Response and Escalation

Early response to suspected sepsis or septic shock through appropriate escalation to a senior medical officer or retrieval service as outlined in CARPA is crucial to ensure early initiation of appropriate treatment. The following response and escalation process should occur if patients meet the warning signs of deterioration. Northern Territory police watch houses should follow local procedures for the escalation and transport for the deteriorating patient.

Figure 3: Sepsis Response and Escalation

| | |
|---|--|
| PLUS any of the following criteria: | |
| <input type="checkbox"/> REWS 5 or more <input type="checkbox"/> An isolated vital sign in the red zone of the REWS | <input type="checkbox"/> REWS 3 or more <input type="checkbox"/> Increasing REWS <input type="checkbox"/> Increasing respiratory rate of 25/minute <input type="checkbox"/> Central capillary return greater than 2 seconds <input type="checkbox"/> Lactate greater than 2 mmol/L <input type="checkbox"/> New altered mental status <input type="checkbox"/> Petechiae <input type="checkbox"/> Unexplained severe/strong pain <input type="checkbox"/> Abnormal white cell counts, where POCT is available <input type="checkbox"/> Clinician/caregiver concerns |
|  |  |
| Patient may have septic shock | Patient may have sepsis or have other causes for deterioration |
| RESPOND AND ESCALATE Top End, East Arnhem & Big Rivers: Urgent escalation to on-site Rural Medical Practitioner (RMP) or Duty Medical Officer (DMO) on 8999 8666. Central & Barkly: Urgent escalation to Medical Retrieval and Consultation Centre (MRaCC) on 1800 167 222. | Notify DMO, onsite RMP or MRaCC. |
| If sepsis suspected by a senior medical officer, commence the SEPSIS BUNDLE . Consider alternate diagnoses and simultaneous investigation and treatment for differential diagnoses. | |
| 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 using this pathway. <ul style="list-style-type: none"> <input type="checkbox"/> If to be discharged home give patient and/or caregiver sepsis recognition education. | |

6. Initial Sepsis Management

6.1 Commence Sepsis Resuscitation Bundle

“The culture is one of assuming least injury/illness rather than actively excluding the greatest illness/injury, this is particularly dangerous in a high morbidity cross cultural environment.” Dr Didier Palmer, Executive Director RDPH.

Due to the remote setting of patients, sepsis requires early transfer to a hospital facility. Early involvement of the DMO or MRaCC to allow this process to occur is essential. Evacuation is a key component of the management plan for acutely unwell remote patients.

Clinical judgement is required to balance the risk of over treatment/investigation. It may be more appropriate to collect targeted cultures and investigations within 2 to 3 hours for those patients with vague presentations and who not meet the screening criteria for septic shock or sepsis.

Initial sepsis management consists of undertaking key actions in the sepsis bundle, including assessment of airway, breathing, circulation and disability as per advanced life support (ALS) principles. This pathway supports appropriate treatment is initiated **as soon as possible** after recognition or strong suspicion and within 60 minutes for both sepsis and septic shock. Evidence suggests that a delay in the first dose of antibiotics beyond 60 minutes of presentation has been associated with increased in-hospital mortality.

NT Police watch houses may be limited in their capacity to implement the 6 item sepsis resuscitation bundle. Early escalation is vital in this setting to ensure rapid transport to a tertiary setting.

Table 1: Sepsis Management: Sepsis Resuscitation Bundle

| Actions | Details |
|---|--|
| 1. Supplemental oxygen therapy | <ul style="list-style-type: none"> Administer oxygen if required. |
| 2. Establish intravenous (IV) access | <ul style="list-style-type: none"> If IV access is unsuccessful after two attempts, consider intraosseous (IO). Do not delay antibiotics. |
| <p>3. Collect blood cultures and lactate.</p> <p>Other cultures and investigations as clinically indicated.</p> <p>Aim to collect cultures prior to antibiotics</p> | <ul style="list-style-type: none"> Point of care testing should be performed including CHEM8+ and CG4+. Paediatric collections to comprise of one paediatric aerobic bottle inoculated with 1–4 mL of blood (4 mL is optimal). If child has a central venous catheter (CVC) collect blood culture from the CVC. The risk-benefit ratio favours rapid administration of antimicrobials if it is not logistically possible to obtain cultures promptly. Lactate can be obtained from CG4+ point of care testing. Lactate is a useful marker of the severity of sepsis and sepsis is more likely to be present if lactate is greater than 2 mmol/L. Other investigations can include: <ul style="list-style-type: none"> the Blood tests: blood glucose level, FBC, CRP, LFT, coagulation studies (PT, APTT), UEC. Other cultures as clinically indicated: sputum, urine (and urinalysis) and wound cultures, joint aspirates, melioid rectal and throat swabs. Other cultures/investigations may include lumbar puncture. CXR and other radiology as clinically indicated Send culture pathology with the patient to the hospital. |
| 4. Administer intravenous (IV) antibiotics (consider possible source) | <ul style="list-style-type: none"> If an abscess, septic arthritis or necrotising fasciitis is suspected, DMO or MRaCC to consult senior surgical doctor for advice. Note necrotising fasciitis is a surgical emergency. Nursing staff should be informed of urgent need to administer antibiotics and they should be administered in order of shortest to longest administration time as outlined in the Australian Injectable Drugs Handbook. Seek IFD/senior pharmacist advice where there is a requirement for oral/IM administration if IV/IO access cannot be obtained. |
| 5. Assess fluid and consider fluid resuscitation | <ul style="list-style-type: none"> Consider 10 mL/kg of 0.9% Sodium Chloride. Refer to Fluid Management (Paediatrics) RDH Guideline and Intravenous (IV) Fluids (Paediatric) CAHS Guideline. If no response, consider inotropes in consultation with DMO, on-site RMP, MRaCC, medical retrieval service. <p>If vasopressors required, consider adrenaline 0.05 mcg/kg/min to 0.3 mcg/kg/min.</p> |
| 6. Monitor signs of deterioration and urine output | <ul style="list-style-type: none"> Patients with sepsis or septic shock should be closely monitored, due to high risk of clinical deterioration. While waiting for retrieval service monitor vital signs every 15 minutes and urine output every 60 minutes. If warranted, consider IDC insertion. |

7. Re-assess and Monitor

Close monitoring of observations is recommended for patients with suspected or confirmed sepsis due to high risk of clinical deterioration. Repeat observations and REWS calculation should adhere to the appropriate endorsed CARPA Guidelines.

Medical officers may request targeted vital signs based on the individual context and this should be clearly documented in the medical records in accordance with the observation chart in recognising and responding to clinical deterioration procedure. Figure 4 is a snapshot of the process outlined on the pathway ([Appendix A](#)).

Figure 4: Re-assess and Monitor

| | | |
|---------------------|---|---|
| RE-ASSESS & MONITOR | Re-assess and monitor observations. Aim for the following: | |
| | <input type="checkbox"/> Targeted vital signs as per medical consultation <input type="checkbox"/> Lactate less than 2 mmol/L <input type="checkbox"/> Urine output greater than 0.5 mL/kg/hour | <input type="checkbox"/> Blood glucose greater than 3 mmol/L <input type="checkbox"/> Central capillary return under 2 seconds |
| | Escalate for a medical review if patient meets any of the following: | |
| | <input type="checkbox"/> Targets not achieved <input type="checkbox"/> Lactate not trending down <input type="checkbox"/> Urine output less than 0.5 mL/kg/hour | <input type="checkbox"/> New altered mental state <input type="checkbox"/> Clinician/patient/caregiver concerns |

7.1 Upon Medical Review, Medical Officer(s) Should Consider the Following:

- Source of infection should be re-reviewed and determined as soon as possible. Appropriate investigations and/or referral to determine the source of infection should be undertaken as a matter of urgency,
- Ensure appropriate antibiotic regimen for source control.
- Discuss with medical retrieval service officer and/or other specialists such as paediatrician, infectious disease, ICU physicians or surgeons as appropriate, and
- Consider expediting retrieval if possible.

8. Referral to Higher Level of Care

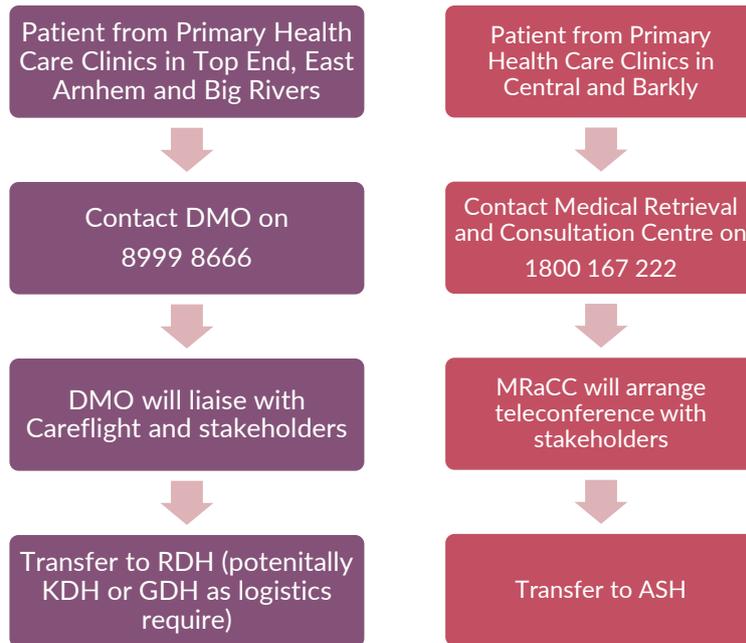
Patients managed in remote clinics or the community after being diagnosed with sepsis are at risk of deterioration. Urgent referral to a tertiary hospital should be prioritised. Prior to retrieval, consideration of an escort for those patients whose disposition is likely intensive care units needs to occur. Ensure appropriate nursing staff and retrieval team composition is allocated to care for the patient so they can be closely monitored.

[ISOBAR](#) or [ISBAR](#) and sepsis pathway should be used to communicate critical information upon handover to ensure the right information is provided to the receiving team to continue to provide care for the patient. Ensure all culture pathology are provided to the retrieval team.

Figure 5: Referral to higher level of care

| | |
|----------|--|
| HANDOVER | Prepare for Transfer: |
| | <input type="checkbox"/> Follow local transfer procedure |
| | <input type="checkbox"/> Discuss management plan with patient and/or caregiver and arrange an escort |
| | <input type="checkbox"/> Use ISOBAR/ISBAR to handover to receiving team |
| | <input type="checkbox"/> Handover culture pathology to the retrieval team |
| | <input type="checkbox"/> Handover sepsis pathway to the retrieval team |

Figure 6: Referral to Higher Level of Care for Remote Primary Health Care Clinics



9. Ongoing Management Plan in Primary Health Care Setting While Awaiting Retrieval

The components of ongoing care of patients with sepsis will vary depending on the source of infection as well as the severity of a patient’s illness, underlying illnesses and/or immunosuppression.

Critical information and management plan should be clearly documented in the patient’s medical record to ensure a communication of the management plan to clinicians involved in the ongoing care of the patient. Refer to [The Clinical Record Documentation NT Hospitals Policy](#) that outlines the requirements for clinical documentation. The management plan should be communicated at handover and to the senior doctor, medical retrieval team and the patient and/or caregiver.

Any variation in care to the pathway should be documented this in the medical record.

In addition to regular documentation, documentation in relation to sepsis should include:

- Likely source of infection
- Any further investigation plans
- Frequency of observations and monitoring (minimum 4 hourly)
- Fluid balance

- Medications that are withheld such as anti-hypertensive and/or diuretic medications
- Antibiotic regimen as per CARPA and in consultation with retrieval specialists/IFD
- Consultation with relevant specialists e.g. infectious diseases, paediatric or intensive care teams

10. Care Planning on Return to Home or to Community from Hospital

Sepsis can have long-lasting effects including reduced psychological and cognitive functioning. Discuss the cognitive and psychological effects that may occur after diagnosis and treatment for sepsis, including fatigue and anxiety. Ensure follow-up requirements have been discussed with the patient and carers and ensure this is reflected in the electronic health record/recall management system.

Discharge documentation from acute care services must include;

- A formal diagnosis of sepsis,
- A referral to the usual primary care provider with a plan for any follow-up requirements,
- Details of the senior clinician or care coordinator where appropriate.
- Contact details for follow up requirements such as Allied Health, Outpatients or Community Clinic etc.

| Quality Assurance | | |
|-----------------------|--|---|
| | Method | Responsibility |
| Implementation | <p>Document will be available for all staff via the PGC.</p> <p>Primary Health Network, Remote Health Atlas and Remote Area Health Corps sites kept updated.</p> <p>Education supporting this guideline is available via MyLearning.</p> | <p>PGC Administrators</p> <p>Sepsis Nurse Management Consultant</p> <p>All relevant clinical employees.</p> |
| Review | Document will be reviewed within a period of 1 year or as changes in practice occur. | Preventing and Controlling Healthcare associated infection Committee, Director Safety and Quality |
| Evaluation | Compliance with PHC paediatric sepsis pathway will be audited as per the required audit scheduled. | Preventing and Controlling Healthcare associated infection Committee, Director Safety and Quality |
| Compliance | Adverse events will be recorded in the patient's notes and Riskman | All Staff |

| Key Associated Documents | |
|---|--|
| Key Legislation, By-Laws, Standards, Delegations, Aligned & Supporting Documents | <p>Australian Commission on Safety and Quality in Health Care (2021). National Safety and Quality Health Service Standards. Retrieved from The NSQHS Standards Australian Commission on Safety and Quality in Health Care</p> <p>Antimicrobial Stewardship Clinical Care Standard</p> <p>NSW Government: Clinical Excellence Comssion (2019). Northern Territory Sepsis Management Review July 2019.</p> |
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Key Associated Documents

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Definitions, Acronyms and Alternative Search Terms

| Term | Description |
|-------------|---------------------------|
| Search term | Sepsis, paediatric sepsis |

National Safety and Quality Health Service Standards

| | | | | | | | |
|---|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |  |
| Clinical Governance | Partnering with Consumers | Preventing and Controlling Healthcare Associated Infection | Medication Safety | Comprehensive Care | Communicating for Safety | Blood Management | Recognising & Responding to Acute Deterioration |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Appendix A: Paediatric Sepsis Pathway for Primary Health Care Facilities

| | | | | | | |
|--|--|---|---|--|---------------|-----------|
|  NORTHERN TERRITORY GOVERNMENT | | DEPARTMENT OF HEALTH | | Principal name: Other name(s): D.O.B: HRN: Sex: | Patient Label | |
| PRIMARY HEALTH CARE PAEDIATRIC SEPSIS PATHWAY | | 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). | | | | | | |
| Sepsis screening on | | DD / MM / YY | at | HH : MM | Name: | Clinician |
| 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. | | | | | | |
| RECOGNISE | Are there signs/symptoms that are consistent with an infection? | | | Increase your suspicion of sepsis in these patients: | | |
| | <ul style="list-style-type: none"> <input type="checkbox"/> Fever, rigors, tachycardia, reduced alertness <input type="checkbox"/> Cool peripheries, mottled skin, pallor <input type="checkbox"/> Respiratory: cough, increased respiratory rate or work of breathing, apnoea <input type="checkbox"/> Skin: cellulitis, increased pain and tenderness out of proportion, infected wounds, non-blanching rash <input type="checkbox"/> IV line access: redness, pain, swelling, discharge <input type="checkbox"/> Musculoskeletal: swollen, painful, tender, warm joints or long bones <input type="checkbox"/> Neurological: neck stiffness, headache, meningism, altered level of cognition or consciousness <input type="checkbox"/> Abdomen: severe pain, tenderness, urinary tract infection, severe vomiting | | | <ul style="list-style-type: none"> <input type="checkbox"/> Aboriginal and Torres Strait Islander people <input type="checkbox"/> High level of parental concern <input type="checkbox"/> Re-presentation <input type="checkbox"/> Previous sepsis presentation <input type="checkbox"/> Worsening of infection despite antibiotics treatment <input type="checkbox"/> Recent surgery, invasive procedure or burns <input type="checkbox"/> Immunocompromised or neutropenia <input type="checkbox"/> Chronic disease or congenital disorder <input type="checkbox"/> Risk of bacteraemia: prosthetic valves, VP shunt, indwelling medical devices <input type="checkbox"/> Recent trauma including minor trauma | | |
| | Younger children may present with the following: | | | | | |
| PLUS any of the following criteria: | | | | | | |
| <ul style="list-style-type: none"> <input type="checkbox"/> REWS 5 or more <input type="checkbox"/> An isolated vital sign in the red zone of the REWS | | | <ul style="list-style-type: none"> <input type="checkbox"/> REWS 3 or more <input type="checkbox"/> Increasing REWS <input type="checkbox"/> Increasing respiratory rate <input type="checkbox"/> Central capillary return greater than 2 seconds <input type="checkbox"/> Lactate greater than 2 mmol/L <input type="checkbox"/> New altered mental status <input type="checkbox"/> Petechiae <input type="checkbox"/> Unexplained severe/strong pain <input type="checkbox"/> Abnormal white cell counts, where POCT is available <input type="checkbox"/> Clinician/caregiver concerns | | | |
|  | | |  | | | |
| Patient may have septic shock | | | Patient may have sepsis or have other causes for deterioration | | | |
| Top End, East Arnhem & Big Rivers: Urgent escalation to on-site Rural Medical Practitioners (RMP) or Duty Medical Officer (DMO) on 8999 8666. | | | Notify DMO, onsite RMP or MRaCC | | | |
| Central & Barkly: Urgent escalation to Medical Retrieval and Consultation Centre (MRaCC) on 1800 167 222. | | | | | | |
| If sepsis suspected by a senior medical officer, commence the SEPSIS BUNDLE . Consider alternate diagnosis and simultaneous investigation and treatment for differential diagnoses. | | | | | | |
| 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 using this pathway. | | | | | | |
| <input type="checkbox"/> If to be discharged home, give patient and/or caregiver sepsis recognition education. | | | | | | |
| RESPOND & ESCALATE | | | | | | |
| | | | | | | |

| | | |
|--|---|---|
|  NORTHERN TERRITORY GOVERNMENT DEPARTMENT OF HEALTH | Principal name: Other name(s): D.O.B: HRN: Sex: | Patient Label |
| | Address must be documented if patient details handwritten | |
| PRIMARY HEALTH CARE PAEDIATRIC SEPSIS PATHWAY | | |
| SEPSIS BUNDLE: 6 KEY ACTIONS IN 60 MINUTES* *If patient at risk of febrile neutropenia with septic shock, administer antibiotics within 30 minutes. | | |
| RESUSCITATE | 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. | |
| | 1. Consider oxygen therapy | <input type="checkbox"/> |
| | 2. Establish intravenous (IV) access If unsuccessful, obtain access with intraosseous (IO) | <input type="checkbox"/> |
| | 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 <input type="checkbox"/> First Lactate <input type="checkbox"/> |
| | 4. Administer IV/IM antibiotics (check allergies) If source unknown, use undifferentiated sepsis/septic shock 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. | <input type="checkbox"/> |
| | 5. Assess fluid state and consider fluid resuscitation Consider 10 mL/kg of 0.9% sodium chloride or Hartmann's. Consider inotropes / vasopressors early in consultation with MRaCC or CareFlight or Emergency Specialist: Metaraminol 10 mcg/kg IV bolus up to a maximum dose of 500mcg. Prepare this bolus as per 'Metaraminol Administration PHC Remote Protocol'. A Metaraminol infusion can also be considered. OR 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. | <input type="checkbox"/> |
| 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. | <input type="checkbox"/> | |
| RE-ASSESS & MONITOR | Re-assess and monitor observations. Aim for the following: | |
| | <input type="checkbox"/> Targeted vital signs as per medical consultation <input type="checkbox"/> Lactate less than 2 mmol/L <input type="checkbox"/> Urine output greater than 0.5mL/kg/hour | <input type="checkbox"/> Blood glucose greater than 3 mmol/L <input type="checkbox"/> Central capillary return under 2 seconds |
| HANDOVER | Escalate for a medical review if patient meets any of the following: | |
| | <input type="checkbox"/> Targets are not achieved <input type="checkbox"/> Lactate not trending down <input type="checkbox"/> Urine output less than 0.5mL/kg/hour | <input type="checkbox"/> New altered mental state <input type="checkbox"/> Clinician/patient/caregiver concerns |
| Prepare for Transfer: | | |
| <input type="checkbox"/> Follow local transfer procedure <input type="checkbox"/> Discuss management plan with patient and/or caregiver and arrange an escort <input type="checkbox"/> Use ISOBAR/ISBAR to handover to receiving team <input type="checkbox"/> Handover culture pathology to the retrieval team <input type="checkbox"/> Handover sepsis pathway to the retrieval team | | |