

# Adult Primary Health Care Sepsis Recognition and Management

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## Applicability

This guideline applies to:

- Northern Territory Urban and Remote Primary Health Care Facilities; Prison Health; Police Watch Houses, Mental Health Services.

This guideline must be used for the following:

- Patients 13 years and older



**SEE SEPARATE DOCUMENT: PRIMARY HEALTH CARE ADULT SEPSIS PATHWAY**

## Guideline statement

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,
- Engage senior medical staff in sepsis recognition and management of patients,
- Support the provision of education and information to patient and carers.

Recommendations in this guideline are not intended to replace a clinician's clinical judgement when presented with a patient with unique characteristics, and is not intended to set a standard for clinical care.

For remote primary health care (PHC) facilities, this guideline should be used in conjunction with the Remote Early Warning Score (REWS) and NT Health Adult Sepsis Pathway for Primary Health Care.

For urban facilities (Urban PHC, Prison Health, Police Watch Houses and Mental Health), this guideline should be used in conjunction with local escalation procedures and NT Health Adult Sepsis Pathway for Primary Health Care.

## Policy suite

This guideline forms part of the following national ACSQHC Sepsis Clinical Care Standard suite for this topic. Related documents are also listed below:

- [Clinical Documentation Policy](#)
- [Physiological Deterioration Patient Recognition and Management NT Health Policy](#)
- [CARPA Standard Treatment Manual for remote and rural practice: 8<sup>th</sup> edition](#)
- [Use of Observation Charts in Recognising and Responding to Clinical Deterioration Procedure](#)
- [Observations and Modified Early Warning Score \(MEWS\) ASH Procedure](#)
- [Adult Acute Care Sepsis Recognition and Management NT Health Guideline](#)
- [Meliodosis Guideline](#)
- [Paediatric Acute Care Sepsis Recognition and Management NT Health Guideline](#)
- [Paediatric Primary Health Care Sepsis Recognition and Management NT Health Guideline](#)
- [Sepsis and Septic Shock RDH ICU Medical Guideline](#)
- [Acute Care Adult CAR/BR Sepsis Pathway Form](#)
- [Acute Care Paediatric CAR/BR Sepsis Pathway Form](#)
- [Acute Care Adult TER/EAR/BRR Sepsis Pathway Form](#)
- [Acute Care Paediatric TER/EAR/BRR Sepsis Pathway Form](#)
- [Primary Health Care Adult Sepsis Pathway Form](#)
- [Primary Health Care Paediatric Sepsis Pathway Form](#)

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## Standards

- [Sepsis Clinical Care Standard](#)
- [Antimicrobial Stewardship Clinical Care Standard](#)

## Guideline details

### 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. Patients with septic shock can be clinically identified by a vasopressor requirement to maintain a mean arterial pressure (MAP) of 65mmHg or greater and serum lactate level greater than 2mmol/L (>18mg/dL) despite adequate fluid resuscitation.

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.

Early recognition of sepsis is important in all health care settings. The majority of sepsis cases arise in the community, therefore the first point of contact with health care workers in primary care, ambulance services or emergency departments (ED) is critical 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 a sepsis improvement program, which includes screening and management tools can significantly decrease the time to recognise and manage sepsis, resulting in better survival rates.

In the Northern Territory (NT), sepsis is five times more common compared to other Australian temperate climates, and is commonly seen in Aboriginal and Torres Strait Islander populations. The common themes of sepsis related deaths in the NT includes: patients of a young age, fit build, and delayed sepsis recognition, diagnosis and administration of appropriate antibiotics.

### 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 (refer to the [staff intranet](#) or [internet](#) sites to access local electronic resources). 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.

### 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 is not a specific illness but rather a syndrome that can be recognised by a

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constellation of clinical signs and symptoms in a patient with suspected infection. There is no gold standard diagnostic test that exists to identify sepsis.

Sepsis may not be obvious in every patient, it may be non-specific and subtle. Patients 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 their 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.

## 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) and/or a tertiary centre to determine the cause of clinical deterioration on the background of a suspected infection

**Figure 1: Signs and symptoms of infection**

RECOGNISE	<b>Are there signs/symptoms that are consistent with an infection?</b>	<b>Increase your suspicion of sepsis in these patients:</b>
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Fever or hypothermia, rigors, myalgia, chills</li> <li><input type="checkbox"/> <b>Neurological:</b> confusion, neck stiffness, headache</li> <li><input type="checkbox"/> <b>Skin:</b> cellulitis, increased pain, infected wounds, tenderness out of proportion</li> <li><input type="checkbox"/> <b>Respiratory:</b> cough, sputum, breathlessness</li> <li><input type="checkbox"/> <b>Abdomen:</b> severe pain, tenderness</li> <li><input type="checkbox"/> <b>Genitourinary:</b> dysuria, frequency, discharge</li> <li><input type="checkbox"/> <b>Intravenous (IV) line and dialysis access:</b> redness, pain, swelling, discharge</li> <li><input type="checkbox"/> <b>Musculoskeletal:</b> swollen, painful, tender, hot joints or limbs, back pain or spinal tenderness</li> <li><input type="checkbox"/> <b>Maternity:</b> given birth or TOP/miscarriage in the last 6 weeks AND increased vaginal bleeding OR new offensive discharge OR new abdominal pain</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Aboriginal and Torres Strait Islander people greater than 45 years, non-Indigenous people greater than 65 years</li> <li><input type="checkbox"/> Homeless</li> <li><input type="checkbox"/> Alcohol misuse</li> <li><input type="checkbox"/> Previous sepsis admission</li> <li><input type="checkbox"/> Re-presentation</li> <li><input type="checkbox"/> Worsening of recently treated infection</li> <li><input type="checkbox"/> Recent surgery or invasive procedure</li> <li><input type="checkbox"/> <b>Chronic illnesses:</b> diabetes, renal failure, haemodialysis, cirrhosis</li> <li><input type="checkbox"/> <b>Bacteraemia risk:</b> prosthetic valves, IV drug use, cardiac implantable electronic device, indwelling medical devices</li> <li><input type="checkbox"/> <b>Immunocompromised:</b> HIV, cancer or immunosuppressive therapy</li> <li><input type="checkbox"/> Patient on beta-blockers</li> <li><input type="checkbox"/> Recent trauma including minor trauma</li> <li><b>Maternity:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Recent birth, operative or assisted birth and/or prolonged rupture of membranes and/or pre-term birth  </li> </ul> </li> </ul>

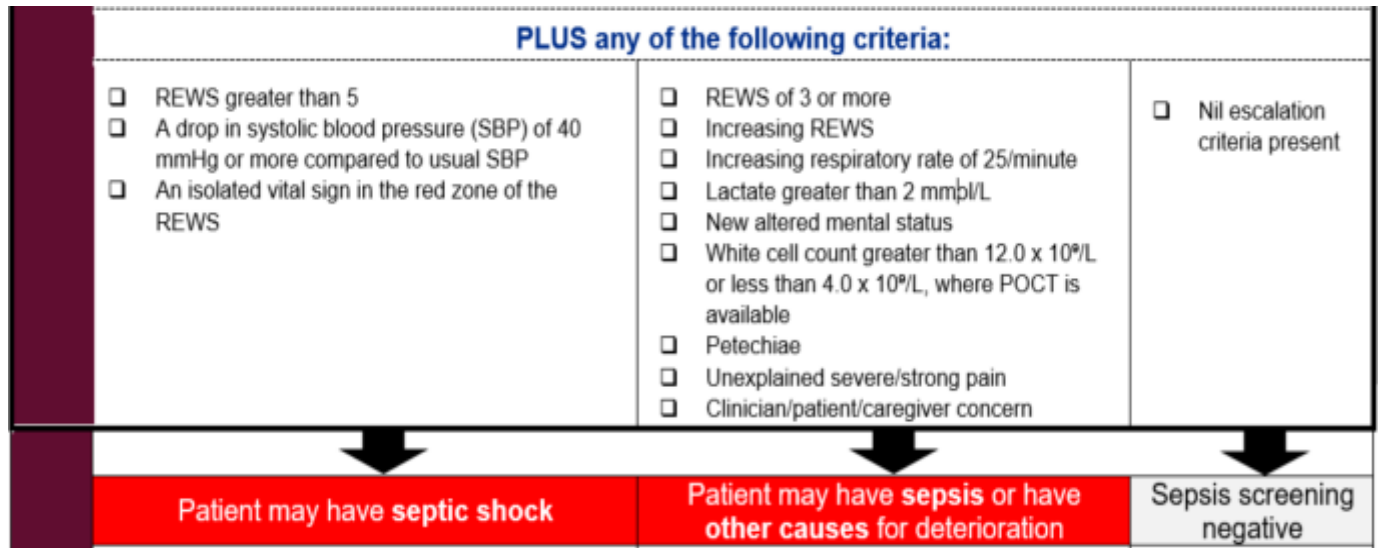
## Signs that may Suggest Septic Shock and Rapid Deterioration

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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 sepsis shock and sepsis



### Sepsis response and escalation

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

If sepsis screening is negative i.e. no escalation criteria is present, re-screen as clinically indicated by starting a new pathway.

Figure 3: Sepsis response and escalation

(next page)

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RESPOND & ESCALATE	Patient may have septic shock	Patient may have sepsis or have other causes for deterioration	Sepsis screening negative
	<p><b>Top End, East Arnhem &amp; Big Rivers:</b> Urgent escalation to on-site Rural Medical Practitioners (RMP) or Duty Medical Officer (DMO) on <b>8999 8666</b>.</p> <p><b>Central Australia &amp; Barkly:</b> Urgent escalation to Medical Retrieval and Consultation Centre (MRaCC) on <b>1800 167 222</b>.</p>	<p>Notify DMO, onsite RMP or MRaCC</p> <p>Escalated to: _____</p> <p>Time: _____</p>	<p>Re-screen as clinically indicated.</p> <p>Initial: _____</p>
	<p>If sepsis suspected by a senior medical officer, commence the <b>SEPSIS BUNDLE</b>. Consider alternate diagnoses and simultaneous investigation and treatment for differential diagnoses.</p>		
	<p style="text-align: center;">▪ Sepsis/septic shock diagnosis Y / N</p> <p>Time: _____ Initial: _____ Print name: _____ Role: _____</p> <ul style="list-style-type: none"> <li>▪ If sepsis is not suspected <b>now</b>, document the provisional diagnosis in the medical record. Re-evaluate as clinically indicated. If patient deteriorates, re-screen by starting a new pathway.</li> <li>▪ If to be discharged home, give patient sepsis recognition education.</li> </ul>		

## Sepsis management

### 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 and/or potential for rapid deterioration, sepsis requires early transfer to a hospital facility. Early involvement of the DMO, MRaCC or tertiary centre to allow this process to occur is essential. Evacuation/transfer is a key component of the management plan for acutely unwell remote or urban-based 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 do not meet the screening criteria for septic shock or sepsis.

Initial sepsis management consists of undertaking 6 key actions within 60 minutes in the sepsis bundle, including assessment of airway, breathing and circulation 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. If there are known delays in patient retrieval i.e. longer than one hour, it is recommended treatment be commenced on site, with antibiotic prescription by Retrieval Consultant or IFD Specialist. Antibiotics should be kept on imprest in remote clinics as per CARPA – Sepsis Management and/or NT Health Acute Care Adult Sepsis Pathway (TER/EAR/BRR or CAR/BR). Evidence suggests that a delay in the first dose of antibiotics beyond 60 minutes of presentation has been associated with increased in-hospital mortality. For patients with febrile neutropenia and features of sepsis or septic shock, it is recommended to initiate antibiotics **within 30 minutes** of sepsis recognition. Please refer to your local guideline and pathway for Febrile Neutropenia management if applicable.

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Urban facilities may be limited in their capacity to implement the 6 key actions in the sepsis bundle. Early escalation is vital in this setting to ensure rapid transport to a tertiary setting.

**Table 1: Sepsis management: Sepsis bundle**

Actions	Details
<p><b>1. Consider oxygen therapy if needed</b></p>	<ul style="list-style-type: none"> <li>Administer oxygen if required. Maintain saturations 94% and above (88 to 92% for chronic obstructive pulmonary disease).</li> </ul>
<p><b>2. Establish intravenous (IV) access</b></p>	<ul style="list-style-type: none"> <li>If IV access is unsuccessful after two attempts, consider intraosseous (IO) or central venous catheter (CVC). Do not delay antibiotics.</li> </ul>
<p><b>3. Collect blood cultures and lactate.</b></p> <p><b>Other cultures and investigations as clinically indicated.</b></p> <p><b>Aim to collect cultures prior to antibiotics</b></p>	<ul style="list-style-type: none"> <li>Collect two sets of blood cultures. Each set must be collected from a separate site. . If concern about central venous access device bloodstream infection refer to “Central Venous Access Device Blood Sample Collection NT Procedure”.</li> <li>Blood cultures should be obtained prior to initiating antimicrobial therapy. At times the risk/benefit ratio favours rapid administration of antimicrobials if it is not logistically possible to obtain a full set of cultures promptly. Lactate can be obtained from venous blood gas, 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.</li> <li>Other investigations can include:                             <ul style="list-style-type: none"> <li>Blood tests: blood glucose level, coagulation studies (PT, APTT), UEC, FBC, LFT, CRP</li> <li>Other cultures as clinically indicated: sputum, urine (and urinalysis) and wound cultures, joint aspirates, melioid rectal and throat swabs.</li> <li>Other cultures/investigations may include lumbar puncture or abdominal paracentesis (ascetic tap), if indicated. CXR and other radiology as clinically indicated.</li> </ul> </li> <li><b>Send culture pathology with the patient to the hospital.</b></li> </ul>
<p><b>4. Administer intravenous (IV) antibiotics (consider possible source)</b></p>	<ul style="list-style-type: none"> <li>If source unknown, use undifferentiated sepsis/septic shock antibiotic regimen.</li> <li>If source known, use empirical antibiotic regimen.</li> <li>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.</li> <li>If a abscess, septic arthritis or necrotising fasciitis is suspected, DMO or MRaCC to notify relevant surgical doctor for advice. Note necrotising fasciitis is a surgical emergency.</li> </ul>
<p><b>5. Assess fluid and consider fluid resuscitation</b></p>	<ul style="list-style-type: none"> <li>If SBP less than 100 mmHg or lactate greater than 2 mmol/L, commence 250 to 500 mL 0.9% sodium chloride or Hartmann’s (up to 30 mL/kg). Use smaller volumes in renal or cardiac patients.</li> <li>Fluid volume should be based on patient’s weight, cardiac function, comorbidities, current volume status and haemodynamics. Assess after each bolus for signs of fluid overload.</li> <li>If no clinical response, consider inotropes early in consultation with CareFlight orMRaCC.</li> </ul>

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Actions	Details
6. Monitor signs of deterioration and urine output	<p>If vasopressors required, consider Metaraminol 0.5mg to 1mg (1mL to 2mL) as per <a href="#">Metaraminol Administration PHC Remote Protocol</a> or Adrenaline 1 to 10 mcg/kg/hr as per <a href="#">Adrenaline Infusion PHC Remote Guideline</a>.</p> <ul style="list-style-type: none"> <li>Patients with sepsis or septic shock should be closely monitored, due to high risk of clinical deterioration.</li> <li>While waiting for retrieval service monitor vital signs every 15 minutes and urine output every 60 minutes.</li> <li>If warranted, consider IDC insertion.</li> </ul>

Figure 4: Sepsis bundle

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.			
<b>RESUSCITATE</b>	<b>1. Consider oxygen therapy</b> Maintain SpO <sub>2</sub> 94% and above (aim 88-92% for moderate/severe COPD).	<ul style="list-style-type: none"> <li>SpO<sub>2</sub> maintained</li> </ul>	Y / N
	<b>2. Establish intravenous (IV) access</b> If unsuccessful, obtain intraosseous (IO).	<ul style="list-style-type: none"> <li>Access established</li> </ul>	Y / N
	<b>3. Perform tests, prioritising blood taken in the following order: blood cultures prior to antibiotics, CG4+ and CHEM8+.</b> Do not delay antibiotics if unable to collect or inadequate sample or analyser issues. Other investigations as indicated: sputum, wound and melioidosis swabs, pathology or stool and urine samples. Send culture pathology with the patient to the hospital.	<ul style="list-style-type: none"> <li>Blood cultures collected</li> <li>Lactate collected</li> </ul> Lactate level: _____ mmol/L	Y / N Y / N
	<b>4. Administer IV antibiotics (check allergies)</b> 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.	<ul style="list-style-type: none"> <li>1<sup>st</sup> antimicrobial commenced</li> <li>2<sup>nd</sup> antimicrobial commenced</li> </ul>	Y / N Y / N
	<b>5. Assess fluid state and consider fluid resuscitation</b> 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' <b>OR</b> Adrenaline 1 to 10 mcg/kg/hour as per 'Adrenaline Infusion PHC Remote Guideline'	<ul style="list-style-type: none"> <li>Fluids administered</li> <li>Inotropes required</li> </ul>	Y / N Y / N
	<b>6. Monitor signs of deterioration and urine output</b> 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.	<ul style="list-style-type: none"> <li>Fluid balance commenced</li> <li>IDC required</li> </ul>	Y / N Y / N
Bundle completed. Time: _____ Initial: _____ Print name: _____ Role: _____			

## Re-assess and monitor

Close monitoring of observations through repeating REWS 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. Urban facilities to follow local procedures for ongoing monitoring until transfer.

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 5 is a snapshot of the process outlined on the pathway.

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Figure 5: Re-assess and monitor

<b>RE-ASSESS &amp; MONITOR</b>	<b>Re-assess and monitor observations every 30 minutes. Aim for the following:</b>	
	<ul style="list-style-type: none"> <li>▪ Targeted vital signs as per medical consultation</li> <li>▪ Lactate less than 2 mmol/L</li> </ul>	<ul style="list-style-type: none"> <li>▪ Urine output greater than 0.5mL/kg/hour</li> </ul>
	<b>Lactate level at 4 hours:</b> Time: _____ Level: _____ mmol/L <b>8 hours:</b> Time: _____ Level: _____ mmol/L	
<b>Escalate for further medical review if patient meets any of the following: Tick below which escalation criteria apply.</b>		
<input type="checkbox"/> Targeted vital signs 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 concern		

### 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 infectious disease, ICU physicians or surgeons as appropriate, and
- Consider expediting retrieval if possible.

### Referral to higher level of care

Patients managed in remote clinics or the community after being diagnosed with suspected 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 the 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 (if able to collect i.e. urban facilities may not have equipment available).

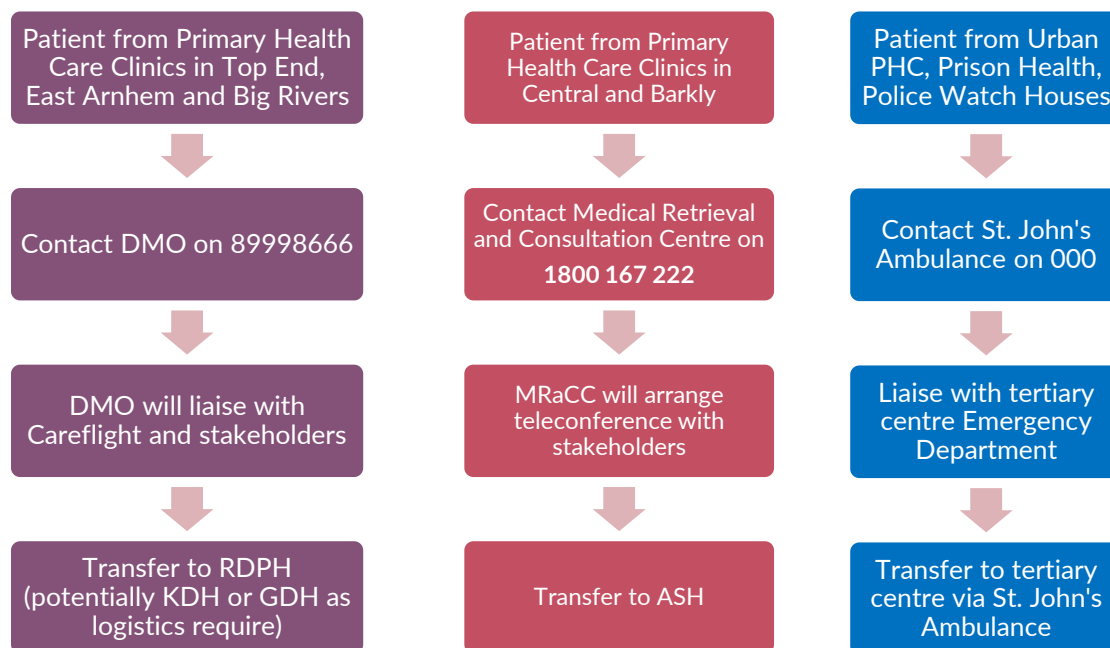
Figure 6: Referral to a higher level of care

<b>HANDOVER</b>	<b>Prepare for Transfer: Tick once completed.</b>	
	<input type="checkbox"/> Follow local transfer procedure	
	<input type="checkbox"/> Sepsis diagnosis and management plan discussed with patient/family/caregiver and education provided, arrange an escort if required	
	<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 copy of sepsis pathway to the retrieval team	

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Figure 7: Process of referral to higher level of care for remote primary health care clinics



## 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 sepsis management plan should be clearly documented in the patient's medical record to ensure communication of the care plan to clinicians involved in the ongoing care of the patient. Refer to [Clinical Documentation 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.

In addition to regular documentation, documentation should include (where able):

- Likely source of infection
- Any further investigation plans
- Frequency of observations and monitoring, e.g. every 15 to 30 minutes, as per CARPA (remote PHC) or local procedures for recognition of the deteriorating patient (urban facilities)
- 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 or intensive care teams, and multidisciplinary team e.g. interpreters and/or Aboriginal Liaison Officer as required.

## Care planning on return to home or to community from hospital

Sepsis can have long-lasting effects including altered immunological, physiological, psychological and cognitive functioning. Discuss the cognitive and psychological effects that may occur after diagnosis and

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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, emotional and social wellbeing support.

## Education requirements

Each service has its own dedicated sepsis teaching programs that includes sepsis education in all:

- medical and nursing orientation or induction packages, and
- regular dedicated competency-based sessions throughout the year which includes sepsis simulation.

Completion of the sepsis e-module via [MyLearning](#) or [RAHC](#) is recommended prior to attending face-to-face courses, e.g. Remote Emergency Course, Central Australia Remote Emergency (CARE) course.

## Monitoring

NT Health quarterly sepsis dashboard (outcome measure) reports and six monthly (process measure) auditing is used to monitor the effectiveness of sepsis pathways in detecting sepsis. **A benchmark of 80% compliance is the minimum required for sepsis process measures.** Each region is responsible for their own monitoring via Business Intelligence system and/or auditing, reporting and related quality improvements. Monitoring will have oversight by the **NT Health Standard 8 Committee**

## Accessibility

Sepsis pathways are available via Darwin Stores with a specific HR code:

- Primary health care adult sepsis pathway – HR543b-02/23

Refer to the sepsis [staff intranet](#) or [internet](#) sites for further information about ordering sepsis pathways and viewing samples of same.

## Roles and responsibility

Sepsis patients must have an overarching lead consultant responsible for their care. When multiple teams are involved, communications between teams must be at Consultant level.

Antimicrobial Stewardship (AMS) teams are responsible for keeping sepsis pathway antibiotic recommendations up to date. A formal review shall be undertaken every six months.

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## Definitions

Term	Definition
Policy suite	A collection of documents on a specific subject matter that is corporate or clinical in nature, in order of hierarchy as per the document pyramid in the Policy Governance Framework Model. A policy suite would usually consist of a parent policy and be supported by a procedure and/or guideline (NT Health Policy Development Procedure).
Guideline	Establishes the key principles and provisions that govern the decision –making process. Guidelines include advisory and explanatory statements offering detail, context or recommendations for good practice and decision making which support policies and procedures. <b>In a clinical context these are usually mandatory. Any deviation from the guideline must be approved and documented.</b> (NT Health Policy Development Procedure)
ACSQHC	Australian Commission on Safety and Quality in Health Care.
AMS	Antimicrobial Stewardship – the ongoing effort by a health service organisation to optimise antimicrobial use among patients ‘to improve patient outcomes, ensure cost-effective therapy and reduce adverse sequelae of antimicrobial use, including antimicrobial resistance.
CARPA	Central Australian Rural Practitioners Association – Standard Treatment Manual for remote and rural practice.
DMO	District Medical Officer – A senior physician of a health agency, usually at the district level, who is responsible and accountable fo providing quality medical care within that setting.
MRaCC	Medical Retrieval and Consultation Centre – Provides a 24-hour, single point-of-contact emergency consultation service for clinicians, and operates a medical retrieval service for acute care cases, inter-hospital transfers and repatriation of patients back to country.
REWS	Remote Early Warning Score – a guide used by medical services to quickly determine the degree of illness of a patient based on vital signs.
RMP	Rural Medical Practitioner – General Practitioners who provide primary care services, emergency medicine and have training in additional skills like obstetrics, anaesthetics or mental health services.

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## National Safety and Quality Health Service standards

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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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