**SEPSIS MANAGEMENT PLAN**

Patients with presumed sepsis are at a high risk of deterioration despite initial resuscitation with intravenous antibiotics and fluids. These patients require a management plan which needs to be discussed with the Attending Medical Officer (AMO). The Infectious Diseases Physician/Clinical Microbiologist and Antimicrobial Stewardship (AMS) team are to be consulted where necessary. This plan needs to be communicated to the Senior Medical Officer, Nurse in Charge, patient and patient’s family/carers.

Specific management plans are to be documented in the health care record.

### Initial 24 hours

- **Monitors**
  - Respiratory rate in the Red or Yellow Zone
  - Systolic blood pressure < 100mmHg
  - Decreased or no improvement in level of consciousness
  - Urine output less than 0.5mL/kg/hr
  - No improvement in serum lactate level

- **Repeat**
  - Lactate: Date:__ __/ __ __/ __ __   Time: __ __ :  __ __   Result __ __ .  __ mmol/L
  - Temperature: Date:__ __/ __ __/ __ __   Time: __ __ :  __ __   Result __ __ .  __ °C

- **Fluid resuscitation**
  - Prescribe IV fluids as appropriate based on the patient’s condition
    - Monitor for signs of pulmonary oedema

- **Reassess**
  - Confirm diagnosis and consider other causes of deterioration
  - Check preliminary results
  - If patient is neutropenic, review antibiotics and change if required
  - Review treatment/management
    - Discuss with AMO
    - Document plan to continue, change or cease antibiotics
    - Continue monitoring for deterioration including urine output
    - If the patient’s recovery is uncertain discuss the goals of care with the patient and their family/carers

### 24-48 hours

- **Reassess**
  - Actively seek microbiology/investigation results and review
  - Confirm diagnosis, document source of sepsis in the health care record
  - Discuss with AMO
  - Consider seeking advice from infectious disease/microbiology physician
  - Document plan to continue, change or cease antibiotics
  - Obtain AMS approval for restricted antibiotics
  - Repeat biochemistry as indicated
  - Continue monitoring for deterioration including urine output

- **Continue to monitor**
  - as per patient’s condition – observations, medical review, antibiotics

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**ARE YOU CONCERNED THAT YOUR PATIENT COULD HAVE SEPSIS?**

Consider the following risk factors

- Re-presentation within 48 hours
- Recent surgery or wound
- Indwelling medical device
- Age > 65 years
- Immunocompromised
- Cough/sputum/breathlessness
- Altered LOC or new onset of confusion
- Temperature < 35.5°C or > 38.5°C
- Heart rate ≤ 50 or ≥ 120 per minute
- SBP < 100mmHg
- SpO₂ < 95%
- SBP < 100mmHg
- Base excess < -5.0
- Lactate ≥ 2mmol/L

**Does your patient have any new onset of the following signs and symptoms of infection?**

- Line associated infection/redness/swelling/pain
- Fever or rigors
- Dysuria/frequency
- Abdominal pain/distension/peri tonealism
- Cough/sputum/breathlessness
- Altered cognition

**Base excess < -5.0**

Lactate ≥ 2mmol/L is significant in sepsis

**Look for other common causes of deterioration and treat**

- New antithrombin
- Hypovolaemia/haemorrhage
- Pulmonary embolus/DVT
- Atelectasis
- AMI
- Stroke
- Overdose/over sedation

**Repeat observations within 30 minutes AND increase the frequency of observations as indicated by the patient’s condition**

- Document decision/diagnosis and management plan in the health care record
- Re-evaluate for sepsis if observations remain abnormal or deteriorate

**Consider**

- Seeking advice from infectious disease/microbiology physician
- Document plan to continue, change or cease antibiotics
- Obtain AMS approval for restricted antibiotics
- Repeat biochemistry as indicated
- Continue monitoring for deterioration including urine output
### Sepsis Pathway

#### Sepsis Recognition
- **Airway**
  - Assess and maintain patent airway
- **Breathing**
  - Assess and administer oxygen if required; aim SpO₂ ≥ 95% (or 88-92% for COPD)
- **Circulation**
  - Vascular access, blood/culture collection, fluid resuscitation and antibiotics
  - Consider intraosseous access after two failed attempts at cannulation
  - Collect Blood Cultures
    - Take two (2) sets from two (2) separate sites
    - For patients with a central venous access device (CVAD), take one set from the CVAD plus one set peripherally
  - Consider commencement of vasopressors
  - Use crystalloid
  - Aim Systolic Blood Pressure > 100mmHg
  - Monitor for signs of pulmonary oedema and review at risk patients more frequently

#### Clinical Review
- Triage category
  - 1
  - 2
  - 3
  - 4
  - 5

#### Rapid Response
- **Emergency Department**
  - Severe sepsis or septic shock
  - Sepsis

#### Antimicrobial Therapy
- **Antibiotics**
  - First/new antibiotic administered

#### Monitoring and Reassess
- **Monitor Blood Glucose Level**
  - Manage as per local guidelines

#### Disposals
- **Blood cultures**
  - At least two sets
  - Other relevant cultures
  - Collect (at least two sets) and other relevant cultures should be collected PRIOR to antibiotic administration. However, if patients have severe sepsis or septic shock, if difficult to obtain cultures do not delay administration of antibiotic(s). Refer to local Antimicrobial Stewardship policies/procedures regarding antibiotic instructions. Consult Infectious Diseases Physician or Clinical Microbiologist if required.

#### Additional Instructions
- **Monitor/document strict fluid input/output and consider IDC if not already inserted**
- **Reassess**, **Re-explore the patient for other potential sources of infection to guide further investigations**
- **Prescribe and administer antibiotics**
  - If no improvement, Intensive Care may be required
  - Discuss the management plan with the patient and their family/carers
  - Document investigations and cultures collected:
- **Update the Attending Medical Officer on the patient’s condition using ISBAR**
- **Prescribe and administer antibiotics within 60 MINUTES of sepsis recognition**

#### Local CERS
- **Respiratory rate in the Red or Yellow Zone**
- **SBP < 100mmHg**
- **Decreased or no improvement in level of consciousness**
- **Urine output < 0.5mL/kg/hour**
- **Serum lactate level of ≥ 2mmol/L**
  - Increase or no improvement after adequate fluid resuscitation may be indicative of septic shock
- **Consider other causes of deterioration**

#### Severe Sepsis/Septic Shock
- **Aim** Systolic Blood Pressure ≥ 100mmHg
- **Monitor** and assess for signs of deterioration and escalate as per local CERS

#### Final Diagnostics
- **First/new antibiotic administered**

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**Note:**
- The image contains a template for a sepsis pathway, including sections for airway, breathing, circulation, monitoring, and diagnostics. It outlines the steps for recognizing and managing sepsis, along with guidelines for antimicrobial therapy and monitoring. The template is designed to be filled in with specific patient information and actions taken during the sepsis management process.