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.

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

- **Continue monitoring**
  - Prescribe the frequency of observations
  - Monitor and reassess for signs of deterioration which may include one or more of the following:
    - 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 biochemistry as indicated**

- **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
  - Document plan to continue, change or cease antibiotics
  - 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

- **Review treatment/management**
  - Discuss with AMO
  - Document plan to continue, change or cease antibiotics
  - Continue monitoring for deterioration including urine output
  - 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

**ADULT SEPSIS PATHWAY**

**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
- Immuno-compromised
- Diabetes mellitus
- Fall
- Overdose/over sedation
- Stroke
- AMI
- Atelectasis
- Pulmonary embolus/DVT
- Hypovolaemia/haemorrhage
- Hypothermia
- Fever or rigors
- Chills
- Line associated infection/redness/swelling/pain
- Abdominal pain/distension/peritonism
- Altered LOC or new onset of confusion
- Heart rate ≤ 50 or ≥ 120 per minute
- Respiratory rate ≤ 10 or ≥ 25 per minute
- Base excess < -5.0
- Lactate ≥ 2mmol/L

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

- Fever or rigors
- Line associated infection/redness/swelling/pain
- Abdominal pain/distension/peritonism
- Altered cognition

**Any RED ZONE observation OR additional criteria**

- SBP < 90mmHg
- Lactate ≥ 4mmol/L
- Base excess < -5.0

**TWO or more YELLOW ZONE observations OR additional criteria including clinician concern**

- Respiration ≤ 10 or ≥ 25 per minute
- SpO₂ < 95%
- SBP < 100mmHg
- Heart rate ≤ 50 or ≥ 120 per minute
- Altered LOC or new onset of confusion
- Temperature < 35.5°C or ≥ 38.5°C
- Obtain a blood gas
- Lactate ≥ 2mmol/L

Lactate ≥ 2mmol/L is significant in sepsis.

Look for other common causes of deterioration and treat:

- New arrhythmia
- 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

Continue monitoring as per patient’s condition – observations, medical review, antibiotics.
Sepsis recognition

Date: __/__/__  Time: __ : __

☐ Emergency Department Patient

☐ Inpatient  Ward: __________

Triage category 1 2 3 4 5

☐ Clinical Review  ☐ Rapid Response

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 intravenous access after two failed attempts at cannulation

Collect Blood Cultures

Take two (2) sets from two (2) separate sites

☐ Yes  ☐ Not obtained

For patients with a central venous access device (CVAD), take one set from the CVAD plus one set peripherally

Collect Lactate

Lactate ≥ 2mmol/L after adequate fluid resuscitation is significant

☐ Yes  ☐ Not obtained

Lactate: __ __ __ mmol/L

Collect FBC, EUC, CRP/PCT, LFTs, coags and glucose

BGL > 7.7mmol/L in the absence of diabetes may be significant

☐ Yes  ☐ Not obtained

BGL: __ __ __ mmol/L

Order and collect other investigations and cultures prior to antibiotics (unless a SENIOR CLINICIAN assesses that this would result in an unacceptable delay in commencing antibiotic therapy)

Document investigations and cultures collected:

Fluid Resuscitation (intravenous or intracessous)

☐ Use crystalloid

☐ Aim Bystolic Blood Pressure > 100mmHg

☐ Monitor for signs of pulmonary oedema and review at risk patients more frequently

☐ Emergency Department patient

Give initial 20mL/kg bolus STAT, if no response repeat 20mL/kg STAT

☐ Inpatient

Initial 250-500mL bolus STAT, if no response repeat 250-500mL STAT

If no response in SBP after 1000mL call a Rapid Response

Consider commencement of vasopressors

Severe sepsis or septic shock

Use CEC Adult Antibiotic Guideline for Severe Sepsis & Septic Shock or locally endorsed antibiotic prescribing guideline

Use locally endorsed antibiotic prescribing guideline

Refer and administer antibiotics within 60 MINUTES of sepsis recognition

Disability - Assess level of consciousness (LOC) using Alert, Voice, Pain, Unresponsive (AVPU)

Exposure - Re-examine the patient for other potential sources of infection to guide further investigations

Fluid - Monitor/document strict fluid input/output and consider IDC (if not already inserted)

Check Blood Glucose Level - Manage as per local guidelines

Monitor and Reassess

Continue monitoring, assess for signs of deterioration and escalate as per 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 (or increasing) or no improvement after adequate fluid resuscitation may be indicative of septic shock

☐ Consider other causes of deterioration

If no improvement Intensive Care may be required

Update the Attending Medical Officer on the patient’s condition using ISBAR

Discuss the management plan with the patient and their family/carers

Sepsis management plan documented by a medical officer in the health care record as per page 4 (over)

Name: ____________________  Designation: ____________________  Signature: ____________________