ARE YOU CONCERNED THAT THE NEWBORN COULD HAVE SEPSIS?

Does the newborn have any of the following sepsis signs or symptoms present?

- **General**
  - Pale/mottled
  - Lethargic
  - Abnormal tone
  - Poor feeding
  - Pyrexic/hypothermic
  - Cool peripheries

- **Respiratory**
  - Apnoeic
  - Tachypnoeic
  - Grunting
  - Nasal flaring
  - Chest recession
  - Cyanotic

- **Cardiovascular system**
  - Tachycardic
  - Bradycardic
  - Hypotensive
  - Delayed capillary refill

- **Central nervous system**
  - Bulging fontanelle
  - Seizures
  - High pitched cry
  - Irritability
  - Abnormal movements
  - Jittery

- **Focal**
  - Rash/Petechiae
  - Cellulitis/Red umbilicus
  - Vomiting
  - Diarrhoea
  - Joint swelling
  - Line associated infection

Does the newborn have any Yellow or Red Zone Observations (including oxygen saturation) on the *SNOC or is there clinician concern of sepsis? (*Standard Newborn Observation Chart)

CLINICAL SUSPICION OF SEPSIS

The newborn has SEVERE SEPSIS or SEPTIC SHOCK until proven otherwise

- Sepsis is a medical emergency
- Call for a Rapid Response (as per local CERS) unless already made
- Direct close observation

The newborn may have SEPSIS

- Call a Clinical Review (as per local CERS) unless already made
- Look for other causes of deterioration and initiate appropriate clinical care
- Obtain early SENIOR CLINICIAN review within 30 minutes
- Remain with the newborn

Does the senior clinician consider the newborn has sepsis?

- YES
- NO

Continue to monitor observations on the SNOC

- Look for other causes of deterioration and treat as per local guidelines
- Repeat observations within 30 minutes AND increase the frequency of observations as indicated by the newborn’s condition
- Document decision/diagnosis and management plan in the health care record
- Re-evaluate for sepsis if observations become abnormal or deteriorate

Commence treatment as per sepsis resuscitation guideline (over page) AND inform the Attending Medical Officer (as per local CERS)

Discuss management plan with the newborn’s family/carers
Continually monitor, assess and manage the newborn’s airway, breathing and circulation every 30 – 60 seconds (connect monitoring equipment e.g. ECG, SpO₂, BP, thermometer)

Correct problems with airway and breathing before proceeding to circulation

Consider supporting the thermal environment to keep newborn warm during ongoing management

Consider potential source of sepsis

**A** Airway - Assess and maintain patent airway
- Position
- Suction
- Adjunct e.g. Laryngeal mask (LMA)/guedel

**B** Breathing - Assess and administer respiratory support if required
- Oxygen
- IPPV
- CPAP

**C** Circulation - Assess and consider need for circulatory support

Obtain vascular access (IV / Umbilical / Intraosseous) and blood collection

*Call for expert assistance after two failed attempts at cannulation and/or consider access via umbilical/intraosseous route*

- Peripheral IV
- Umbilical
- Intraosseous (contra indicated if <2kg)

**PRIORITY**

- Collect Blood Glucose
  - Yes
- Collect Blood Gas / Lactate
  - Yes
  - Not obtained
- Collect Blood Cultures
  - Yes
  - Not obtained

**DON’T EVER FORGET TO CHECK BLOOD GLUCOSE**

Dependent on volume of blood sample/second collection consider taking

- FBC
- EUC
- LFT
- CRP
- Coags
- Procalcitonin
- Other (Specify):
NEWBORN SEPSIS PATHWAY

Circulation

**ANTIBIOTICS ADMINISTERED** Yes  
Date: __ / __ / ___  
Time: __ : __  
Prescribe and administer IV antibiotics within 60 minutes of recognition  
Aim to obtain at least one set of blood cultures prior to antibiotic administration. If difficult to obtain  
**DO NOT** delay antibiotics  
Consider alternate source of infection (including viral) and/or resistance  
Refer to Attending Medical Officer for antibiotic prescribing regimen

**FLUID RESUSCITATION** Yes  
Date: __ / __ / ___  
Time: __ : __  
**Aim for improvement in heart rate, capillary refill or colour**  
Administer initial 10mL/kg 0.9% sodium chloride  
Reassess need for circulation support  
If required, repeat 10mL/kg 0.9% sodium chloride  
Reassess need for circulation support  
Before further fluid bolus refer to Attending Medical Officer/Tiered Maternity and Neonatal Network and consider vasopressors

Where available refer to local guidelines for IV antibiotics and fluid resuscitation

**Disability** - Assess lethargy, tone, cry, response and posture

**Exposure** - Fully assess the newborn. Prescribe any additional tests and investigations. Reassess and identify source of sepsis. Review maternal tests and investigations

**Fluid** - Monitor and document strict fluid input/output (e.g. measure the nappy weight)

**Check Blood Glucose Level** - Manage as per local guidelines

Monitor, Reassess and Treat

Continue to assess Airway, Breathing and Circulation and treat accordingly  
Monitor and assess for signs of deterioration and escalate as per local CERS

**INTENSIVE CARE MAY BE REQUIRED**

Discuss the newborn’s condition with the Attending Medical Officer  
Update the mother’s care team on the newborn’s condition  
Discuss the management plan with the newborn’s family / carers  
Sepsis management plan documented by a medical officer in the health care record as per page 4 (over)  
Does the local/regional neonatal expert/Tiered Maternity and Neonatal Network or NETS need to be contacted for advice on management and referral?

NETS Tel: 1300 36 2500  
Ensure clinical handover is given using ISBAR

Name: __________________________ Designation: ___________________ Signature: _______________
SEPSIS MANAGEMENT PLAN

Newborns with presumed sepsis are at high risk of deterioration despite initial resuscitation with intravenous antibiotics and fluids. These newborns require a management plan that must be discussed with the Attending Medical Officer (AMO). The Infectious Disease/Clinical Microbiology Specialist and Antimicrobial Stewardship team are to be consulted where necessary. The management plan should be communicated to the Senior Medical Officer, Midwife/Nurse in Charge, and the newborns family/carers.

Specific management plans are to be documented in the newborn’s health care record

### Monitoring
- Initiate continuous cardiorespiratory/oximetry monitoring
- Prescribe the frequency of documented observations
- **Minimum recommendation every 30 minutes for 2 hours, then hourly for 4 hours (continue as directed by Senior Medical Officer)**
- Monitor Blood Glucose as per local guidelines
- Monitor and reassess for signs of sepsis - clinical deterioration may include one or more of the following:
  - Pale in colour, mottled, abnormal tone
  - Apnoea, tachypnoea (respiratory rate in the Red or Yellow Zone)
  - Persistent tachycardia, slow capillary refill (> 3 seconds), bradycardia, hypotension
  - Hypothermia
  - Acidosis or increasing serum lactate level
  - Hypoglycaemia, thrombocytopenia, leukopenia or abnormal coagulation
- If deteriorating (has any Red or Yellow Zone criteria), escalate as per your local CERS and inform AMO

### Fluid resuscitation
- Prescribe IV fluids as appropriate based on the newborn’s condition
- **Monitor for signs of fluid overload/hypovolaemia**

### Reassess
- Confirm diagnosis and consider other causes of deterioration (e.g. congenital heart disease, metabolic disorders, hypovolaemia)
- Check preliminary results and consider repeats
- **If the newborn is neutropenic, review antibiotics and change if required**

### Review treatment/management
- Discuss with AMO
- Document a plan to continue, change or cease antibiotics
- Continue monitoring for signs of deterioration
- Senior Medical Officer to discuss the goals of care with the newborn’s family/carers

### 24 - 48 hours
- Actively seek microbiology/investigation results and review
- Confirm diagnosis and document source of sepsis in the health care record
- Discuss with AMO
- Document a plan to continue, change or cease antibiotics
- Repeat biochemistry/hematology as indicated
- Update the mother’s care team on the newborn’s condition/diagnosis
- Continue monitoring for signs of deterioration

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