Paediatric sepsis pathway for use in all emergency departments and inpatient wards
Use relevant febrile neutropenia or fever guideline as required
e.g. Infants and Children: Initial Management of Fever/Suspected Sepsis in Oncology/Transplant Patients guideline

ARE YOU CONCERNED THAT YOUR PATIENT COULD HAVE SEPSIS?
Consider the following risk factors
- Re-presentation within 48 hours
- Deterioration despite treatment
- 3 months of age or younger
- High level parental concern

Absence of risk factors does not exclude sepsis as a cause of deterioration

Does your patient have any new onset of the following signs and symptoms of infection?
- Signs of toxicity:
  - Decreased alertness, arousal or activity; pale or mottled colour; cool peripheries; weak cry; grunting; fever; rigors; bounding pulses; wide pulse pressure

Any RED ZONE observation
OR additional criteria (*SPOC)
OR neonate (< 28 days corrected) with temp ≥ 38°C
OR serious clinician concern
*Standard Paediatric Observation Chart

Two or more YELLOW ZONE observations
OR additional criteria (*SPOC)
OR clinician concern
Call for a Rapid Response if 3 or more simultaneous Yellow Zone observations

Patient has SEVERE SEPSIS or SEPTIC SHOCK until proven otherwise
- Sepsis is a medical emergency
- Aim for treatment with antibiotics & fluids within 60 minutes
- Call for a Rapid Response (as per local CERS) unless already made

Patient may have SEPSIS
- Obtain SENIOR CLINICIAN review within 30 minutes
- Conduct targeted history and clinical examination
- Obtain blood - any one of these is significant:
  - lactate ≥ 2mmol/L
  - BE ≤ -5.0
  - procalcitonin (PCT) ≥ 0.5

Look for other common causes of deterioration and treat
- 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

Patient has SEVERE SEPSIS or SEPTIC SHOCK

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

Discuss management plan with the patient and their family/carer
Adapt treatment to the patient’s end of life care plan if applicable
### PAEDIATRIC SEPSIS PATHWAY

#### Sepsis recognition

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

- [ ] Emergency Department
  - Triage category: [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- [ ] Inpatient  Ward:__________________________
  - [ ] Clinical Review
  - [ ] Rapid Response

#### Airway

- Assess and maintain patent airway

#### Breathing

- Assess and administer oxygen if required; aim SpO₂ ≥ 95%

#### Circulation

- Vascular access, bloods, antibiotics and fluid resuscitation
- Consider intraosseous access after two failed attempts at cannulation
- Blood Culture(s)
- Glucose: Result __ __.__  mmol/L
- Lactate: Result __ __.__  mmol/L  Lactate ≥ 2mmol/L is significant
- FBC [ ] Coags [ ] LFTs [ ] EUC [ ] CRP/Procalcitonin (PCT) [ ]

#### Antibiotics

- Prescribe and administer antibiotics within 60 minutes of sepsis recognition
- Use *Therapeutic Guidelines: Antibiotic* OR locally endorsed antibiotic prescribing guideline
- For neonates use *Therapeutic Guidelines: Antibiotic* and seek expert advice
- First/new antibiotic administered
  - Date: __/__/__  Time: __:__

#### Fluid Resuscitation

- (intravenous or intraosseous)
- Give initial 20mL/kg 0.9% sodium chloride bolus STAT
- Repeat 20mL/kg 0.9% sodium chloride bolus if no improvement in heart rate, capillary refill, colour
- Consider commencement of vasopressors and discuss need for intubation with senior clinician

#### Disability

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

#### Exposure

- Targeted history and re-examine the patient for source of sepsis
- Consider cerebrospinal fluid, urine, swab collection, viral culture, x-ray

#### Fluid

- Monitor/document strict fluid input/output and consider IDC

#### Check Blood Glucose Level

- If less than 3mmol/L treat with 2mL/kg 10% Glucose

---

**Facility:**

**FAMILY NAME** __________  **MRN** __________

**GIVEN NAME** __________  **SEX**  [ ] MALE  [ ] FEMALE

**D.O.B.**  __________ / __________ / __________  **M.O.**

**ADDRESS**

**LOCATION / WARD**

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE
PAEDIATRIC SEPSIS PATHWAY

Monitor and Reassess

Continue monitoring, assess for signs of deterioration and escalate as per local paediatric CERS
- Tachypnoea (Red or Yellow Zone)
- Persistent tachycardia (Red or Yellow Zone), slow capillary refill and hypotension
- Colour pale and mottled
- Drowsiness or decreased level of consciousness
- Urine output < 1 mL/kg/hour
- Acidosis, increasing serum lactate or procalcitonin
- Hypoglycaemia, leukopaenia or abnormal coagulation
- Consider other causes of deterioration

If no improvement Paediatric Intensive Care may be required

Seek advice immediately from local/regional paediatric experts and/or NETS using ISBAR Tel: 1300 36 2500

Administer further fluid bolus

Consider second vascular access, vasopressors and intubation

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)
### 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

<table>
<thead>
<tr>
<th>Continue monitoring</th>
<th>Continue monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Prescribe the frequency of observations</td>
<td></td>
</tr>
<tr>
<td>Minimum recommendation every 30 minutes for 2 hours, then hourly for 4 hours</td>
<td></td>
</tr>
<tr>
<td>● Monitor and reassess for signs of deterioration which may include one or more of the following:</td>
<td></td>
</tr>
<tr>
<td>Tachypnoea  (Red or Yellow Zone)</td>
<td></td>
</tr>
<tr>
<td>Persistent tachycardia (Red or Yellow Zone), slow capillary refill and hypotension</td>
<td></td>
</tr>
<tr>
<td>Decreased or no improvement in level of consciousness</td>
<td></td>
</tr>
<tr>
<td>Urine output less than 1mL/kg/hour over 4 hours</td>
<td></td>
</tr>
<tr>
<td>No improvement in serum lactate level</td>
<td></td>
</tr>
</tbody>
</table>

If deteriorating (has any Red or Yellow Zone criteria), escalate as per local CERS and inform AMO.

<table>
<thead>
<tr>
<th>Repeat lactate 4 and 8 hours post recognition</th>
<th>Repeat lactate 4 and 8 hours post recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 hours Date:<strong>/</strong>/___ Time: __ : __ Result ___ . ___ mmol/L</td>
<td>8 hours Date:<strong>/</strong>/___ Time: __ : __ Result ___ . ___ mmol/L</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fluid resuscitation</th>
<th>Fluid resuscitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Prescribe IV fluids as appropriate based on the patient’s condition</td>
<td></td>
</tr>
<tr>
<td>Monitor for signs of fluid overload/pulmonary oedema/inappropriate antidiuretic hormone</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reassess</th>
<th>Reassess</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Confirm diagnosis and consider other causes of deterioration e.g. dehydration/hypovolaemia/haemorrhage or an overdose/over sedation</td>
<td></td>
</tr>
<tr>
<td>● Check preliminary results</td>
<td></td>
</tr>
<tr>
<td>If patient is neutropenic, review antibiotics and change if required</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Review treatment/management</th>
<th>Review treatment/management</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Discuss with AMO</td>
<td></td>
</tr>
<tr>
<td>● Document plan to continue, change or cease antibiotics</td>
<td></td>
</tr>
<tr>
<td>● Continue monitoring for deterioration including urine output</td>
<td></td>
</tr>
<tr>
<td>● If the patient’s recovery is uncertain discuss the goals of care with the patient’s family/carers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>24 - 48 hours</th>
<th>24 - 48 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Actively seek microbiology/investigation results and review</td>
<td></td>
</tr>
<tr>
<td>● Confirm diagnosis, document source of sepsis in the health care record</td>
<td></td>
</tr>
<tr>
<td>● Discuss with AMO</td>
<td></td>
</tr>
<tr>
<td>● Consider seeking advice from infectious disease/microbiology physician</td>
<td></td>
</tr>
<tr>
<td>● Document plan to continue, change or cease antibiotics</td>
<td></td>
</tr>
<tr>
<td>● Obtain AMS approval for restricted antibiotics</td>
<td></td>
</tr>
<tr>
<td>● Repeat biochemistry as indicated</td>
<td></td>
</tr>
<tr>
<td>● Continue monitoring for deterioration including urine output</td>
<td></td>
</tr>
</tbody>
</table>

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