### Paediatric Sepsis 6

**Child unwell? CEWS concern? THINK Could this be Sepsis?**

#### Recognition of child at risk
If a child with suspected or proven infection AND at least 2 of (or 1 if immunocompromised):
- Core temperature of $<36^\circ\text{C}$ or $>38.5^\circ\text{C}$ (38.0$^\circ\text{C}$ if immunocompromised)
- Tachycardia (refer to Early Warning Score)
- Altered mental state (sleepiness, irritability, lethargy, floppiness)
- Prolonged capillary refill (> 2s)

#### Red flag signs (Any 1 flag present)
- Hypotension
- Lactate $>2\text{mmol/l}$
- Extreme tachycardia/tachypnoea
- SpO2 $<90%$/grunting/cyanosis/apnoea
- P or U on AVPU
- Immunocompromised
- Non blanching rash/mottled skin

**CONSULT DOCTOR OR CSP – COULD THIS CHILD HAVE SEPSIS OR SEPTIC SHOCK?**

<table>
<thead>
<tr>
<th>START TIME</th>
<th>END TIME</th>
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<tbody>
<tr>
<td><strong>Yes or high suspicion – start Sepsis 6</strong></td>
<td><strong>Commence all elements within 1 hour</strong></td>
</tr>
<tr>
<td>1] Give high flow oxygen</td>
<td>Time</td>
</tr>
<tr>
<td>2] Obtain IV/IO access and take blood tests</td>
<td>Time</td>
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</tbody>
</table>
  - Blood gas and lactate (+/- FBC, U&E, CRP if able)
  - Blood glucose – treat hypoglycaemia (2mls/kg 10% glucose)
  - Blood cultures
| 3] Give IV or IO antibiotics (PTO for guidelines) | Time | Sign |
| 4] Consider fluid resuscitation | Time | Sign |
  - Aim to restore normal physiological parameters, U/O $>0.5\text{mls/kg/hr}$
  - Give 10-20ml/kg isotonic fluid over 5-10 mins
  - Repeat as necessary, monitor urine output
| 5] Involve senior clinicians early | Time | Sign |
  - Own team Consultant (Consider CSP/ICON)
| 6] Consider inotropic support early | Time | Sign |
  - If normal physiological parameters not restored after $>40\text{ml/kg}$ fluids consider ICU admission

#### Is there a likely source of infection?
- Yes, but source unclear at present
- Line infection
- VP shunt
- Pneumonia/likely chest source
- Meningitis/encephalitis
- Intra-abdominal
- Urinary tract infection
- Febrile Neutropenia
- Surgical Site
- Other – details

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Please put all completed Sepsis forms into the Sepsis boxes on your ward.

These will be filed in the patient notes after review. Any questions, please contact Claire Fraser or Rhiannon Follett on ext 8480

Adapted from the Paediatric Sepsis 6 version 11.1 August 2015 in collaboration with the UK Sepsis Trust Paediatric Group
**THIS GUIDANCE IS FOR EMPIRIC ANTIBIOTIC TREATMENT FOR SEPSIS WITHOUT A CLEAR FOCUS. IF PRE-EXISTING ANTIBIOTIC PLAN EXISTS, THIS SHOULD BE FOLLOWED.**

*Antibiotics should be given within the first hour of diagnosis of sepsis.*

*Discuss urgently with senior member of admitting team or microbiology if any of the following apply:*

- Already on antibiotics (prophylaxis or treatment)
- Any contra-indication to the antibiotics recommended in this guidance (allergy, intolerance, interactions, toxicity)
- If known to be colonised with resistant organism or previously treated for infection with a resistant organism (MRSA/VRE/ESBL/CRO)
- If possible neurosurgical shunt infection discuss urgently with microbiology on call

For urgent micro advice call SpR ext 5282 9am-5pm Mon to Fri.

Outside of hours or if ext 5282 not available, call consultant on call for microbiology via switchboard.

<table>
<thead>
<tr>
<th>In GOSH or referring hospital &gt;72 hours</th>
<th>or at risk of infection with resistant gram negative organism</th>
<th>or immunocompromised</th>
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</thead>
<tbody>
<tr>
<td><a href="#">YES</a></td>
<td><a href="#">NO</a></td>
<td><a href="#">YES</a></td>
</tr>
<tr>
<td>Possible CNS infection or under 1 month of age</td>
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<td></td>
</tr>
<tr>
<td><a href="#">YES</a></td>
<td><a href="#">NO</a></td>
<td><a href="#">NO</a></td>
</tr>
<tr>
<td>Meropenem (as per cBNF CNS dosing) + Amikacin (as per GOSH dosing guide) if under one month of age: + Ampicillin (as per cBNF Listeria meningitis dosing)</td>
<td>Piperacillin/Tazobactam (as per GOSH dosing guide) + Amikacin (as per GOSH dosing guide) if under one month of age: + Ampicillin (as per cBNF Listeria meningitis dosing)</td>
<td>Cefotaxime (as per cBNF severe infection dosing) + Amikacin (as per GOSH dosing guide) if under one month of age: + Ampicillin (as per cBNF Listeria meningitis dosing)</td>
</tr>
</tbody>
</table>

If suspected central venous line infection or known MRSA positive:
Add **Vancomycin** (as per GOSH dosing guide)

If encephalitis suspected:
Add **IV Aciclovir** (as per cBNF for HSV CNS infection)

**Antibiotic should be reviewed within 48 hours of initiation.**

**Possible risk factors for resistant gram negative infection include:**

- Prolonged hospital stay (currently or in the past)
- Multiple/prolonged courses of antibiotics

Doctor to document reason(s) for variation from GOSH Paediatric Sepsis 6: