Sepsis- Empirical Treatment according to possible source

**Always give 1st dose within 1 hour**

If penicillin allergy or recent antibiotic treatment in the community, consult microbiology for advice or refer to MicroGuide. Doses may need to be reduced in renal impairment- consult MicroGuide/Pharmacy.

If patient fulfills criteria for severe sepsis follow this pathway

If not, please follow CAVUHB guidance on the investigation and management of common infections

### Community Acquired Pneumonia (CAP) source
- Amoxicillin 2g TDS IV
  - PLUS
  - Clarithromycin 500mg BD IV
  - If at risk of S.AUREUS infection (history of recent flu or chickenpox or ICU admission):
    - ADD
  - Flucloxacillin 2g QDS IV

### Urinary tract infection (UTI) source
- Gentamicin 6mg/kg OD IV
  - PLUS
  - Amoxicillin 2g TDS IV

### Uncertain CAP or UTI source
- Amoxicillin 2g TDS IV
  - PLUS
  - Clarithromycin 500mg BD IV
  - PLUS
  - Gentamicin 6mg/kg OD IV

### Skin and soft tissue infection/cellulitis source
- Meropenem 1g TDS IV
  - PLUS
  - Clindamycin 600mg QDS IV
  - If signs of necrotizing fasciitis contact surgeons urgently

### Meningitis source
- Ceftriaxone 2g OD IV
  - PLUS
  - If age >50 years or pregnant or immunocompromised
    - ADD
  - Amoxicillin 2g 4 hourly IV
- “Neutropenic sepsis”
  - Piperacillin/tazobactam 4.5g TDS IV
    - PLUS
  - Amikacin 15mg/kg OD IV
- Sepsis-Unknown source
  - Piperacillin/tazobactam 4.5g TDS IV
    - PLUS
  - Gentamicin 6mg/kg STAT IV

Review treatment and microbiology daily to be able to switch to narrower spectrum antibiotic as per culture sensitivities (if available) to complete treatment course (see specific sections for durations)

If you have concerns about the use of gentamicin please consult microbiology; Do NOT OMIT without prior consultation with microbiology.

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**SEPSIS / SEVERE SEPSIS SCREENING TOOL**

Follow NEWS escalation procedure

<table>
<thead>
<tr>
<th>SSI Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>&lt;36 or &gt;38.3°C</td>
</tr>
<tr>
<td>Respiratory rate</td>
<td>≥20/min</td>
</tr>
<tr>
<td>Heart rate</td>
<td>&gt;90bpm</td>
</tr>
<tr>
<td>WCC</td>
<td>&gt;12 or &lt;4x10⁹</td>
</tr>
<tr>
<td>Acute altered mental state</td>
<td></td>
</tr>
<tr>
<td>Hyperglycaemia in the absence of diabetes</td>
<td></td>
</tr>
</tbody>
</table>

If yes, the patient has SSI

Does your patient have a history or signs suggestive of a new infection?

For example:

- Cough/ sputum/ chest pain
- Dysuria
- Abdo pain/ distension/ diarrhoea
  - Headache with neck stiffness
  - Cellulitis /wound infection/ septic arthritis
  - Endocarditis

If yes, the patient has SEPSIS

Any signs of organ dysfunction?

<table>
<thead>
<tr>
<th>Organ Dysfunction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP &lt; 90mmHg or MAP &lt;65</td>
<td></td>
</tr>
<tr>
<td>Urine output &lt;0.5ml/kg/hr for 2 hrs</td>
<td></td>
</tr>
<tr>
<td>INR &gt; 1.5 or aPTT &gt;60s</td>
<td></td>
</tr>
<tr>
<td>Bilirubin &gt; 34 μmol/l</td>
<td></td>
</tr>
<tr>
<td>Creatinine &gt;177mmol/l</td>
<td></td>
</tr>
<tr>
<td>New need for oxygen to keep SpO₂ &gt;90%</td>
<td></td>
</tr>
<tr>
<td>Platelets &lt;100 x10⁹/1</td>
<td></td>
</tr>
</tbody>
</table>

If NO, treat for SEPSIS

1. oxygen
2. Blood cultures
3. IV antibiotics
4. Fluid therapy
5. Serum lactate & Hb
6. Hourly urine output monitoring

Reassess for SEVERE SEPSIS with hrly observations

If YES, patient has SEVERE SEPSIS

Start SEVERE SEPSIS PATHWAY

Survive SEPSIS www.survivesepsis.org

Ron Daniels (October 2007)

UHB 244 Updated Oct 2014 C&VUHB by Gemma Ellis
### Severe Sepsis Care Pathway - First Hour Care Duties

**Could this patient have sepsis?**

- Yes
- Negative

**Severe Sepsis Six**

<table>
<thead>
<tr>
<th>Time</th>
<th>Initial</th>
<th>Reason not done or result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oxygen: high flow 15l/min via non-rebreathe mask. Target saturations &gt; 94%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Blood cultures: take at least one set plus all relevant blood tests eg FBC, U&amp;E, LFT, clotting, glucose. Consider urine/ sputum/ swab samples.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. IV antibiotics as per trust guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fluid resuscitate: if hypotensive give boluses of 0.9% saline or Hartmann’s 20 ml/kg up to a max of 60ml/kg</td>
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<td></td>
</tr>
<tr>
<td>5. Serum lactate and Hb: (ABG analyser: MAU/EU/ICU) Ensure Hb &gt; 70g/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Consider urinary catheter and commence fluid balance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Plus**

- Referral to Critical Care. Do you need to discuss with your consultant –on-call first?

**Start the clock__________ h**

**Please think before referring is this episode reversible?  Have all the above been completed and the patient reviewed within one hour and a PMH/Co-morbidity history taken?**

**One hour time check: All steps done?**

- Yes
- No

**Name ______________________________     Sig ______________________________**

**Designation _________________________     Bleep No. _________________________**

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### 6 Hour Resuscitation Bundle (assisted care)

**Systolic BP <90mmHg or MAP <65mmHg or a fall of >40mmHg from baseline**

**Could this patient have sepsis?**

- Yes
- No

**6 hour time check:**

- All steps done? Yes [ ] No [ ]

**Name ______________________________     Sig ______________________________**

**Designation _________________________     Bleep No. _________________________**

**Approved by G. Ellis**