

## Sepsis (Adults)

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## Introduction and Purpose

Antimicrobial Guidelines are intended to provide clinicians guidance on the management (both treatment and prevention) of common infections. This guideline forms part of a series of antimicrobial guidelines.

The clinical guidelines provide evidence based and best practice on the management of patients with infective episodes. They include empirical antimicrobial therapy including dose, route and duration of therapy and where necessary microbiological investigations and

## Objectives

- To improve the quality of antimicrobial prescribing and reduce inappropriate prescribing.
- To maximise the clinically effectiveness of antimicrobial agents used.
- To reduce drug related toxicity and development of antimicrobial resistance.
- To ensure cost effective use of antimicrobial agents.

## Scope

This guideline applies to all healthcare professionals involved in the prescription, administration and monitoring of antimicrobial agents.

## Development and consultation

The clinical guidelines have been produced by the lead clinician and lead pharmacist for each division in conjunction with microbiology.

## Implementation and Monitoring and documentation

Implementation and adherence to the guidelines is the responsibility of the lead clinician and lead pharmacist for each division.

Key aspects of the guidelines will be monitored as part of the annual audit programme.

## RECOGNISE SEPSIS

Sepsis is the systemic response to severe infection. The diagnosis is based on:

### Suspicion of infection AND 2 or more of the following

- Temperature  $<36^{\circ}\text{C}$  or  $>38^{\circ}\text{C}$
- Heart rate  $>90$  bpm
- Respiratory rate  $>20$  breaths/min
- WCC  $<4$  or  $>12 \times 10^9$  /L

## START ANTIBIOTIC THERAPY AS SOON AS POSSIBLE AFTER RECOGNITION OF SEPSIS (WITHIN 1 HOUR IN IN-PATIENTS AND WITHIN 3 HOURS IN A&E)

- Septic patients are a medical emergency requiring rapid, accurate diagnosis and prompt aggressive treatment.
- Recent microbiology results should be reviewed to identify if the patient is at risk of sepsis with a more resistant organism, which may not respond to standard first line therapy.
- Treatment should be modified according to microbiology results and duration of therapy should be based on response to therapy.

## EMPIRICAL ANTIBIOTIC THERAPY

- The choice of antibiotic, dose and route of administration are critical.
- Mortality is 2–3 times greater in bacteraemic patients that remain on ineffective empirical therapy. Even when the antibiotic regimen is corrected after 48 hours, mortality is still greater than those treated with appropriate antibiotics from the outset.

### Community acquired sepsis (unknown source)

Start treatment as soon as specimens have been taken. Administration of appropriate antibiotics should not be delayed whilst undertaking or awaiting results of investigations.

**If in any doubt seek advice. Discuss all cases with Microbiology.**

<b>1<sup>st</sup> line</b>	<u>Cefuroxime</u> 1.5g IV 8 hourly <b>plus</b> <u>Gentamicin</u> 7mg/kg IV 24 hourly Refer to <u>gentamicin dosing guideline</u> for further information on monitoring.
<b><math>\beta</math>-lactam allergy</b>	<u>Teicoplanin</u> 400mg IV 12 hourly for 3 doses, then 400mg IV 24 hourly <b>plus</b> <u>Ciprofloxacin</u> 400mg IV 12 hourly <b>plus</b> <u>Gentamicin</u> 7mg/kg IV 24 hourly Refer to <u>gentamicin dosing guideline</u> for further information on monitoring.
<b>If anaerobic sepsis suspected (e.g. with bowel derived flora)</b>	<b>Add</b> <u>Metronidazole</u> 500mg IV 8 hourly

### Hospital acquired sepsis

Contact Microbiology

### References

1. BSAC Treatment of hospital infections. Sepsis. Available at: <http://www.bsac.org.uk/pyxis/>