# HOSPITAL ADULT Empirical Treatment of Infection Guidelines

NHS Tayside

*When male and female are stated within this policy, it refers to sex assigned at birth*

## NEWS ≥5 AND INFECTION: THINK SEPSIS

**If 2 or more of the following AND clinical suspicion of infection** Temperature >38°C or <36°C Pulse rate >90 beats per minute Altered mental state Respiratory rate >20 breaths/min WCC <4 or >12 Known or suspected neutropenia

**ALWAYS DOCUMENT INDICATION & DURATION IN NOTES AND HEPMA/MEDICINE CHART**
**REVIEW ANTIBIOTIC THERAPY DAILY- CAN YOU STOP? SWITCH? SIMPLIFY? STATE DURATION?**

**INDICATIONS FOR IV USE:** Review IV therapy every 12-24 hours – see **IVOST** guideline

- Specific infections e.g. endocarditis, septic arthritis, abscess, meningitis, osteomyelitis
- 2 or more criteria as above out with range (temperature, respiratory rate, pulse, WCC)
- Febrile with neutropenia or immunosuppression
- Oral route compromised
- Post surgery – unable to tolerate 1 litre of oral fluids
- No oral formulation available

**DOSES** (UNLESS OTHERWISE STATED) ALL DOSES ASSUME NORMAL RENAL& HEPATIC FUNCTION IN NON PREGNANT ADULTS

| ANTIBIOTIC | ORAL | IV |
|---|---|---|
| Amoxicillin | 1g tds | 1g tds |
| Co-trimoxazole | 960mg bd | 960mg bd |
| Clarithromycin* | 500mg bd | 500mg bd |
| Metronidazole | 400mg tds | 500mg tds |
| Flucloxacillin | 1g qds | 1g qds |

*Consider risk of prolonged QT interval and interactions e.g. statins
** Doxycycline oral absorption significantly reduced when administered with Fe/Ca Mg/Al/Zn (including antacids e.g. Peptac) – if possible hold medicine or space doses

**MICROGUIDANCE: FOR ANTIBIOTIC 'RULES OF THUMB' AND BASIC MICROBIOLOGY INFORMATION ON COMMON INFECTIONS. ON MICROBIOLOGY REPORTS 'I' MEANS 'SENSITIVE AT INCREASED DOSE' REFER TO GUIDANCE.**

**GENTAMICIN: ALWAYS CHECK EXCLUSION CRITERIA PRIOR TO PRESCRIBING IF IV THERAPY IS STILL INDICATED AFTER 96 HOURS OF GENTAMICIN (OR AFTER 24 HOURS IF POOR/DETERIORATING RENAL FUNCTION): 1. CHECK MICROBIOLOGY RESULTS & SENSITIVITIES 2. CONSIDER SWITCH TO AZTREONAM 3. IF REQUIRED ASK ID OR MICRO FOR ADVICE**

**AZTREONAM: FOR CERTAIN PATIENTS ONLY AS ALTERNATIVE TO GENTAMICIN – REFER TO GUIDANCE**

**PENICILLIN ALLERGY: TAKE ACCURATE HISTORY AND REFER TO GUIDANCE**

## CNS ENT

**MENINGITIS** Ceftriaxone IV 2g bd + Dexamethasone IV 10mg qds (started with or just before first dose of antibiotics for 4 days) Duration: refer to guidance
• Aciclovir IV (10mg/kg tds) if encephalitis suspected (oral treatment never appropriate) • Add Amoxicillin IV 2g 4 hourly if ≥ 60 years or immunocompromised

**EPIGLOTTITIS/SUPRAGLOTTITIS** Ceftriaxone IV 2g od Refer to ENT Guidance for oral step down and treatment of other infections

## LUNG

**COMMUNITY ACQUIRED PNEUMONIA** **Assess CURB65 score /CXR/ HIV test**
**0-2 Mild/Mod** Amoxicillin 1g tds PO **(5 days)** If penicillin allergic:Doxycycline** PO 200mg on day 1 then 100mg od (If NBM IV Amoxicillin or Clarithromycin*)
**3-5 Severe** Co-amoxiclav IV 1.2g tds + Doxycycline** PO 100mg bd (If penicillin allergic: IV Levofloxacin 500mg bd monotherapy)
**ICU/HDU or NBM** Co-amoxiclav IV 1.2g tds + Clarithromycin* IV 500mg bd (If penicillin allergic: IV Levofloxacin 500mg bd monotherapy)
Step down to Doxycycline** 100mg bd for ALL patients with severe CAP **TOTAL IV/PO 5 days**

**HOSPITAL ACQUIRED PNEUMONIA** (previous ICU admission or history of MRSA: seek advice)
**Non severe:** Amoxicillin 1g tds PO **(5 days)** (If penicillin allergic: Doxycycline** PO 200mg on day1 then 100mg od)
**Severe:** IV Amoxicillin + Gentamicin (If penicillin allergic: PO/IV Co-trimoxazole + IV Gentamicin) Step down: PO Co-trimoxazole **TOTAL IV/PO 5 days**

**ASPIRATION PNEUMONIA**
**Non severe** Amoxicillin 1g tds PO (If penicillin allergic: PO Doxycycline** 200mg on day 1 then 100mg od) **TOTAL 5 days**
**Severe** IV Amoxicillin + Gentamicin (If penicillin allergic: PO/IV Co-trimoxazole + IV Gentamicin)
Step down to: PO Co-trimoxazole **TOTAL IV/PO 5 days**

**ACUTE EXACERBATION OF COPD** Give antibiotics if ↑ sputum purulence.If **no** ↑ sputum purulence then **no** antibiotics unless consolidation on CXR or signs of pneumonia **1ST LINE Amoxicillin 500mg tds 2ND LINE Doxycycline** 200mg on day 1 then 100mg od (5days)**

**ACUTE COUGH/ACUTE BRONCHITIS** Antibiotics give no significant benefit in clinical improvement but may be considered in the frail elderly.
1ST LINE Amoxicillin 500mg tds 2ND LINE Doxycycline** 200mg on day 1 then 100mg od **(5 days)**

**BRONCHIECTASIS ACUTE EXACERBATION** **• Send sputum cultures on admission & review previous sputum results prior to prescribing**
**Refer to full guidance for antimicrobial choice and duration TOTAL IV/PO 7days (mild) 14 days (severe)**

## HEART

**ENDOCARDITIS**
- **Take appropriate blood cultures**
- **Start empirical therapy as per guidance and refer to ID/Microbiology**
- **Do not use gentamicin chart/ or online calculator**

## GI

**C. DIFFICILE INFECTION Refer to full guidance to assess severity**
**Severe/Non severe**: Vancomycin 125mg qds **(10 days)**
**Recurrent:** positive CDI in previous 12 weeks - see **guidance**

**PERITONITIS/BILIARY TRACT/ INTRA-ABDOMINAL (TOTAL IV/PO 7 days)**
IV Amoxicillin + Gentamicin + PO Metronidazole *(only use IV if oral route not available)*
Step down: PO Co-trimoxazole + Metronidazole
(If penicillin allergic: IV Vancomycin + Gentamicin + PO Metronidazole *(only use IV if oral route not available)*
Step down: PO Co-trimoxazole + Metronidazole)

**ACUTE GASTROENTERITIS**
No antibiotic treatment required. Seek advice if severe.

**ACUTE PANCREATITIS**
Antibiotics unlikely to affect outcome. Seek advice.

**PROVEN SPONTANEOUS BACTERIAL PERITONITIS (5 - 7 days)**
**Mild disease:** (incidental diagnosis on routine tap): Co-trimoxazole PO
**Severe disease:** Piperacillin/Tazobactam IV 4.5g tds then step down to Co-trimoxazole PO

## GU

**CATHETERISED PATIENTS: DO NOT USE URINALYSIS. DO NOT TREAT UNLESS CLINICAL SIGNS/SYMPTOMS OF INFECTION. IF DEFINITE INFECTION TREAT AS PER COMPLICATED UTI.**
**UTI IN OLDER ADULTS: DO NOT USE URINALYSIS. DO NOT TREAT UNLESS CLINICAL SIGNS/SYMPTOMS OF INFECTION. IF DEFINITE INFECTION TREAT AS PER GUIDANCE BELOW.**

**COMPLICATED UTI/PYELONEPHRITIS/UROSEPSIS** IV Amoxicillin + Gentamicin (If penicillin allergic: PO/IV Co-trimoxazole + Gentamicin)
Step down: PO Co-trimoxazole or as per sensitivities **TOTAL IV/PO 7 days**

**UNCOMPLICATED FEMALE LOWER UTI** Nitrofurantoin 100mg MR bd or Trimethoprim 200mg bd **(3 days)**

**UNCATHETERISED MALE UTI** Nitrofurantoin 100mg MR bd or Trimethoprim 200mg bd **(7 days)**

**ACUTE BACTERIAL PROSTATITIS OR EPIDIDYMO-ORCHITIS** Refer to separate guidance and update on quinolone warnings

## BONE/ SKIN

**CELLULITIS Refer to full guidance to assess severity TOTAL IV/PO 5-7 days**
Flucloxacillin 1g qds (If penicillin allergic: Doxycycline** 100mg bd PO)
**If history of MRSA or not responding: see CELLULITIS guidance**

**OPEN FRACTURE PROPHYLAXIS** (including hand injuries)
**Refer to guidance** Start within 3 hours for max 72 hours

**DIABETIC FOOT INFECTION (7 days)**
**Refer to full guidance to assess severity OR if antibiotics in last month**
**Mild:** Flucloxacillin 1g qds or Doxycycline 100mg bd
**Moderate:** Flucloxacillin 1g qds + Metronidazole 400mg tds or Doxycycline** 100mg bd + Metronidazole 400mg tds

**ACUTE SEPTIC ARTHRITIS / OSTEOMYELITIS** (seek ID advice)
**Refer to full guidance documents**

## SEVERE SYSTEMIC INFECTION SOURCE UNKNOWN

IV Amoxicillin + Metronidazole + Gentamicin (If PWID add *S. aureus* cover IV Flucloxacillin 2g qds or if penicillin allergic use regimen below)
Penicillin allergy: IV Vancomycin + Metronidazole + Gentamicin **Neutropenic patients**: refer to guidance

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