

Title	Empirical Antibiotic Therapy for Adults Summary
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Addition/amendments	Approved date
Change to recommendations for CAP	Sep 22
Change to recommendations for HAP	Sep 22
Change to recommendations for UTI in line with ERF guidance	Sep 22
C.difficile infection – change to recommendations in line with NICE and SAPG guidance	Sep 22
IAI/Hepatobiliary – addition of oral route option for metronidazole	Sep 22
Meningitis – change in dexamethasone dose as for BNF, addition of penicillin allergy recommendation in suspected Listeria infection	Sep 22

Uncontrolled when printed

EMPIRICAL ANTIBIOTIC THERAPY FOR ADULTS: SUMMARY

See Full Guidelines for further information*



LOWER RESPIRATORY TRACT

CURB 0 or 1

EXAC OF COPD Antimicrobials if 2 or more of the following

- Increased SOB · Increased sputum
- · Purulent sputum

Oral therapy usually.

FIRST LINE Amoxicillin 500mg oral 8 hourly or Doxycycline 200mg oral on day 1 then 100mg daily Duration 5 days then review

IF SEVERE Co-amoxiclav 1.2g IV 8 hourly, (plus Clarithromycin¹ 500mg IV, 12 hourly in rare cases).

BACTERIAL PULMONARY INFECTION COMPLICATING COVID-19

NO VENTILATION Amoxicillin 500mg to 1g oral 8 hourly Doxycycline 200mg oral on day 1 then 100mg daily Duration 5 days.

NON INVASIVE VENTILATION Co-amoxiclav 1.2g IV if true Penicillin allergy Levofloxacin² 500mg IV/PO 12 hourly

Duration 5 days (with

IVOS).

IF INTUBATED Piperacillin/tazobactam 4.5a 6 hourly if true Penicillin allergy Levofloxacin² 500mg IV/PO 12 hourly Duration 5-7 days.

COMMUNITY ACQUIRED PNEUMONIA (CAP) CURB-65 score, any Confusion (new),

Urea >7, RR≥30, SBP<90 or DBP≤60, age>65v

Amoxicillin 500mg to 1g oral 8 hourly If true penicillin allergy Doxycycline oral 200mg on day 1 then 100mg daily. Duration 5 days then review. CURB 2 Amoxicillin 500mg to 1g oral 8 hourly If Legionella, Mycoplasma or other atypical bacterial pathogens suspected add

Clarithromycin¹ 500mg oral 12 hourly Use IV if oral route unavailable If true Penicillin allergy Doxycycline oral 200mg on day 1 then 100mg daily

or Clarithromycin¹ 500mg oral 12 hourly (IV if oral route unavailable) Duration 5 days then review. **CURB 3-5**

Co-amoxiclav 1.2g IV 8 hourly +Clarithromycin¹ 500mg oral or IV 12

If true Penicillin allergy -Levofloxacin² 500mg oral/IV 12 hourly Duration 5 days then review.

HOSPITAL ACQUIRED **PNEUMONIA**

< 48h since admission: treat as CAP

>48h since admission Low severity: Doxycycline oral 200mg on day 1 then 100mg daily

Co-trimoxazole 960mg oral 12 hourly High Severity: Amoxicillin 1g IV 8 hourly + Gentamicin IV (Max 3 days then review. Extended interval: see dosing guideline) if true Penicillin allergy or prev MRSA Vancomycin IV (see dosing quideline) + Gentamicin IV (Max 3 days then review. Extended interval: see dosing guideline) Duration 5 days then review

ASPIRATION PNEUMONIA

MILD TO MODERATE Amoxicillin oral 500mg 8 hourly (or IV 1g 8 hourly if oral route not available) +Metronidazole oral 400mg 8 hourly (or 500mg IV 8 hourly ir oral route not available) If true Penicillin allergy

Doxycyline oral 200mg on day 1 then 100mg daily (or vancomycin IV if oral route not available. See dosing guidelines) + metronidazole oral 400mg 8 hourly (or 500mg IV 8 hourly if oral route not available)

SEVERE

Amoxicillin IV 1g 8 hourly +metronidazole IV 500mg 8 hourly + gentamicin IV (max 3 days then review. Extended interval: see dosing guidelines) If true Penicillin allergy Vancomycin IV (see dosing guidelines)

+ metronidazole IV 500mg 8 hourly

+ gentamicin IV (max 3 days then review. Extended interval: see dosing guidelines

Duration 5 days then review

SKIN/SOFT TISSUE

CELLULITIS

Initial treatment - see full guideline for more information.

CLASS I (no systemic toxicity & no significant co-morbidity. no sepsis): Flucloxacillin 500mg-1g oral 6 hourly If true Penicillin allergy, Clarithromycin¹ 500mg oral 12 hourly.

CLASS II (co-morbidity but no sepsis): Flucloxacillin 2g IV 6 hourly If true Penicillin allergy, Clarithromycin¹ 500mg IV 12

hourly.

quidelines).

CLASS III (sepsis or new confusion or limb-threatening infection due to vascular compromise): Flucloxacillin 2g IV 6 hourly If true Penicillin allergy: vancomycin IV (see dosing

CLASS IV (severe sepsis, septic shock or suspected necrotising fasciitis) Flucloxacillin 2g IV 6 hourly ciprofloxacin 400mg IV1 12 hourly + clindamycin 600mg-1.2g IV 6 hourly If true penicillin allergy: vancomycin IV (see dosing guidelines)+ciprofloxacin1 400mg IV1 12 hourly + clindamycin 600mg-1.2g IV 6 hourly.(Ciprofloxacin¹ IV for first

Duration 7-14 days (longer courses may be required).

to switch patient to oral).

dose, then review if appropriate

ABDOMINAL WALL: see full guideline

DIABETIC FOOT: see separate guideline

NECROTISING

FASCIITIS: antibiotics as for Class IV cellulitis, above. Note: debridement is the definitive treatment and should not be delayed

HUMAN, DOG OR CAT BITES Co-amoxiclay 625mg oral

8 hourly If true Penicillin allergy (excluding pregnancy & children) Doxycycline100mg

+Metronidazole 400mg oral 8 hourly. Duration: 5 days for treatment

3 days for prophylaxis

URINARY TRACT

GASTRO-INTESTINAL

Lower UTI

Females(non-pregnant) and Males

Trimethoprim 200mg oral 12 hourly

Nitrofurantoin MR 100mg oral 12 hourly

Nitrofurantoin contraindicated in patients with eGFR <45ml/min. Short course (3-7d) may be used with caution in certain patients with eGFR 30-44ml/min to treat lower UTI if indicated by Microbiology results and only where benefit outweighs risks Duration: Women 3 days/ Men 7 days.

Pregnant See East Region Formulary: Infections Chapter via NHSB Intranet

UPPER UTI/ PYELONEPHRITIS/

UROSEPSIS (Initial treatment)

Amoxicillin 1g IV 8 hourly +Gentamicin IV (max 3 days then review. Extended interval: see dosing guidelines). 2nd line

Ciprofloxacin² 500mg oral 12 hourly Consider giving initial dose as 400mg Adjust therapy on basis of culture

results or discuss with microbiology. Amoxicillin monotherapy not suitable unless directed by sensitivities.

Total duration (IV + oral) = 7 days then

In pregnancy, see Specialist Obstetric Guideline via NHSB Intranet

C DIFFICILE Infection

Stop/review concomitant antibiotic therapy

Consider stopping gastric acid suppressive therapy

First episode Vancomycin 125mg oral 6 hourly

Duration 10 days.

Second/subsequent episode Discuss with Infection Specialist

Seek advice if oral route not available

Urgent surgical, GI and Microbiology consultation in all patients with life-threatening disease

INTRA-ABDOMINAL/ HEPATOBILIARY INFECTION

Amoxicillin 1g IV 8 hourly + Metronidazole 500mg IV 8 hourly or, i oral route appropriate, 400mg oral 8

+Gentamicin IV (max 3 days then review. Extended interval: see dosing auidelines).

If true Penicillin allergy, consider Vancomycin IV (see dosing guidelines) +Metronidazole 500mg IV 8 hourly or, if oral route appropriate, 400mg oral 8 hourly

+Gentamicin IV (max 3 days then review. Extended interval see dosing guidelines) + and discuss with Microbiologist.

BONE/JOINT INFECTION

SEPTIC ARTHRITIS/ OSTEOMYELITIS

Initial treatment: Flucloxacillin 1g to 2g IV 6 hourly If true Penicillin allergy: Vancomycin IV (see dosing guidelines) (discuss with microbiologist).

DIABETIC FOOT: see separate quideline

OPEN FRACTURES Co-amoxiclay 1.2g IV/625mg oral 8 hourly depending on severity.

Penicillin Allergy Teicoplanin IV (see full guidelines for dosing) +gentamicin IV (extended interval: see dosing guidelines) or depending on severity, Clindamycin 150-300mg oral, increase if necessary to 450mg, 6 hourly.

Duration: 24h, but up to 3 days if severe then review.

BACTERIAL MENINGITIS

Consider dexamethasone 10mg IV 6 hourly for 4 days started before or with first dose of antibiotic, especially where S.pneumoniae is most likely pathogen.

CNS INFECTION

Cefotaxime 2g IV 6 hourly. Increased if necessary to 12g daily in 3-4 divided doses.

If age >50 or, immunocompromised, and in all other cases where listeria. suspected, add amoxicillin 2g IV every 4 hours (if penicillin allergy, add co-trimoxazole IV 120mg/kg/daily in 4 divided doses. Seek advice if patient is obese)

Duration 7 days meningococcal

14 days pneumococcal, or as per Microbiologist advice.

H.SIMPLEX ENCEPHALITIS Aciclovir 10mg/kg IV 8 hourly Duration: minimum 14 days.

SEVERE SYSTEMIC INFECTION UNKNOWN SOURCE

UNKNOWN SOURCE Amoxicillin 1.g IV 8 hourly +Gentamicin IV (max 3 days then review. Extended interval: see dosing guidelines) +Metronidazole 500mg IV 8 hourly if abdominal source suspected

If MRSA infection suspected substitute Vancomycin for amoxicillin (see dosing guidelines).

Penicillin allergy Vancomycin IV (see dosing guidelines) + Gentamicin (max 3 days then review. Extended interval dosing see dosing auidelines) Metronidazole 500mg IV 8 hourly if abdominal source suspected.

POSSIBLE INFECTIVE ENDOCARDITIS

See separate Guideline Consult Microbiologist and Cardiologist.

SEPTICAEMIA

FROM CENTRAL LINES Remove line if possible (Discuss with Consultant before removing tunnelled lines). Vancomycin IV (see dosing quidelines) or Teicoplanin 400mg 6mg/Kg IV 12 hourly for 3 doses then 6mg/Kg daily (higher doses may be required -discuss with Microbiologist). Add gentamicin if systemically unwell. Extended interval dosing: see dosing guidelines.

NEUTROPENIC SEPSIS

*See full Neutropenic sepsis guidelines on antimicrobial microsite for further details including exceptions to use of gentamicin

DO NOT GIVE GENTAMICIN TO PATIENTS RECEIVING **CISPLATIN** CHEMOTHERAPY

Piperacillin/Tazobactam 4.5g IV 6 hourly +Gentamicin IV (extended interval: see dosing guidelines)

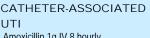
Penicillin allergy If rash only, should be safe to use Ceftazidime 2g IV TDS +Gentamicin IV (extended interval: see dosing quidelines)

If known severe beta-lactam allergy, seek advice from Microbiologist.

If Hickman line infection suspected, add Teicoplanin (see full guidelines for dosing and discuss with Microbiologist)

CATHETER-ASSOCIATED

Vancomycin IV (see dosing guidelines)



Amoxicillin 1g IV 8 hourly +Gentamicin IV (max 3 days then review. Extended interval: see dosing auidelines)

Penicillin allergy

+ Gentamicin IV (max 3 days then review. Extended interval dosing see dosing guidelines).

Take CSU, preferably through new catheter, prior to antibiotics. Adjust therapy on basis of culture results or discuss with microbiology. Total duration (IV + oral) = 7 days then review.



- Doses stated assume normal renal and hepatic function. If renal failure/dysfunction hepatic failure/dysfunction, seek advice
- If severe sepsis/complicated or unusual aetiology, seek advice
- See Protocols for Gentamicin and Vancomycin dosing
- Use in conjunction with specialist unit policies.
- Modify treatment according to laboratory sensitivity results.
- ¹significant drug interactions
- ²consider safety issues with quinolones
- Review all patients on a daily basis with a view to IV to ORAL switch if appropriate (see full guideline):clinical improvement - markers improved - oral route available - Not a high risk/deep seated infection or longer duration advised by Microbiologist).
- To contact Consultant Microbiologist: page 6231 or phone BGH Switchboard.
- *Hospital Antimicrobial Guidelines available on NHS Borders Intranet (Antimicrobials Microsite) and via Antimicrobial Companion App.

NHS BORDERS Antimicrobial Management Team Sep 22 (Review date Sep 2025)