Antibiotic Management Team

NHS Dumfries and Galloway

Empirical Antibiotics Formulary for Secondary Care (Adult)

Updated 09 Oct 2025

Document Control			
Scope	NHS Dumfries and Galloway Adults in secondary care		
Author	Evelyn Yoong Antimicrobial Pharmacist *Original document* Dr Sharon Irvine, Dr Edel Pyke & Dr Mikesh Mistry, AMN Jayne Walden	Version Number	8.2
Reviewers	Antimicrobial Management Team (AMT) & *in particular:* **Dr Linsey Batchelor (AMT lead)** **Dr Bryan Marshall** **Dr Jon Van Aartsen** **Dr Sharon Irvine** **Dr Manjul Medhi** *Special thanks for their contribution to the formulary: Micro/ID team, Dr. Heydtmann, Dr. Moawad Mahgoub, Dr. Ali Atwi, Dr. Abdellatif Tawfik & Mr. Whitelaw*	Implementation date Contents updated	02 June 2025 09 Oct 2025
Status	Approved		
Approved by	AMT & ADTC	Next review date:	02 June 2027

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Aims

- To provide a simple, best guess approach to the treatment of common infections.
- To promote the safe, effective, and economic use of antibiotics.
- To minimise the emergence of bacterial resistance and hospital acquired infections.

Principles of Treatment

1. The advice given in the antibiotic policy for adults is based on the information available at the time of writing. It should be interpreted by the prescriber in the light of professional judgement and clinical assessment.

2. Prescribe an antibiotic only when there is likely to be a clear clinical benefit. Prescriptions for antibiotics must include documentation of the indication and stop/review date on HEPMA or prescription chart or in the medical notes.

3. In pregnancy, avoid quinolones, tetracycline, aminoglycosides (unless severe/ life threatening infection), high dose metronidazole, trimethoprim (in first trimester - folate antagonist) and nitrofurantoin (at term - risk of neonatal haemolysis, however short term use of nitrofurantoin is unlikely to cause problems to the foetus).

4. Avoid widespread use of topical antibiotics (especially those also available as systemic preparations).

5. Quinolones and tetracycline antibiotics can interact with cations, milk, antacids, and sodium bicarbonate, potentially reducing their absorption and effectiveness. These interactions occur due to the formation of insoluble complexes between the antibiotics and divalent or trivalent cations such as calcium, magnesium, aluminium, iron, and zinc. To minimize these interactions, it's recommended to leave a gap of at least (minimum) 2 hours before or after taking the antibiotic- refer to link

6. **Avoid prescribing tetracycline antibiotic (e.g. doxycycline) near bedtime** due to risk of oesophagitis. Consider prescribing doxycycline at 8am and 8pm, or 8am or 4pm on HEPMA. Patient should remain upright for at least 30 minutes after taking doxycycline.

7. Gentamicin and Vancomycin therapy requires monitoring. Gentamicin and Vancomycin dosing guidelines can be found in the NHS Dumfries and Galloway Antimicrobial Handbook.
   - For guidance on dosing gentamicin & vancomycin, refer to the policy
   - Gentamicin for **endocarditis**, synergistic Gentamicin for endocarditis guidelines should be used

   Neonatal ototoxicity has not been observed with use of gentamicin in pregnancy however it has been seen with other aminoglycosides, therefore gentamicin should be used with caution in pregnancy. Where possible use only a stat dose or the shortest effective course.

8. **Doses stated on this formulary are based on normal renal and hepatic function.** If renal function is impaired, discuss antibiotic dose adjustments with your clinical pharmacist/consultant or check the Renal Drug Database* or Summary of Product Characteristics (SPC).*
   - For most drugs and for most patients of average build and height, eGFR can be used to determine dosage adjustments. However, in elderly patients, extremes muscle mass (BMI <18kg/m2 or >40kg/m2), on nephrotoxic drugs/ drugs with narrow therapeutic index, it's advisable to calculate creatinine clearance (CrCl) using the Cockcroft-Gault formula.
   - *Note- The information on dosage adjustments in renal impairment given in Renal Drug Database and SPC are based on Cockcroft-Gault creatinine clearance and not eGFR, since the majority of published information available is based on creatinine clearance.

9. Nitrofurantoin is contraindicated in patients with an estimated CrCl below 30 mls/min.

10. If the patient is penicillin allergic, review the nature of the allergy.
    - If allergy is minor (non-confluent or non-pruritic rash restricted to a small area), it is safe to use Cephalosporins. The information contained in the 56th and subsequent editions of the BNF now states that the hypersensitivity rate between penicillins and cephalosporins is 0.5% - 6.5% (vs 10% previously thought).
    - If patient has had previous Type I anaphylaxis or Severe Type 4 reaction (e.g. Steven-Johnson syndrome, Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS); **DO NOT** use any penicillin or cephalosporins (of any generation). Other beta lactams (e.g. aztreonam, carbapenems) may be used with caution where benefit outweighs risk, as low risk of cross sensitivity (≤1%).
    - If a penicillin allergy alternative is not given in this policy, contact microbiology for further advice.

11. All antibiotics have side effects including Clostridiodes difficile infection (CDI). In particular, broad spectrum Cephalosporins, Co-Amoxiclav, Piperacillin/Tazobactam, Carbapenems and Quinolones are implicated, and where possible, an alternative antibiotic is recommended. CDI is associated with high mortality; a 2010-2016 study reported a 30-day all-cause mortality rate of 17.5% for CDI patients. Healthcare-associated CDI had a higher mortality rate (21.8%) compared to community-associated CDI (8.3%)

12. Oral Quinolones, Metronidazole and Co-trimoxazole have excellent bioavailability. Although oral Clarithromycin has 50% bioavailability, it has an active metabolite and excellent penetration into pulmonary tissue, hence considered equivalent to IV. For these agents, use IV only if oral route is compromised.

13. Note restrictions on use of fluoroquinolones following MHRA safety review 2024. **Patient information leaflets must be provided and counselling done on quinolone prescriptions.**

14. **Review intravenous antibiotics daily**. Consider switching to oral therapy when the patient is clinically improved and the following criteria are satisfied: Temperature is resolving; patient can tolerate oral therapy; refer to IV to Oral Antibiotic Switch Therapy (IVOST) guidelines on NHS D&G Antimicrobial Handbook if there is no positive microbiology to guide change.

15. In 2019, EUCAST (European Committee on Antimicrobial Susceptibility Testing) redefined 3 primary categories used in antibiotic susceptibility testing: Refer to link for further information
    - **Susceptible (S):** Indicates that the antibiotic is effective at standard doses.
    - **Susceptible, Increased Exposure (I):** Replaces the previous "Intermediate" category**, suggesting that the antibiotic can be effective at higher doses or with prolonged exposure.**
    - **Resistant (R):** Indicates that the antibiotic is ineffective, even at higher dose.

16. Individuals with myasthenia gravis (MG) should exercise caution when using certain antibiotics, as they can potentially worsen the condition. Refer to link for more information.

17. If you require advice for any indication not listed here, or for any other advice, please contact the duty consultant microbiologist. Ensure all relevant clinical information is available.

18. Audit of antibiotic prescribing against this policy is carried out on a regular basis.

Useful contact numbers

Duty consultant microbiologist- (Switchboard)
Infectious diseases consultant- Dr Irvine (33656)k
Antimicrobial Pharmacist for secondary care Evelyn Yoong (31315)
Antimicrobial Pharmacy Technician Donna Davidson (32236)
Antimicrobial Stewardship Team email: dg.antimicrobialstewardship@nhs.scot
Out of hours – Clinical queries on call Microbiologist or Pharmacy issues on-call pharmacist via switchboard.

Sepsis

Sepsis is a life-threatening organ dysfunction caused by dysregulated host response to infection. Arises due to injury to tissues, usually as a response to infection. Sepsis has a mortality rate of 30% in the UK.

Septic shock is a subset of sepsis, in which circulatory and metabolic abnormalities are profound enough to substantially increase mortality. End organ damage has occurred as a result of sepsis – lactate remains high, and BP remains low despite adequate fluid resuscitation.

Screen for Sepsis (in all patients with suspected infection). Please refer to D&G sepsis bundle

- High degree of vigilance required for early identification
- If presenting with infection and physiological disturbances (NEWS of ≥4, or 3 in one parameter) → **Stop. Think: Could this be Sepsis?**

Presence of Red Flags

- V, P or U on AVPU – responds only to voice or pain, or is unrousable
- SBP ≤ 90mmHg (or <40mmHg from normal)
- HR > 120
- RR ≥25
- Requires oxygen to maintain SaO2 ≥ 92%
- Non-blanching rash/ cyanosis/ mottled skin/ ashen looking
- No urine output in last 18 hours
- Urine output < 0.5ml/kg/hr
- Lactate ≥2
- Recent chemotherapy

Any red flags → start Sepsis-6 within 1 hour and request senior review

Presence of Amber Flags

- Relatives concerned about mental status/ confusion
- Acute deterioration in functional ability
- Immunosuppressed
- Trauma/ surgery/ procedure in last 6 weeks
- RR 21-24 OR working hard to breathe
- SBP 91-100mmHg
- HR 91-120 OR new arrhythmia
- Temperature < 36
- No urine output in last 12-18 hours
- Clinical signs of wound, skin or device infection

Any amber flags → take bloods and lactate and senior review within 1 hour and treatment started, if appropriate, within 3 hours or sooner

Take cultures (blood, urine, etc) and measure lactate prior to commencing antibiotic treatment.

Antibiotics of choice for SEPSIS

Indications	1st line antibiotics	2nd line antibiotics	Duration
Sepsis of unknown origin			
	IV Amoxicillin 1g 8-hourly AND IV Gentamicin	IV Vancomycin AND IV Gentamicin	Duration depends on source Review after 48 hours and switch if possible
Sepsis and unsure if LRTI or UTI			
	IV Amoxicillin 1g 8-hourly AND IV Gentamicin IV	IV Co-trimoxazole 960mg 12-hourly (and consider IV Gentamicin)	Review at 48hrs and switch
Respiratory tract sepsis			
Community-acquired	IV Amoxicillin 1g 8-hourly or IV Co-amoxiclav 1.2g 8-hourly AND PO Doxycycline 200mg stat, then 100mg bd (as 1st choice) OR PO Clarithromycin 500mg 12-hourly (as 2nd choice) - *IV if absorption/ swallow issues*	PO Levofloxacin 500mg 12-hourly *(IV if absorption/ swallow issues)*	5 days (including IV and oral) Levofloxacin is the choice of antibiotic if confirmed *Legionella pneumonia* Duration: 10-14 days of 'atypical cover' (longer duration may be required in severe disease or immunocompromised)
Hospital-acquired	IV Co-trimoxazole 960mg 12-hourly AND IV Gentamicin		5 days (including IV and oral)

Urinary tract sepsis		
Upper UTI/ pyelonephritis (males & non-pregnant females)	**With sepsis:** IV Gentamicin up to 72 hours as per protocol, consider IVOST* at 48-72 hours **If renal impairment CrCl<20mls/min:** **Single dose** IV Gentamicin- take levels q24 hours as per gentamicin protocol, consider IVOST* at 48-72hours *Note- clearance of gentamicin in severe renal impairment is significant slower. A single dose can linger in the system for much longer and may be sufficient to cover up to 72hours* *Refer to IVOST policy if no positive culture and sensitivity **If IVOST criteria not met:** refer to 'IV Gentamicin: What to do after 72hours (Adult)' policy OR discuss with infection specialist	7 days (including IV and oral)
Catheter-associated UTI (CAUTI) *Change catheter*	**With sepsis:** IV Gentamicin up to 72 hours as per protocol, consider IVOST* at 48-72 hours Change catheter after 1st dose **If renal impairment CrCl<20mls/min:** **Single dose** IV Gentamicin- take levels q24 hours as protocol, consider IVOST* at 48-72hrs *Note- clearance of gentamicin in severe renal impairment is significant slower. A single dose can linger in the system for much longer and may be sufficient to cover up to 72hours* *Refer to IVOST policy if no positive culture and sensitivity **If IVOST criteria not met**: refer to 'IV Gentamicin: What to do after 72hours (Adult)' policy OR discuss with infection specialist	**With sepsis:** 7 days (including IV and oral)

Gastrointestinal sepsis			
Initial treatment for intra-abdominal sepsis and infections • Cholangitis • Cholecystitis with sepsis • Appendicitis • Diverticulitis • Peritonitis • Biliary stent infections	IV Amoxicillin IV 8-hourly AND PO Metronidazole 400mg 8-hourly (IV if absorption/ swallow issues) AND IV Gentamicin **PO Metronidazole has about 95- 100% bioavailability;*	**If CrCl <20mls/min:** IV Piperacillin-Tazobactam 4.5g 12-hourly **If severe penicillin allergy:** IV Vancomycin AND IV Gentamicin AND PO* Metronidazole 400mg 8-hourly (IV- only if absorption/ swallow issues*)* **If severe penicillin allergy and CrCl<20mls/min:** PO* Metronidazole 400mg 8-hourly AND PO* Ciprofloxacin 500mg 12-hourly **IV only if absorption/ swallow issues*	5 days (including IV and oral) **For biliary tract infection- Treatment as recommended <u>except metronidazole not routinely required unless severe</u>** Refer to IV Gentamicin: What to do after 72 hours (Adults) policy for further guidance if IVOST criteria not met For IVOST option- refer to IVOST policy on NHS D&G Antimicrobial Handbook
Sepsis from skin or soft tissue infections			
Severe Cellulitis/ Erysipelas For upper limb cellulitis, seek orthopaedic advice	IV Flucloxacillin 2g qds **If rapidly progressing:** Add IV Clindamycin 600mg 6-hourly	IV Vancomycin **If rapidly progressing:** Add IV Clindamycin 600mg 6-hourly	7-10 days (including IV and oral)
Necrotising fasciitis *Get urgent surgical review*	**<u>In order of administration:</u>** IV Piperacillin-Tazobactam 4.5g 6-hourly (1st dose can be given as bolus over at least 5 minutes) AND IV Clindamycin 1.2g 6-hourly (40-60mins infusion) AND IV Gentamicin (30mins infusion)	**<u>In order of administration:</u>** **<u>TWO IV LINES REQUIRED</u>** IV Vancomycin IV AND IV Clindamycin 1.2g 6-hourly (40-60mins infusion) AND IV Gentamicin (30mins infusion) AND IV Metronidazole 500mg tds (20mins infusion)	Rationalise 48-72 hours of starting antibiotics 10 days or as per Infection specialist

<table>
<tr><th colspan="4">Sepsis from Bone and Joint infection</th></tr>
<tr><td rowspan="2">Septic arthritis

Urgent orthopaedic referral if underlying metal work or recent surgery. Ensure joint aspiration done prior to antibiotics</td><td>Native joint:
IV Flucloxacillin 2g 6-hourly

If high risk for gram negative infection e.g. immunocompromised, recurrent UTI, sickle cell disease: ADD Gentamicin</td><td>Native joint:

IV Vancomycin

If high risk for gram negative infection e.g. immunocompromised, recurrent UTI, sickle cell disease: ADD Gentamicin</td><td>Discuss with Microbiology Consultant.

Usually 6 weeks total – [usually first 2 weeks as IV]</td></tr>
<tr><td colspan="3">Prosthetic joint: Discuss with Microbiology Consultant.</td></tr>
<tr><td rowspan="2">Osteomyelitis

Moderate & Severe infection in acute diabetic foot /osteomyelitis

Assess ulcer size, probes to bone, neuropathy, peripheral vascular disease, MRSA risk. Refer to diabetic foot MDT, and consider need for podiatry and vascular surgery input. Send specimen for culture and review previous microbiology</td><td colspan="3">Take blood cultures (2 sets) prior to starting treatment. Discuss with infection specialist

Diabetic foot: Determine severity of wound infection (mild/ moderate/ severe), as per IWGDF/IDSA infection guideline, to determine most appropriate antibiotic therapy:
https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-04-Infection-Guideline.pdf</td></tr>
<tr><td>IV Flucloxacillin 2g 6-hourly +/- see below

If high risk for Gram negative infection (e.g. recent antibiotics, sepsis, haemodynamic compromise, ischaemic limb, necrosis, gas forming: ADD IV Gentamicin

If high risk for anaerobic infections (e.g. ischaemic limb/ necrosis/ gas forming): ADD PO Metronidazole 400mg 8-hourly (IV- if absorption/ swallow issues)

If CrCl <20ms/min AND combination therapy required:
IV Piperacillin-Tazobactam 4.5g 12-hourly

*PO Metronidazole has about 95- 100% bioavailability</td><td>IV Vancomycin +/- see below

If high risk for Gram negative infection (e.g. recent antibiotics, sepsis, haemodynamic compromise, ischaemic limb, necrosis, gas forming: ADD IV Gentamicin

If high risk for anaerobic infections (e.g. ischaemic limb/ necrosis/ gas forming): ADD PO Metronidazole 400mg 8-hourly (IV- if absorption/ swallow issues)

If eGFR<20ms/min AND combination therapy required: Discuss with Infection Specialist

*PO Metronidazole has about 95- 100% bioavailability</td><td>10-14 days (including IV and oral)

(if osteomyelitis, discuss duration with infection specialist)</td></tr>
</table>

Central nervous system sepsis			
Bacteria Meningitis	**IV Ceftriaxone 2g 12-hourly** ADD IV Dexamethasone 10mg IV 6-hourly **(prescribe 3mls of 3.3mg/ml dexamethasone (base) on HEPMA** **If Listeria suspected/confirmed, >55years, immunocompromised, alcohol excess, liver disease:** ADD IV Amoxicillin2g 4-hourly	Severe penicillin allergy: **IV Meropenem 2g 8-hourly** ADD IV Dexamethasone 10mg IV 6-hourly **(prescribe 3mls of 3.3mg/ml dexamethasone (base) on HEPMA** **If penicillin allergy and Listeria suspected/confirmed, 55years, immunocompromised, alcohol excess, liver disease:** ADD IV Co-trimoxazole 30mg/kg 6 hourly	Discuss with Infectious Disease Specialist/ Microbiology Consultant
Viral Meningitis	Usually diagnosed after empirical management and exclusion bacteria meningitis Stop antiviral if enteroviral or mumps meningitis is diagnosed and manage symptomatically Continuation of antivirals for HSV/ VZV should be discussed with infection specialist		
If suspected encephalitis/ *HSV encephalitis *Discuss with microbiology if suspecting HSV Consider if confusion or reduced level consciousness in suspected CNS infection.	IV Aciclovir 10mg/kg* 8-hourly Obesity is defined by the National Institute for Health and Care Excellence (NICE) as BMI ≥30kg/m2 Risk of toxicity is increased when IV Aciclovir is dosed as per actual body weight in obese patients. One pharmacokinetic study has shown that dosing using ideal body weight may lead to sub therapeutic plasma concentration. ***It is recommended that adjusted body weight (AdjBW) should be used when calculating doses for obese patients BMI ≥30kg/m2** **AdjBW= IBW + 0.4 (actual body weight – IBW)**		10-21 days
Sepsis from Ophthalmic, ENT and maxillofacial Infections			
	Refer to the Ophthalmic, ENT and maxillofacial section- Page 25-27		

<table>
<tr><td colspan="4">Neutropenic Sepsis (May 2025- Neutropenic guidance being reviewed- use this meantime)
Definition:
• Signs of sepsis, Neutrophils <0.5 or <1 if chemotherapy in the last 21 days</td></tr>
<tr><td>Standard risk

Neutropenic sepsis and NEWS ≤ 6</td><td>IV Piperacillin-Tazobactam 4.5g 6-hourly
If MRSA positive:
ADD IV Vancomycin</td><td>IV Gentamicin
AND
IV Vancomycin (irrespective of MRSA status)</td><td>7 days</td></tr>
<tr><td>High risk
Neutropenic sepsis and NEWS >7 OR
Septic shock of leukaemia OR
Allogenic stem cell transplant</td><td>IV Piperacillin-Tazobactam 4.5g 6-hourly
AND
IV Gentamicin

If MRSA positive:
ADD IV Vancomycin</td><td>IV Gentamicin AND
IV Vancomycin (irrespective of MRSA status)
AND
PO Ciprofloxacin 500mg 12-hourly (IV-if absorption/ swallow issues)
Or discuss with Microbiology Consultant</td><td>7 days</td></tr>
<tr><td colspan="4">Sepsis in pregnancy or post-partum period</td></tr>
<tr><td colspan="4">Refer to NHS D&G Obstetrics and Gynaecology Formulary</td></tr>
<tr><td colspan="4"><u>Staphylococcus bacteraemia (SAB)</u></td></tr>
<tr><td colspan="4">Refer to NHS D&G Antimicrobial Handbook- SAPG infection specific guidance on SAB</td></tr>
<tr><td>Needs investigation for source</td><td>IV Flucloxacillin 2g 6-hourly</td><td>IV Vancomycin</td><td>Depends on source
MINIMUM of 14 days IV antibiotics</td></tr>
<tr><td colspan="4"><u>Infective endocarditis</u></td></tr>
<tr><td>3 sets of blood cultures (ideally over 48 hours) to be taken prior to antibiotics</td><td colspan="3">Discuss with Microbiology Consultant
Note: If IV Flucloxacillin commenced (for Methicillin Sensitive Staphylococcus Aureus [MSSA] endocarditis)- please ensure correct dosing as weight dependant
<85kg: 2g 6- hourly (i.e. 8g daily of IV Flucloxacillin)
≥85kg: 2g 4-hourly (i.e. 12g daily of IV Flucloxaciilin)</td></tr>
<tr><td colspan="4"><u>Line infections</u></td></tr>
<tr><td>PVC phlebitis

Peripheral line infections

Peripheral lines refers to cannula inserted into peripheral veins including PICCs and Midlines</td><td colspan="2">REMOVE LINE. Assess signs of infection

If localised infection at PVC exit site present (red, swollen, warm, pus around skin entry site):
PO Flucloxacillin 1g PO 6-hourly OR
PO Doxycycline 200mg stat, then 100mg 12-hourly

Severe infected PVC exit site (+/- sepsis):
IV Flucloxacillin 2g 6-hourly
OR if penicillin allergy:
IV Vancomycin</td><td>Duration: Discuss with Microbiology Consultant. Treatment depends on underlying organism</td></tr>
<tr><td>Central line infection</td><td colspan="3">Discuss with Microbiology Consultant. Treatment depends on underlying organism</td></tr>
</table>

Indications	1st Line antibiotic	2nd Line antibiotic	Typical Duration

Covid
https://www.nhsdghandbook.co.uk/categories/covid19/?handbook=medical
 	
Community Acquired Pneumonia
Assess severity with CURB-65 score
 	
For severe pneumonia →
• Urine for legionella and pneumococcal (L&P) antigens
  ○ **D&G Labs will only process this only if CURB65 ≥2- please state CURB65 score on lab request form**
  ○ **Consider testing if there is a history of recent travel or bird/animal exposure**
• Blood cultures
• Sputum cultures
• Viral specimens
• HIV test			

CURB-65 ≤1 **Mild** CURB-65 = 2 **Moderate**	PO Amoxicillin 1g 8-hourly (unless H. Influenza has been excluded) OR PO Doxycycline – 200mg stat, then 100mg 12-hourly	PO Clarithromycin 500mg 12-hourly	5 days
CURB-65 ≥3 **Severe** OR Any CURB65 score with sepsis OR **Clinically severe** pneumonia in young patients	IV Amoxicillin 1g 8-hourly **OR** IV Co-amoxiclav 1.2g 8-hourly **AND (Add atypical agent)** PO Doxycycline 200mg stat, then 100mg 12-hourly (as 1st choice) **OR** PO Clarithromycin 500mg 12-hourly (as 2nd choice*)- IV if absorption/ swallow issues)*	PO Levofloxacin 500mg 12-hourly (IV if absorption/ swallow issues) *Levofloxacin has atypical cover*	5 days (including IV and oral) Levofloxacin is the choice of antibiotic for **confirmed *Legionella pneumonia*** Duration: 10-14 days of 'atypical cover' (longer duration may be required in severe disease or immunocompromised)
Unsure if LRTI or UTI, and no evidence of sepsis	PO Amoxicillin 500mg - 1g 8-hourly AND PO Nitrofurantoin 50mg 6-hourly *(*M/R 100mg 12-hourly only if compliance issues)*	PO Co-trimoxazole 960mg 12-hourly	Diagnosis needs to be clarified 48-hours into admission and switched to more specific antibiotic coverage

Hospital Acquired Pneumonia (HAP) Early Onset: ≤ 4 days from admission date Late Onset: ≥ 5 days from admission date Assess severity using CURB-65 criteria			
Early-Onset:	Early-onset (occurring within 4 days of admission) HAP is usually caused by the same bacteria and viruses as community-acquired pneumonia		
	Follow CAP guidance based on CURB-65 score	Follow CAP guidance based on CURB-65 score	5 days
Late Onset	Late-onset HAP has a worse prognosis and is usually caused by micro-organisms that are acquired from the hospital environment and can be more resistant		
Non-severe Late-Onset	PO Doxycycline 200mg stat then 100mg 12-hourly	PO Co-trimoxazole 960mg 12-hourly	5 days
Severe Late-Onset	IV Co-trimoxazole 960mg 12-hourly AND IV Gentamicin (review after 48-hours If MRSA positive: ADD Vancomycin	PO Levofloxacin 500mg 12-hourly *(IV if absorption/ swallow issues)* If MRSA positive: ADD IV Vancomycin	5 days (including IV and oral)
Infective Exacerbation of COPD			
Purulent sputum – **likely bacterial** aetiology	PO Doxycycline 200mg stat then 100mg 12-hourly	PO Amoxicillin 1g 8-hourly Unless H. Influenza has been excluded **OR** PO Clarithromycin 500mg 12-hourly	5 days *Remember to give steroids – 30mg prednisolone daily for 5 days; wean slowly if had multiple steroid courses prior*
Non-purulent sputum - likely viral aetiology	No antibiotic coverage required	*Prednisolone 30mg PO once daily for 5 days; consider weaning slowly if had multiple steroid courses prior*	

<table>
<tr><td colspan="4"><u>Aspiration Pneumonia (AP)</u>

Aspiration pneumonitis (e.g. secondary to aspiration of gastric contents) does not require antibiotic treatment unless secondary infection arises later in the lungs. Prophylactic antibiotics are not recommended
https://www.brit-thoracic.org.uk/quality-improvement/clinical-statements/aspiration-pneumonia/

BTS do not recommend routine anaerobic cover for AP. Anaerobes have not been proven to influence outcomes adversely and have become progressively less important pathogens in recent decades. Covering for anaerobes seem unlikely to make a major difference to outcome except those at high risk</td></tr>
<tr><td>Suspected or confirmed on CXR</td><td>If occurs ≤4 days from admission (Community acquired):
IV/PO* Amoxicillin 1g 8-hourly
(*use PO if safe swallow)

If occur ≥ 5 days from admission date (Hospital acquired):
(if safe swallow)
PO* Doxycycline 200mg stat, then 100mg 12 hourly

Regardless admission date, if severely ill:
ADD IV Gentamicin IV

Only if at high risk of anaerobic infections (e.g. obvious dental/periodontal disease, putrid sputum, or suspected lung abscess/empyema):
ADD Metronidazole</td><td><u>Alternatives:</u>
If occurs ≤4 days from admission (Community acquired):
(if safe swallow)
PO Doxycycline 200mg stat, then 100mg 12 hourly

(if swallow <u>not</u> safe):
IV Clarithromycin 500mg 12-hourly (switch to PO when swallow safe)

If occur ≥ 5 days from admission date (Hospital acquired):
IV/PO* Co-trimoxazole 960mg 12-hourly
(*use PO if safe swallow)

Regardless admission date, if severely ill:
ADD IV Gentamicin IV

Only if at high risk of anaerobic infections (e.g. obvious dental/periodontal disease, putrid sputum, or suspected lung abscess/empyema):
ADD Metronidazole</td><td>5 days (including IV and oral)</td></tr>
</table>

Genito-urinary Tract/Obstetric Infections

Indications	1st Line Antibiotics	2nd Line antibiotics	Typical Duration
Urinary Tract Infections **Obtain urine culture and send to microbiology** **Dipstick testing should not be used to diagnosed UTI in pts >65yr as they become more unreliable with increasing age over 65 years**			
Lower UTI males & non-pregnant females			
LUTI	PO Trimethoprim 200mg 12-hourly OR PO Nitrofurantoin 50mg 6-hourly *(*M/R 100mg 12-hourly if compliance issues)*	**If no severe penicillin allergy:** PO Cefalexin 500mg tds*; if CrCl <10mls/min: 500mg 12-hourly* **(Cefalexin is suitable for mild penicillin allergy only)** **In severe penicillin allergy and with CrCl <20mls/min:** PO Ciprofloxacin 500mg 12-hourly	3 days (female) 7 days (male)
Upper UTI/ pyelonephritis (males & non-pregnant females)			
With or Without sepsis	IV Gentamicin up to 72 hours as per protocol, consider IVOST* at 48-72 hours **If renal impairment CrCl<20mls/min:** **Single dose** IV Gentamicin- take levels q24 hours as per gentamicin protocol, consider IVOST* at 48-72hours *Note- clearance of gentamicin in severe renal impairment is significant slower. A single dose can linger in the system for much longer and may be sufficient to cover up to 72hours* *Refer to IVOST policy if no positive culture and sensitivity **If IVOST criteria not met:** refer to 'IV Gentamicin: What to do after 72hours (Adult)' policy OR discuss with infection specialist		**No sepsis:** 3 days (female) 7 days (male) **Sepsis:** 7 days (including IV and oral)
Catheter-associated UTI (CAUTI) *Change catheter* **With or Without sepsis**	IV Gentamicin up to 72 hours as per protocol, consider IVOST* at 48-72 hours Change catheter after 1st dose **If renal impairment CrCl<20mls/min:** **Single dose** IV Gentamicin- take levels q24 hours as protocol, consider IVOST* at 48-72hrs *Note- clearance of gentamicin in severe renal impairment is significant slower. A single dose can linger in the system for much longer and may be sufficient to cover up to 72hours* *Refer to IVOST policy if no positive culture and sensitivity **If IVOST criteria not met**: refer to 'IV Gentamicin: What to do after 72hours (Adult)' policy OR discuss with infection specialist		7 days (including IV and oral)

<table>
<tr><th colspan="4"><u>Acute Prostatitis</u></th></tr>
<tr><td>Acute Prostatitis
Send MSSU</td><td colspan="2">PO Trimethoprim 200mg 12-hourly
OR
PO Ciprofloxacin 500mg 12-hourly</td><td>Minimum 14 days
Review after 14 days
Can extended to 28 days, if clinically appropriate</td></tr>
<tr><th colspan="4"><u>Epididymo-orchitis</u>
Sexual health screen recommended</th></tr>
<tr><td>Epididymo-orchitis
≥35 years age
Send MSSU</td><td>PO Ofloxacin 400mg 24-hourly</td><td>PO Co-amoxiclav 625mg 8-hourly</td><td>14 days
(10 days for co-amoxiclav)</td></tr>
<tr><td><35 years age
Refer to GUM clinic</td><td colspan="2">PO Doxycycline 200mg stat, then 100mg 12-hourly</td><td>14 days</td></tr>
<tr><th colspan="4"><u>Sexually Transmitted Infections</u></th></tr>
<tr><td colspan="4">Offer HIV testing. Guidance is now being maintained regionally.
https://www.wossexualhealthmcn.scot.nhs.uk/?page_id=56</td></tr>
<tr><th colspan="4"><u>Pelvic Inflammatory Disease</u></th></tr>
<tr><td colspan="4">Symptoms of PID:
• Low abdominal pain, abnormal PV discharge (often purulent) or abnormal bleeding (including post coital bleeding(PCB), intermenstrual bleeding (IMB) or menorrhagia) and deep dyspareunia
Signs of PID
Bilateral pelvic pain, cervical excitation and bilateral adnexal tenderness and pyrexia > 38ºC
• Sexual health screen including HIV test is advised</td></tr>
<tr><th colspan="4"><u>Mild to Moderate (Swabs before commencing therapy)</u></th></tr>
<tr><td>Refer to GUM or carry out in-hospital STI testing</td><td>IM Ceftriaxone 1g once-off
AND
PO Doxycycline 100mg 12-hourly
AND
PO Metronidazole 400mg 12-hourly

(Doxycycline is contraindicated in pregnancy)

PO Erythromycin 500mg BD should be used instead of doxycycline in pregnancy</td><td>OP Ofloxacin 400mg 12-hourly
AND
PO Metronidazole 400mg 12-hourly

This regimen should NOT be used in patients at high risk of gonococcal PID</td><td>14 days

Failure to improve suggests the need for further investigation, IV therapy and/or surgical intervention

Review IV antibiotics 24hours after improvement

IVOST option:
Doxycycline with Metronidazole</td></tr>
</table>

Severe PID (including sepsis) Consider surgical exploration and drainage if tubo-ovarian abscess ≥5cm or significant bilateral collections or with smaller collections if the patient is peritonitic or there has been a deterioration/ inadequate response to IV antibiotics within 24-48 hours			
	IV Ceftriaxone 2g 24-hourly AND PO Metronidazole 400mg 12 hourly (IV- if absorption/ swallow issues) AND PO Doxycycline 100mg 12-hourly	IV Clindamycin 900mg 8-hourly AND IV Gentamicin	Continue IV therapy until 24 hours after clinical improvement IVOST option: PO Doxycycline 100mg 12-hourly And PO Metronidazole 400mg 12-hourly Duration: 14 days in total

Gastrointestinal Infections

Indications	1st Line Antibiotics	2nd Line antibiotics	Typical Duration
Gastroenteritis/ Infected diarrhoea			
Confirm travel history/ other risk factors. Send sample. **Antibiotic not normally required** and may be deleterious in E.Coli 0157. Consider viral causes. **Send sample** **If systemically unwell- discuss with ID/ Micro**			
Intra-abdominal Infections			
Initial treatment for intra-abdominal sepsis and infections • Cholangitis • Cholecystitis with sepsis • Appendicitis • Diverticulitis • Peritonitis • Biliary stent infections	IV Amoxicillin 1g 8-hourly AND PO* Metronidazole 400mg 8-hourly (IV- only if absorption/ swallow issues*)* AND IV Gentamicin **PO Metronidazole has about 95- 100% bioavailability*	**If CrCl <20mls/min:** IV Piperacillin-Tazobactam 4.5g 12-hourly **If severe penicillin allergy:** IV Vancomycin AND IV Gentamicin AND PO Metronidazole 400mg PO 8-hourly (IV if absorption/ swallow issues) **If severe penicillin allergy and CrCl<20mls/min:** *PO Metronidazole 400mg 8-hourly AND *PO Ciprofloxacin 500mg 12-hourly *(*IV only if absorption/ swallow issues)*	5 days (including IV and oral) **For biliary tract infection- Treatment as recommended except metronidazole not routinely required unless severe** Refer to the IV Gentamicin: What to do after 72 hours (Adults) policy for further guidance if IVOST criteria not met IVOST option- refer to IVOS policy on NHS D&G Antimicrobial Handbook
Spontaneous bacterial peritonitis See also: BSG-BASL Decompensated Cirrhosis Care Bundle- First 24 Hours- The British Society of Gastroenterology			
If not receiving co-trimoxazole prophylaxis	PO/IV Co-trimoxazole 960mg 12-hourly	PO Levofloxacin 500mg 12-hourly *(IV only if absorption issues)*	5-7 days (including IV and oral)
If receiving co-trimoxazole prophylaxis	IV Piperacillin-Tazobactam 4.5g 8-hourly		

Decompensated chronic liver disease with sepsis of unknown origin			
Decompensated chronic liver disease with sepsis of unknown origin	IV Piperacillin-Tazobactam 4.5g 8-hourly	PO Levofloxacin 500mg 12-hourly *(IV only if absorption issues)*	7 days (including IV and oral)
***Clostridioides difficile* infection (CDI)** Please see: SAPG Infection-specific guidance for CDI Start empirical treatment for CDI if patient has loose stools and either a history of recent antibiotic use or hospitalisation (and no alternate diagnosis) or stool positive for C. Difficile toxin. Where possible, stop/rationalise non-clostridial antibiotics, antimotility agents and gastric acid suppression. **Assess severity markers (below) DAILY:** Evidence of severe colitis in CT/XRay. Temperature >38.5C, Acute rising serum Cr >1.5 x baseline, WBC >15 x 109/L, Suspicion/ confirmed pseudomembranous colitis, toxic megacolon or ileus			
First line treatment	Irrespective of severity	Vancomycin PO 125 mg 6-hourly	10 days
Second line treatment	Patients who fail to improve after 7 days or worsen with 125mg oral Vancomycin (discuss with infection specialist)	Either PO Fidaxomicin 200mg 12-hourly Or Higher dose Vancomycin up to 500mg 6-hourly	10 days
Severe/Life threatening infection	Seek urgent advice. Any of the following, related to CDI: Admission to ICU, hypotension with or without need for vasopressors, Ileus or significant abdominal distension, mental status changes WCC >35 or <2x10^9/L, lactate >2.2mmol/L or end organ failure (mechanical ventilation, renal failure)	PO Vancomycin 500mg 6-hourly With IV Metronidazole 500mg 8-hourly (review need for IV daily)	10 days
Recurrence of CDI **within 12 weeks** (relapse)	Treatment failure identified as complete treatment course. **If incomplete course/poor compliance, treat as per first line (i.e. oral Vancomycin 125mg 6-hourly)**	PO Fidaxomicin 200mg 12-hourly	10 days
Recurrence of CDI **after 12 weeks** (First recurrence)	Treat with oral Vancomycin as per first line treatment	PO Vancomycin 125 mg 6-hourly	10 days
Second recurrence of CDI	Discuss with infection specialist/ micro consultant	Consider Faecal Microbiota Transplant or Pulsed/tapered vancomycin if FMT not available	

Skin and Soft Tissue Infections

Indications	1st line antibiotics	2nd line antibiotics	Duration
Cellulitis **Mild:** systemically well **Moderate:** systemically well with comorbidity/ systemically unwell **Severe:** suspicion of sepsis			
Mild-Moderate infection	PO Flucloxacillin 1g 6-hourly	PO Doxycycline 200mg stat then 100mg 12-hourly OR PO Co-trimoxazole 960mg 12-hourly	5-7 days (including IV and oral)
Severe infection For upper limb cellulitis, seek orthopaedic advice	**Consider if OPAT candidate**		
	IV Flucloxacillin 2g 6-hourly **If rapidly progressive:** ADD IV Clindamycin 600mg 6-hourly	IV Vancomycin (use if MRSA suspected as 1st line) **If rapidly progressive:** ADD IV Clindamycin 600mg 6-hourly	7-10 days (including IV and oral)
Necrotising fasciitis **Urgent surgical review is imperative**			
Refer to above Sepsis section- Page 8			
Surgical Wounds Infection			
Non-contaminated	IV Flucloxacillin 1-2g 6-hourly	**If MRSA suspected, or penicillin allergic:** PO Doxycycline 200mg stat, followed by 100mg 12-hourly **If IV required:** IV Co-trimoxazole 960mg 12-hourly	5-7 days (including IV and oral)
Contaminated	IV Flucloxacillin 1-2g 6-hourly AND PO Metronidazole 400mg 8-hourly *(IV if absorption/ swallow issues)* AND IV Gentamicin	**If MRSA suspected, or penicillin allergic:** IV Co-trimoxazole 960mg 12 hourly AND PO Metronidazole 400mg 8-hourly *(IV if absorption/ swallow issues)* ADD IV Gentamicin if septic	

<table>
<tr><td colspan="4"><u>Animal bites</u>
Assess BBV, tetanus and rabies risk
Tetanus prone → any bite or scratch, unless domesticated pet with saliva only
Give tetanus booster to all (unless received booster within last 10 years)
Give tetanus immunoglobulin if not fully immunised (received 3 primary immunisations)

Risk stratify for when prophylaxis is indicated, as per NICE guidelines:
https://www.nice.org.uk/guidance/ng184/resources/visual-summary-pdf-8897023117</td></tr>
<tr><td colspan="4"><u>Human bites</u>
Assess HIV and hepatitis risk – prophylaxis as required</td></tr>
<tr><td>Non-severe infection</td><td>PO Co-amoxiclav 625mg 8-hourly</td><td>PO Doxycycline 200mg stat then 100mg 12-hourly AND
PO Metronidazole 400mg 8-hourly</td><td>Treatment- 5 days
Prophylaxis- 3 days</td></tr>
<tr><td>Severe Infection

(over joints; requiring washout)</td><td>IV Co-amoxiclav 1.2g 8-hourly</td><td>IV Vancomycin
AND
*PO Metronidazole 400mg 8-hourly
AND
*PO Ciprofloxacin 500mg 12-hourly
*IV if absorption/ swallow issues</td><td>7 days</td></tr>
<tr><td colspan="4"><u>Burns, contaminated wounds, and compound fractures</u>
Give tetanus booster to all (unless received booster within last 10 years)
Give tetanus immunoglobulin if not fully vaccinated (received 3 primary immunisations)</td></tr>
<tr><td>Burn injury</td><td colspan="3">Routine use of prophylactic antibiotics is not recommended for burn patients</td></tr>
<tr><td rowspan="2">Contaminated wounds and compound fractures</td><td colspan="3">At presentation antibiotics within 3 hours of injury: Continue antibiotics until first debridement (excision)

At the time of first debridement: Continue antibiotics until soft tissue closure or for a maximum of 72 hours whichever is sooner

At surgery for skeletal stabilisation and definitive tissue closure: Single dose only- do not continue post-surgery</td></tr>
<tr><td>IV Co-amoxiclav 1.2g 8-hourly

If severely contaminated:
ADD IV Gentamicin</td><td>IV Clindamycin 600mg 6-hourly
AND
PO Metronidazole 400mg 8-hourly (IV if absorption/ swallow issues)

If severely contaminated:
ADD IV Gentamicin</td><td>See above</td></tr>
</table>

Facial cellulitis			
Refer to ophthalmic, ENT and Maxillofacial Infection Page 27			
Varicella Zoster Infections			
Chickenpox *Seek advice if pregnant*	PO Aciclovir 800mg PO 5 times a day OR IV Aciclovir 5mg/kg 8-hourly (Use Adjusted Body Weight if BMI ≥30m^2) If lesions are infected: ADD PO Flucloxacillin 1g 6-hourly OR PO Clarithromycin 500mg PO 12-hourly		7 days
Shingles	Aciclovir 800mg PO 5 times a day OR IV Aciclovir 5mg/kg 8-hourly (Use Adjusted Body Weight if BMI ≥30m^2)		5 days
Infected eczema			
Take swabs *Manage underlying condition with topical steroid, emollients*	Fusidic acid 2% topically 8-hourly If unresponsive: PO Flucloxacillin 1g 6-hourly	**If penicillin allergic and needs oral antibiotic:** PO Clarithromycin 500mg 12-hourly	5-7 days

Bone and Joint Infections

Indications	1st line antibiotics	2nd line antibiotics	Duration
Septic Arthritis Aspirate joint and send cultures prior to commencing antimicrobial therapy Urgent orthopaedic referral if underlying metal work or recent surgery. Ensure joint aspiration prior to antibiotics			
Native joint	Flucloxacillin 2g IV 6-hourly **If high risk for gram-negative infection e.g. immunocompromised, recurrent UTI or sickle cell disease:** ADD IV Gentamicin	IV vancomycin **If high risk for gram-negative infection e.g. immunocompromised, recurrent UTI or sickle cell disease:** ADD IV Gentamicin	6 weeks total 2 weeks IV therapy 4 weeks PO therapy
Prosthetic joint	*Discuss with microbiology*		
Osteomyelitis For all patients: Take blood cultures (2 sets) prior to starting treatment. Discuss with microbiology **Diabetic foot infection/ osteomyelitis** Assess ulcer size, probes to bone, neuropathy, peripheral vascular disease, MRSA risk. Refer to diabetic foot MDT, and consider need for podiatry and vascular surgery input. Send specimen for culture and review previous microbiology			
Mild infection	IV Flucloxacillin 1g 6-hourly	PO Doxycycline 200mg stat then 100mg 12-hourly OR IV Vancomycin (if PO unsuitable)	5-7 days

<table>
<tr><th colspan="4"><u>(Con't) Diabetic foot infection/ osteomyelitis</u></th></tr>
<tr><td rowspan="2">Moderate & Severe infection in acute diabetic foot /osteomyelitis

Refer to diabetic foot MDT, and consider need for podiatry and vascular surgery input.</td><td colspan="3">Diabetic foot: Determine severity of wound infection (mild/ moderate/ severe), as per IWGDF/IDSA infection guideline, to determine most appropriate antibiotic therapy:
https://iwgdfguidelines.org/wp-content/uploads/2023/07/IWGDF-2023-04-Infection-Guideline.pdf</td></tr>
<tr><td>IV Flucloxacillin 2g 6-hourly +/- see below

If high risk for Gram negative infection (e.g. recent antibiotics, sepsis, haemodynamic compromise, ischaemic limb, necrosis, gas forming: ADD IV Gentamicin

If high risk for anaerobic infections (e.g. ischaemic limb/ necrosis/ gas forming): ADD PO* Metronidazole 400mg 8-hourly (IV- if absorption issues)

If CrCl<20ms/min AND combination therapy required: IV Piperacillin-Tazobactam

*PO Metronidazole has about 95- 100% bioavailability</td><td>IV Vancomycin +/- see below

If high risk for Gram negative infection (e.g. recent antibiotics, sepsis, haemodynamic compromise, ischaemic limb, necrosis, gas forming: ADD IV Gentamicin

If high risk for anaerobic infections (e.g. ischaemic limb/ necrosis/ gas forming): ADD PO* Metronidazole 400mg 8-hourly (IV- if absorption issues)

If eGFR<20ms/min AND combination therapy required: Discuss with Consultant microbiologist

*PO Metronidazole has about 95-100% bioavailability</td><td>7- 14 days
(if osteomyelitis, discuss duration with infection specialist)</td></tr>
</table>

Central Nervous System Infections

Indications	1st Line antibiotics	2nd line antibiotics	Duration
Bacterial Meningitis			
Meningitis	**IV Ceftriaxone 2g 12-hourly** ADD IV Dexamethasone 10mg IV 6-hourly **(prescribe 3mls of 3.3mg/ml dexamethasone (base) on HEPMA** **If Listeria suspected/confirmed, >55years, immunocompromised, alcohol excess, liver disease:** ADD IV Amoxicillin2g 4-hourly	Severe penicillin allergy: **IV Meropenem 2g 8-hourly** ADD IV Dexamethasone 10mg IV 6-hourly **(prescribe 3mls of 3.3mg/ml dexamethasone (base) on HEPMA** **If severe penicillin allergy and Listeria suspected/confirmed, >55years, immunocompromised, alcohol excess, liver disease:** ADD Co-trimoxazole 30mg/kg IV 6 hourly	Duration: Discuss with Infectious Disease Specialist/ Microbiology Consultant
Viral Meningitis			
Usually diagnosed after empirical management and exclusion bacteria meningitis Stop antiviral if enteroviral or mumps meningitis is diagnosed and manage symptomatically Continuation of antivirals for HSV/ VZV should be discussed with infection specialist			
Viral Encephalitis			
If suspected encephalitis/ *HSV encephalitis *Discuss with microbiology if suspecting HSV Consider if confusion or reduced level consciousness in suspected CNS infection.	IV Aciclovir 10mg/kg* 8-hourly Obesity is defined by the National Institute for Health and Care Excellence (NICE) as BMI ≥30kg/m2 Risk of toxicity is increased when IV Aciclovir is dosed as per actual body weight in obese patients. One pharmacokinetic study has shown that dosing using ideal body weight may lead to sub therapeutic plasma concentration. ***It is recommended that adjusted body weight (AdjBW) should be used when calculating doses for obese patients BMI ≥30kg/m2** **AdjBW= IBW + 0.4 (actual body weight – IBW)**		10-21 days

Ophthalmic, ENT and maxillofacial Infections

Indications	1st line antibiotics	2nd line antibiotics	Duration
Tonsillitis Most cases are viral and do not require antibiotics Calculate CENTOR or FEVERPAIN criteria to assist with decision-making			
Evidence of sepsis	IV Benzylpenicillin 2.4g 6-hourly AND IV Clindamycin 600mg 6-hourly	IV Vancomycin AND IV Clindamycin 600mg 6-hourly	10 days IVOST option: Penicillin V or Clindamycin
No evidence of sepsis	PO Phenoxymethylpenicillin 500mg 6-hourly or 1g 12-hourly	PO Clarithromycin 500mg 12-hourly	10 days 5 days for clarithromycin
Quinsy *Drain abscess immediately*	IV Benzylpenicillin 2.4g 6-hourly AND IV Clindamycin 600mg 6-hourly	IV Vancomycin AND IV Clindamycin 600mg 6-hourly	10 days IVOST option: Penicillin V or Clindamycin
Epiglotitis and Supraglottitis Urgent anaesthetics review if any airway concerns or stridor occurs			
	IV Ceftriaxone 2g 24-hourly	IV Clindamycin 900mg 8-hourly AND IV Ciprofloxacin 400mg 12-hourly *(IV due to risk of airway obstruction)*	7-10 days Review IV antibiotic daily. Consider IVOST if able IVOST option: Co-amoxiclav or Ciprofloxacin
Preseptal/Orbital cellulitis Urgent CT scan to assess extent and for intracranial extension			
	IV Flucloxacillin 2g 6-hourly OR IV Ceftriaxone 2g 24-hourly or 12-hourly if intracranial extension	IV vancomycin AND PO Ciprofloxacin 500mg 12-hourly (IV- if absorption/ swallow issues)	10-14 days IVOST option: Flucloxacillin or Ciprofloxacin
Acute otitis media Avoid antibiotics if able – usually only given if systemically unwell or >5 days duration of illness			
	PO Co-amoxiclav 625mg 8-hourly OR IV Co-amoxiclav 1.2g 8-hourly if severe	PO Clarithromycin 500mg 12-hourly OR IV Clindamycin 900mg 6-hourly if severe	5 days

Sinusitis			
Acute ≤6 weeks duration	PO Amoxicillin 1g 8-hourly **If severe:** PO Co-amoxiclav 625mg 8-hourly	PO Doxycycline 200mg stat then 100mg 12-hourly	5 days
Chronic >6 weeks duration	No antibiotics needed Treat with saline rinses, nasal steroids and one week of decongestant		
Otitis externa			
Acute infection	Acetic acid 2% topically 8-hourly **If fungal:** ADD Clotrimazole drops 8-hourly	Neomycin sulphate with steroid topically 8-hourly	7 days
Acute, severe infection	**As above and ADD:** PO Flucloxacillin 1g 6-hourly	**As above and ADD:** PO Clarithromycin 500mg 12-hourly	7 days
Malignant otitis externa	Discuss with OPAT/Microbiology		6 weeks
Acute Mastoiditis Requires urgent CT scan to assess intracranial involvement and extent of infection			
	IV Co-amoxiclav 1.2g 8-hourly	PO Ciprofloxacin 500mg 12-hourly (V- if absorption/ swallow issues) AND IV Clindamycin 900mg 6-hourly	10-14 days
Suppurative parotitis			
Review culture results *Check for mumps and other causes*	IV Co-amoxiclav 1.2g 8-hourly	IV Clindamycin 900mg 6-hourly	10-14 days
Dental abscess For immunocompetent persons with no systemic upset, no antibiotics are required Requires urgent dental review https://www.sapg.scot/media/5473/statement-on-pen-v-in-dental-infections.pdf http://www.sdcep.org.uk/wp-content/uploads/2016/03/SDCEP-Drug-Prescribing-for-Dentistry-3rd-edition.pdf			
	PO Phenoxymethylpenicillin (Penicillin V) 500mg 6-hourly	Metronidazole 400mg PO 8-hourly	5 days

Facial cellulitis			
	IV Flucloxacillin 2g 6-hourly AND IV Clindamycin 900mg 6-hourly	IV Vancomycin AND IV Clindamycin 900mg 6-hourly	7 days
Retropharyngeal Abscess If any airway concerns, get urgent anaesthetic review			
Surgical review for drainage	IV Ceftriaxone 2g 12-hourly AND IV Metronidazole 500mg 8-hourly	IV Clindamycin 900mg 6-hourly AND IV Ciprofloxacin 400mg 12-hourly *(IV due to risk of airway obstruction)*	10-14 days Review IV antibiotic daily. Consider IVOST if able IVOST option: Co-amoxiclav OR clindamycin with ciprofloxacin
Eye infections			
Bacterial conjunctivitis, blepharitis	Topical Chloramphenicol 1% ointment: apply 6-hourly		7 days
Gonococcal conjunctivitis *Urgent referral to ophthalmology*	IM Ceftriaxone 1g once-off dosing	IM Gentamicin 240mg once-off AND PO Azithromycin 1g once-off	Discuss with microbiology prior to giving 2nd line treatment if not true anaphylaxis to penicillin
Chlamydial conjunctivitis *Urgent referral to ophthalmology*	PO Azithromycin 1g once off dosing	PO Doxycycline 200mg stat then 100mg 12-hourly for 5 days	Discuss with ophthalmology specialist/ Micro
Viral conjunctivitis	Self-limiting. Cool compresses and antihistamines usually sufficient. Give chloramphenicol if any doubt		7 days
Bacterial keratitis *Urgent referral to ophthalmology*	If not same day review: Topical ofloxacin 2-4 hourly until reviewed		
Ocular herpes/ HSV keratitis *Urgent referral to ophthalmology*	If not same day review: Topical acyclovir 5 times daily until reviewed		
Endophthalmitis *Urgent referral to ophthalmology*	*Admission required* If not same day review:		Discuss with ophthalmology specialist/ Micro
	IV Cefazolin 2g once-off AND IV Gentamicin	PO Ciprofloxacin 750mg PO once-off AND IV Gentamicin	

Decolonisation

If a patient is found to be MRSA positive from an admission screen (or any other skin site swab not indicative of infection) treatment will consist of a decolonisation regime.

Decolonisation treatment is as follows:

Treatment – for five days

Product	**Bactroban Nasal** **Mupiricin 2%**	**Antimicrobial** **Chlorhexidine 4% body wash**
Where it's for	Nasal passages	All over body wash (including hair)
When to use	3 x daily (morning afternoon & Night)	1 x daily
How to apply	A small amount (about the size of match head) should be placed on a cotton bud or tip of little finger & applied to each nostril. The sides of the nose should be pinched together to spread ointment.	Shower in warm water for 1-3 minutes. Apply body wash (40- 50ml if liquid) (25-33ml if foam) head to toe. Wash off after 1-2 minutes.

Clearance from MRSA will consist of three consecutive negative swabs, each taken at least 48 hours apart. If decolonisation is unsuccessful after two attempts a third attempt should not be made. If the patient is to undergo a high risk procedure and decolonisation has been unsuccessful after 2 attempts please contact the Infection Control Team.

Patients who are being discharged to their own home may not require decolonisation if risk is low.

http://www.sdcep.org.uk/wp-content/uploads/2016/03/SDCEP-Drug-Prescribing-for-Dentistry-3rd-edition.pdf