Ipswich and East Suffolk CCG
West Suffolk CCG
North East Essex CCG

Suffolk and North East Essex Primary Care and A&E* Antibiotic Formulary

(Adults and paediatrics)

Revision Date: April 2020

*For use in A+E where an admission is not required.

Principles of treatment

1. This formulary is based on best available evidence, but practitioners should use their professional judgement and patients should be involved in decisions about their treatment.
2. Do not prescribe antibiotics for a common cold. Sign-post to community pharmacy for self-care advice, including drinking plenty of fluid, OTC medicines and resting. Give advice on how long common symptoms usually last. Advise on contacting the practice if symptoms worsen or do not get better in the time scale. There is information for patients/parents on how long common conditions like sore throat last on the Target website under 'Leaflets to share with patients' https://www.rcgp.org.uk/TARGETantibiotics.
3. It is important to initiate antibiotics as soon as possible for severe infection.
4. Prescribe an antibiotic only when there is likely to be a clear clinical benefit, giving alternative, non-antibiotic self-care advice where appropriate.
5. If a person is systemically unwell with symptoms or signs of serious illness, or is at high risk of complications: give immediate antibiotic. Always consider possibility of sepsis, and refer to hospital if severe systemic infection.
6. Use a lower threshold for antibiotics in immunocompromised patients, or in those with multiple morbidities; consider culture/specimens, and seek advice from microbiology if required
7. In severe infection or immunocompromised, it is important to initiate antibiotics as soon as possible, particularly if sepsis is suspected. If patient is not at moderate to high risk for sepsis, give information about symptom monitoring, and how to access medical care if they are concerned.
8. Consider a 'No', or 'Back-up/delayed', antibiotic strategy for acute self-limiting mild Urinary Tract Infection (UTI) symptoms and upper Respiratory Tract Infections (RTI) including sore throat, cough and sinusitis. (See patient leaflets "Treating your infection").
9. Limit prescribing over the telephone to exceptional cases.
10. Use simple antibiotics prescribed generically whenever possible. Avoid broad spectrum antibiotics (e.g. co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective. Broad spectrum antibiotics increase the risk of *Clostridium difficile*, MRSA and resistant UTIs – they should be avoided in patients with a history of *Clostridium difficile* infection or colonisation.
11. Following the return of antibiotic sensitivity results, a check should be made that the patient is receiving an antibiotic that will treat the infection. Where both broad spectrum (e.g. co-amoxiclav, quinolones and cephalosporins) and narrow spectrum antibiotics are highlighted as treatment options, the patient should be given a prescription for a narrow spectrum antibiotic.
12. Avoid widespread use of topical antibiotics, especially those agents also available as systemic preparations, e.g. fusidic acid; in most cases, topical use should be limited with the exception of ophthalmology and otitis externa.
13. Do not treat positive wound swab results with antibiotics unless there are clinical signs of infection.
14. Always check for antibiotic allergies. Unless otherwise stated, a dose and duration of treatment for adults is usually suggested, but may need modification for age, weight, renal function or if immunocompromised. In severe or recurrent cases, consider a larger dose or longer course.
15. Please refer to the British National Formulary (BNF) or the BNF for Children (BNFc) for further dosing and interaction information (e.g. interaction between macrolides and statins) if needed and please check for hypersensitivity.
16. For further advice (e.g. empirical therapy failure, special circumstances, etc.) contact local Consultant Medical Microbiologists (West Suffolk Hospital: 01284 712579; ESNEFT [Ipswich]: 01473 712233; ESNEFT [Colchester]: 01206 747474).
17. In pregnancy, if possible, AVOID **tetracyclines, quinolones, aminoglycosides, azithromycin, clarithromycin and high dose metronidazole (e.g. doses ≥2g stat)** unless the benefits outweigh the risks. Short-term use of **nitrofurantoin** is not expected to cause foetal problems, but should be AVOIDED in 3rd trimester due to the potential risk of neonatal haemolysis. Avoid **Trimethoprim** in first trimester.
18. Where a 'best guess' therapy has failed, or special circumstances exist, advice from a consultant microbiologist should be obtained.
19. This formulary should not be used in isolation, it should be supported with patient information about safety netting, back-up/delayed antibiotics, self-care, infection severity and usual duration, clinical staff education, and audits. Materials are available on the RCGP TARGET website

Safety issues/ interactions

This page lists some of the common interactions and safety issues that should be considered when prescribing antibiotics. Please note that this list is not exhaustive.

Drug	Warning
Warfarin	• Experience in anticoagulant clinics suggests that INR is possibly altered when warfarin is given with the majority of antibiotics; please check for interactions, consider management options and advise the patient accordingly. • Patients should be advised to have their INR checked 3-4 days after starting an antibiotic or a new medicine and follow the advice given by the anticoagulant clinic.
Trimethoprim	**AVOID WITH PATIENTS TAKING METHOTREXATE (ORAL AND INJECTION)**
Quinolones	MHRA updates to consider before prescribing quinolones • November 2018- Small increased risk of aortic aneurysm and dissection; advice for prescribing in high-risk patients • March 2019- Very rare reports of disabling and potentially long-lasting or irreversible side effects
Nitrofurantoin	• Check renal function before prescribing (click here for further information) • Contraindicated in **glucose 6-phosphate dehydrogenase (G6PD) deficiency** (due to the definite risk of haemolysis), and in acute porphyria. • Nitrofurantoin has a potential risk of causing pulmonary reactions in up to 14% of acute cases and pulmonary fibrosis in 0.001-1.97% of patients receiving nitrofurantoin long-term.
Theophylline / Aminophylline	• Due to the metabolism of theophylline/aminophylline it is important to consult the Summary of Product Characteristics (SPC) product literature for any potential interactions. • Certain antibiotics, antifungals and antivirals can alter the level of theophylline/aminophylline. • Doses of theophylline/aminophylline may need to be adjusted. • Theophylline levels may need to be monitored. • Common signs of toxicity include tachycardia, palpitations, nausea, headache, abdominal pain and muscle tremor.

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Upper Respiratory Tract Infections				
Acute sore throat NICE visual summary	Use FeverPAIN or Centor to assess symptoms			
	FeverPAIN 0-1 or Centor 0-2	**Self-Care** - No antibiotic and advise self-care - Advise paracetamol, or if preferred and suitable, ibuprofen for pain. - Medicated lozenges may help pain in adults		
	FeverPAIN 2-3: no or back-up antibiotic; FeverPAIN 4-5 or Centor 3-4: immediate or back-up antibiotic Systemically very unwell or high risk of complications: immediate antibiotics	First Line Phenoxymethylpenicillin	500mg QDS	5-10 days
		Penicillin allergy Clarithromycin	250mg to 500mg BD	5-10 days
Influenza	Annual vaccination is essential for all those 'at risk' of influenza. Antivirals are not recommended for healthy adults. Treat 'at risk' patients with 5 days oseltamivir 75mg BD, when influenza is circulating in the community, and ideally within 48 hours of onset (36 hours for zanamivir treatment in children), or in a care home where influenza is likely. At risk: pregnant (and up to 2 weeks post-partum); children under 6 months; adults 65 years or older; chronic respiratory disease (including COPD and asthma); significant cardiovascular disease (not hypertension); severe immunosuppression; chronic neurological, renal or liver disease; diabetes mellitus; morbid obesity (BMI>40). See the PHE Influenza guidance for the treatment of patients under 13 years. In severe immunosuppression, or oseltamivir resistance (as directed by PHE), use zanamivir 10mg BD (2 inhalations twice daily by diskhaler for up to 10 days) and seek advice from microbiology if required			

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Scarlet fever	**Prompt treatment** with appropriate antibiotics significantly reduces the risk of complications. Vulnerable individuals (immunocompromised, the comorbid, or those with skin disease) are at increased risk of developing complications. Optimise analgesia and give safety netting advice	**First line** Phenoxymethylpenicillin	500mg QDS	10 days
		Penicillin allergy: Clarithromycin	250mg to 500mg BD	5 days
Acute otitis media NICE visual summary	**Otorrhoea or under 2 years with infection in both ears**: no, back-up or immediate antibiotic. **Otherwise**: no or back-up antibiotic. **Systemically very unwell or high risk of complications**: immediate antibiotic, see second line	**Self-Care (for all patients)** Regular paracetamol or ibuprofen for pain (right dose for age or weight at the right time and maximum doses for severe pain) can be purchased OTC.		
		First line: Amoxicillin	500mg-1000mg TDS	5-7 days
		Penicillin allergy: Doxycycline (not in under 12s) Clarithromycin	200mg on day 1, then 100mg OD 250mg to 500mg BD	
		Second line: Co-amoxiclav	625mg TDS	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute otitis externa	**First line management:** No antibiotics and advise self-care Analgesia for pain relief, and apply localised heat (such as a warm flannel)			
	Second line management: topical acetic acid or topical antibiotic +/- steroid: similar cure at 7 days. Please note Betamethasone 1mg with neomycin 5mg/mL ear drops should be avoided in patients with a perforated tympanic membrane or with a patent grommet	***First option:*** Earcalm (available OTC for 12yrs+) ***Second option:*** Betamethasone 1mg with neomycin 5mg/mL ear drop	1 spray TDS 2-3 drops TDS	7 days 7-14 days
	If cellulitis or disease extends outside ear canal, or systemic signs of infection, start oral antibiotics and refer to exclude malignant otitis externa.	**First line** Flucloxacillin	250mg QDS If severe: 500mg QDS	7 days
Sinusitis NICE visual summary	**Symptoms for 10 days or less**: no antibiotic. **Symptoms with no improvement for more than 10 days**: no antibiotic or back-up antibiotic depending on likelihood of bacterial cause. Consider high-dose nasal corticosteroid (if over 12 years). **Systemically very unwell or high risk of complications**: immediate antibiotic, see second line.	**Self-Care (for all patients)** - Paracetamol or ibuprofen for pain. - Little evidence that nasal saline or nasal decongestants help, but people may want to try them.		
		First line: Phenoxymethylpenicillin	500mg QDS	5 days
		Penicillin allergy: Doxycycline (not in under 12s) Clarithromycin	200mg on day 1, then 100mg OD 500mg BD	
		Second line: Co-amoxiclav	625mg TDS	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Lower respiratory tract infections **Note: Low doses of penicillins are more likely to select for resistance. Do not use fluoroquinolones (ciprofloxacin, ofloxacin) first line because they may have long-term side effects and there is poor pneumococcal activity.Reserve all fluoroquinolones (including levofloxacin) for proven resistant organisms.**				
Acute exacerbation of COPD NICE visual summary	Many exacerbations are not caused by bacterial infections so will not respond to antibiotics. Consider an antibiotic, but only after taking into account severity of symptoms (particularly sputum colour changes and increases in sputum volume or thickness), need for hospitalisation, previous exacerbations, hospitalisations and risk of complications, previous sputum culture and susceptibility results, and risk of resistance with repeated courses. Some people at risk of exacerbations may have antibiotics to keep at home as part of their exacerbation action plan. **If person at higher risk of treatment failure, see third line**. For further detail see the NICE guideline on COPD in over 16s	**First line:** Amoxicillin **OR** Doxycycline **OR** Clarithromycin	 500mg TDS (see BNF for severe infection) 200mg on day 1, then 100mg OD (see BNF for severe infection) 500mg BD	5 days
		Second line: Use alternative first choice		5 days
		Third line: Co-amoxiclav **OR** Levofloxacin (see MHRA alerts)	500/125mg TDS 500mg OD	5 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute cough NICE visual summary	**Acute cough with upper respiratory tract infection**: no antibiotic give TARGET RTI leaflet **Acute bronchitis**: no routine antibiotic **Acute cough and higher risk of complications (at face-to-face examination)**: immediate or back-up antibiotic. **Acute cough and systemically very unwell (at face-to-face examination)**: immediate antibiotic. Higher risk of complications includes people with pre-existing comorbidity; young children born prematurely; people over 65 with 2 or more of, or over 80 with 1 or more of: hospitalisation in previous year, type 1 or 2 diabetes, history of congestive heart failure, current use of oral corticosteroids. Do not offer a mucolytic, an oral or inhaled bronchodilator, or an oral or inhaled corticosteroid unless otherwise indicated.	**Self-care** Some people may wish to try: - Honey (in over 1s) - Herbal medicine pelargonium (in over 12s) - Cough medicines containing the expectorant guaifenesin (in over 12s) - Cough medicines containing cough suppressants, except codeine, (in over 12s). These self-care treatments have limited evidence for the relief of cough symptoms.		
		Adults and children: **First line:** Amoxicillin **OR** Doxycycline (not for under 12) **OR** Clarithromycin	 500mg TDS 200mg on day 1, then 100mg OD 250mg- 500mg BD	 5 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute exacerbation of bronchiectasis (non-cystic fibrosis) NICE visual summary	Send a sputum sample for culture and susceptibility testing. Offer an antibiotic. When choosing an antibiotic, take account of severity of symptoms and risk of treatment failure. People who may be at higher risk of treatment failure include people who've had repeated courses of antibiotics, a previous sputum culture with resistant or atypical bacteria, or a higher risk of developing complications. Course length is based on severity of broncheictasis, exacerbation history, severity of exacerbation symptoms, previous culture and susceptibility results, and response to treatment. Do not routinely offer antibiotic prophylaxis to prevent exacerbations. Seek specialist advice for preventing exacerbations in people with repeated acute exacerbations. This may include a trial of antibiotic prophylaxis after a discussion of the possible benefits and harms, and the need for regular review.	**First line** Amoxicillin (preferred if pregnant) **OR** Doxycycline (not in under 12s **OR** Clarithromycin	500mg TDS 200mg on day 1, then 100mg OD 500mg BD	7 to 14 days
		Alternative option (if person at higher risk of treatment failure) Co-amoxiclav **OR** Levofloxacin (adults only) With specialist advice if co-amoxiclav cannot be used; see MHRA alerts. **OR** Ciprofloxacin (children only) with specialist advice if co-amoxiclav cannot be used; see MHRA alerts	625mg TDS 500mg OD or BD See NICE visual summary	7 to 14 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Community-acquired pneumonia NICE visual summary	Assess severity in adults based on clinical judgement guided by mortality risk score (CRB65). See the NICE guideline on pneumonia for full details: **Low severity** – CRB65 0 **Moderate severity** – CRB65 1 or 2 consider hospital assessment **High severity** – CRB65 3 or 4 urgent hospital admission 1 point for each parameter: **confusion**, **respiratory rate** ≥30/min, low systolic (<90 mm Hg) or diastolic (≤60 mm Hg) **blood pressure**, **age** ≥65. Assess severity in children based on clinical judgement. Offer an antibiotic. Start treatment as soon as possible after diagnosis, within 4 hours (within 1 hour if sepsis suspected and person meets any high risk criteria – see the NICE guideline on sepsis). When choosing an antibiotic, take account of severity, recent hospital discharge, risk of complications, local antimicrobial resistance and surveillance data, recent antibiotic use and microbiological results. For detailed information click on the NICE visual summary. See also the NICE guideline on pneumonia.	**Low severity** Amoxicillin **OR** Clarithromycin **OR** Doxycycline (not in under 12s)	500mg TDS (higher doses can be used- see BNF) 500mg BD 200mg on day 1 then 100mg OD	5 days Stop antibiotics after 5 days unless patient shows sign of clinical deterioration. Consider alternative therapy or hospital admission
		Moderate severity and at home: Amoxicillin **AND (if atypical pathogen is suspected)** Clarithromycin **OR** Doxycycline alone	500mg TDS (higher doses can be used) 500mgBD 200mg on day 1 then 100mg OD	
		High severity: urgent hospital admission		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Urinary tract infections Click here for guidance- Urinary tract infection: diagnostic tools for primary care				
Lower urinary tract infection Non pregnant women NICE visual summary	Advise paracetamol or ibuprofen for pain. Back up antibiotic (to use if no improvement in 48 hours or symptoms worsen at any time) or immediate antibiotic. When considering antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Click here for the NICE visual summary and further information *Low risk of resistance is likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in areas where data suggests low resistance. Higher risk of resistance is likely with recent use.	**First line** Nitrofurantoin Click here for renal dosing **OR** Trimethoprim (if low risk of resistance*)	100mg m/r BD 200mg BD	3 days
		Second line Pivmecillinam (a penicillin) **OR** Fosfomycin	400mg initial dose, then 200mg TDS 3g single dose sachet	3 days Single dose

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Lower urinary tract infection **Pregnant women** NICE visual summary	Immediate antibiotic required Click here for the NICE visual summary and further information	**First line** Nitrofurantoin (avoid in third trimester) Click here for renal dosing	100mg m/r BD	7 days
		Second choice: Amoxicillin (only if known to be susceptible) **OR** Cefalexin	500mg TDS 500mg BD	
	Treatment of asymptomatic bacteriuria in pregnant women**.**	Choose from Nitrofurantoin (avoid in third trimester), Amoxicillin or Cefalexin based on recent culture and susceptibility results.		
Lower urinary tract infection **Men** NICE visual summary	Immediate antibiotic required Click here for the NICE visual summary and further information	**First line**: Trimethoprim **OR** Nitrofurantoin See above for renal dosing	200mg BD 100mg m/r BD	7 days
		Second choice: Base antibiotic choice on recent culture and susceptibility results. Consider alternative diagnoses including sexually transmitted infections.		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Lower urinary tract infection **Children and young people (3 months to 16 years)** **NICE visual summary**	Immediate antibiotic required If <3months refer urgently for assessment Click here for the NICE visual summary and further information *Low risk of resistance is likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in areas where data suggests low resistance. Higher risk of resistance is likely with recent use.	**First line** Trimethoprim (if low risk of resistance) * **OR** Nitrofurantoin Click here for renal dosing	Click here for children dosing	3 days
		Second line: Nitrofurantoin Click here for renal dosing (if not used as first choice) **OR** Amoxicillin (only if known to be susceptible) **OR** Cefalexin	Click here for children dosing	3 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute pyelonephritis (upper urinary tract) Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12 years old. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Consider admission advice if vomiting, unable to take oral antibiotics or severely unwell.				
Acute pyelonephritis (upper urinary tract) **Non-pregnant women and men over 16** NICE visual summary	See above for further information Offer an antibiotic	**First line** Cefalexin **OR** Ciprofloxacin (see MHRA alerts)	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections) 500mg BD	7–10 days 7 days
Acute pyelonephritis (upper urinary tract) **Pregnant women** NICE visual summary	Offer an antibiotic- consider seeking specialist advice if required. See above for further information- consider hospital admission if required. Note: Use opioids with caution during pregnancy and avoid for patients under 12.	**First line** Cefalexin	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	7–10 days
		Second line Contact microbiology for advice		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute pyelonephritis (upper urinary tract) **Children and young people (3 months to 16 years)** NICE visual summary	Offer an antibiotic See above for further information- consider hospital admission if required. Children <3months- refer to a paediatrician	Cefalexin	Click here for children doses	7-10 days
		Second line Contact microbiology for advice		
Recurrent urinary tract infection NICE guidance	First advise about behavioural and personal hygiene measures, and self-care (with D-mannose or cranberry products available OTC) to reduce the risk of UTI. For postmenopausal women, if no improvement, consider vaginal oestrogen (review within 12 months). For non-pregnant women, if no improvement, consider single-dose antibiotic prophylaxis for exposure to a trigger (review within 6 months). For non-pregnant women (if no improvement or no identifiable trigger) or with specialist advice for pregnant women, men, children or young people, consider a trial of daily antibiotic prophylaxis (review within 6 months). Consider seeking advice from microbiology or urology where first line and second line options have proven unsuccessful IESCCG- click here for local guidance	**First line antibiotic prophylaxis**: Trimethoprim (avoid in first trimester of pregnancy)	200mg single dose when exposed to a trigger or 100mg at night	Review in 6 months
		Second line antibiotic prophylaxis: Nitrofurantoin (avoid in third trimester of pregnancy) See above for renal dosing	100mg single dose when exposed to a trigger or 50mg to 100mg at night	Review in 6 months

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Catheter-associated urinary tract infection CSU samples should not be dipsticked as this will give false positive results and is not helpful in diagnosing presence of infection. Click here for further guidance **Asymptomatic bacteriuria:** Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter. **Antibiotic prophylaxis:** Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter. **Symptomatic infection:** - Offer an antibiotic. - When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data - Consider removing or, if not possible, changing the catheter if it has been in place for more than 7 days. But do not delay antibiotic treatment. - Advise paracetamol for pain. - Advise drinking enough fluids to avoid dehydration.				
Catheter-associated urinary tract infection **Non-pregnant women and men over 16 years if NO upper UTI symptoms** NICE visual summary	See above for further information When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. *Low risk of resistance is likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in areas where data suggests low resistance. Higher risk of resistance is likely with recent use.	**First line** Nitrofurantoin Click here for renal dosing **OR** Trimethoprim (if low risk of resistance)*	100mg m/r BD 200mg BD	7 days
		Second line Pivmecillinam (a penicillin)	400mg initial dose, then 200mg TDS	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Catheter-associated urinary tract infection **Non-pregnant women and men if upper UTI symptoms 16 and over** NICE visual summary	See above for further information. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.	**First line** Cefalexin **OR** Co-amoxiclav (only if known to be susceptible) **OR** Ciprofloxacin (see MHRA alerts)	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections) 500/125mg TDS 500mg BD	7-10 days 7-10 days 7 days
		Second line Discuss with Microbiology		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Catheter-associated urinary tract infection **pregnant women** NICE visual summary	See above for further information. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.	Discuss with Microbiology if required		
Catheter-associated urinary tract infection **Children and young people (3 months to 16 yrs.)** NICE visual summary	See above for further information. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data.	Discuss with Microbiology if required		
Acute prostatitis NICE visual summary	Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable. Be guided by susceptibilities where available.	**First line:** Ciprofloxacin (see MHRA alerts) **OR** Trimethoprim (if unable to take quinolone)	500mg BD 200mg BD	28 days
		Second line (to be prescribed after discussion with specialist)		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Meningitis				
Suspected meningococcal disease	**Transfer all patients to hospital immediately**. If time before hospital admission, if suspected meningococcal septicaemia or non-blanching rash, give IV benzylpenicillin as soon as possible. Do not give IV antibiotics if there is a definite history of anaphylaxis; rash is not a contraindication.	IV or IM Benzylpenicillin	Child <1 year: 300mg Child 1–9 years: 600mg Adult/Child 10+ years: 1.2g	Stat dose; give IM, if vein cannot be accessed
Prevention of secondary case of meningitis (Public Health England)	Only prescribe following advice from your local health protection specialist/consultant: ☎ 0300 3038537 Out of hours: contact on-call doctor: ☎ 01603 481221 Expert advice is available for managing clusters of meningitis. Please alert the appropriate organisation to any cluster situation. Public Health England, Colindale (☎ 0208 200 4400) AWARe (all Wales Acute Response team) (☎ 0300 003 0032) Access the supporting evidence and rationales on the PHE website.			

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Gastrointestinal tract infections				
Oral candidiasis	**Topical azoles** are more effective than topical nystatin. Oral candidiasis is rare in immunocompetent adults; consider undiagnosed risk factors, including HIV.	Miconazole oral gel Available OTC Avoid if patient is using warfarin (see MHRA alert)	2.5ml of 24mg/ml QDS (hold in mouth after food)	7 days; continue for 7 days after resolved
		If not tolerated or on warfarin: Nystatin suspension	1ml; 100,000units/mL QDS (half in each side)	7 days; continue for 2 days after resolved
	If extensive/severe candidiasis	Fluconazole capsules	50mg OD	7 to 14 days
	If HIV or immunocompromised		100mg OD	
Infectious diarrhoea	For children send stool sample and discuss with a paediatrician to consider HUS (Haemolytic Uremic Syndrome) Refer previously healthy children with acute painful or bloody diarrhoea, to exclude *E. coli* O157 infection. **Antibiotic therapy is not usually indicated unless patient is systemically unwell**. If systemically unwell and campylobacter suspected (such as undercooked meat and abdominal pain), consider Clarithromycin 250mg–500mg BD for 5–7 days, if treated early (within 3 days). If *Giardia* is confirmed or suspected – tinidazole 2g single dose is the treatment of choice. Click here for information on reporting infectious bloody diarrhoea / food poisoning			

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Helicobacter pylori **See PHE quick reference guide for diagnostic advice: PHE *H. pylori***	Always test for *H.pylori* before giving antibiotics. Treat all positives, if known duodenal ulcer (DU,) gastric ulcer (GU), or low-grade MALToma. NNT in non-ulcer dyspepsia: 14. Do not offer eradication for GORD. Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection. **Retest for *H. pylori*:** post DU/GU, or relapse after second-line therapy, using urea breath test (UBT) or stool antigen test (SAT), consider referral for endoscopy and culture. **PPI options - Always use PPI** first line and first relapse Omeprazole 20mg BD Lansoprazole 30mg BD			
	No penicillin allergy:	Use PPI **PLUS** Amoxicillin **PLUS** Clarithromycin **OR** Metronidazole	 1000mg BD 500mg BD 400mg BD	7 days
	Penicillin allergy:	Use PPI **PLUS** Clarithromycin **PLUS** Metronidazole.	 500mg BD 400mg BD	MALToma 14 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Helicobacter pylori **See PHE quick reference guide for diagnostic advice: PHE *H. pylori***	**Penicillin allergy and previous clarithromycin**:	Use PPI **PLUS** Bismuth subsalicylate (Pepto bismol chewable tablet) **PLUS** Metronidazole **PLUS** Tetracycline hydrochloride.	2 tablets (525mg) QDS 400mg BD 500mg QDS	7 days MALToma 14 days
	Relapse and no penicillin allergy	Use PPI **PLUS** Amoxicillin **PLUS** Clarithromycin **OR** Metronidazole (whichever was not used first line)	1000mg BD 500mg BD 400mg BD	
	Relapse and previous metronidazole and clarithromycin	Use PPI **PLUS** Amoxicillin **PLUS** Tetracycline hydrochloride **OR** Levofloxacin (see MHRA alerts)	1000mg BD 500mg QDS 250mg BD	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Helicobacter pylori **See PHE quick reference guide for diagnostic advice: PHE *H. pylori***	**Relapse and penicillin allergy (no exposure to quinolone)**	Use PPI **PLUS** Metronidazole **PLUS** Levofloxacin (see MHRA alerts)	 400mg BD 250mg BD	7 days MALToma 14 days
	Relapse and penicillin allergy (with exposure to quinolone)	Use PPI **PLUS** Bismuth subsalicylate chewable tablet **PLUS** Metronidazole **PLUS** tetracycline	 2 tablets (525mg) QDS 400mg BD 500mg QDS	
	Third line on advice	Use PPI **PLUS** Bismuth subsalicylate chewable tablet **PLUS** **2 antibiotics** as above not previously used	 2 tablets (525mg) QDS	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Clostridium difficile	Review need for antibiotics, PPIs, and antiperistaltic agents and discontinue use where possible. Mild cases (<4 episodes of stool/day) may respond without metronidazole. 70% respond to metronidazole in 5 days; 92% respond to metronidazole in 14 days. **If severe (T>38.5, or WCC>15, rising creatinine, or signs/symptoms of severe colitis)**: consider hospital referral	**First episode**: Metronidazole	400mg TDS	10–14 days
		Severe, not responding or second episode Vancomycin (oral)	125mg QDS	10–14 days
		Recurrent or second line: On microbiology advice only Fidaxomicin	200mg BD	10 days
Traveller's diarrhoea	Prophylaxis rarely, if ever, indicated. Consider **standby** antimicrobial only for patients at high risk of severe illness, or visiting high-risk areas. **Do not prescribe on the NHS- prescribe privately if required or refer to travel clinic.**	**Standby**: azithromycin	500mg OD	1–3 days
		Prophylaxis/treatment: Bismuth subsalicylate (Pepto bismol chewable tablets)	2 tablets QDS	2 days
Threadworm	**Treat all household contacts at the same time**. **Advise hygiene measures for 2 weeks** (hand hygiene; pants at night; morning shower, including perianal area). Wash sleepwear, bed linen, and dust and vacuum. **Child <6 months**, add perianal wet wiping or washes 3 hourly.	**Child >6 months**: Mebendazole Available OTC for 2yrs +	100mg stat	1 dose; repeat in 2 weeks if persistent
		Child <6 months or pregnant (at least in first trimester): only hygiene measures for 6 weeks		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Genital tract infections				
STI screening	People with risk factors should be screened for chlamydia, gonorrhoea, HIV and syphilis. Refer individual and partners to GUM. **Risk factors**: <25 years; no condom use; recent/frequent change of partner; symptomatic or infected partner; area of high HIV.			
Chlamydia trachomatis/ urethritis	Opportunistically screen all sexually active patients aged 15 to 24 years for *chlamydia* annually and on change of sexual partner. Test positives for reinfection at 3 months following treatment. Reinfection in this age group is more common. If positive, treat index case, refer to GUM for partner notification, further testing and treatment. As single dose azithromycin has led to increased resistance in GU infections, doxycycline should be used first line for *chlamydia* and urethritis. Advise patient to abstain from sexual intercourse for 7 days after treatment. **Test of cure:** At least 3 weeks after end of treatment is recommended in pregnancy, where poor compliance is suspected and where symptoms persist. Consider referring all patients with symptomatic urethritis to GUM as testing should include *Mycoplasma genitalium and Gonorrhoea*.	**First line**: Doxycycline	100mg BD	7 days
		Second line including pregnant/breastfeeding: Azithromycin	1000mg on day 1 then 500mg OD	2 days (total 3 days)

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Epididymitis	Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI. If under 35 years or STI risk, refer to GUM.	Doxycycline **OR**	100mg BD	10 to 14 days
		Ofloxacin (see MHRA alerts) **OR**	200mg BD	14 days
		Ciprofloxacin (see MHRA alerts)	500mg BD	10 days
Vaginal candidiasis	All topical and oral azoles give over 80% cure. **Pregnant**: avoid oral azoles, the longer courses are more effective than shorter ones. Do not routinely treat an asymptomatic sexual partner	**Non-pregnant** Clotrimazole **OR** Oral Fluconazole	500mg pessary 150mg	Stat Stat
		Pregnant Clotrimazole **OR** Miconazole 2% topical	 100mg pessary 5g applicator full BD	 6 nights 7 days
	Recurrent (>4 episodes per year): Consider sending a swab for culture requesting candida identification/sensitivity if grown	**If recurrent**: Fluconazole (induction/maintenance)	150mg every 72 hours **THEN** 150mg once a week	3 doses 6 months

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Bacterial vaginosis	Oral metronidazole is as effective as topical treatment, and is cheaper. 7 days results in fewer relapses than 2g stat at 4 weeks. Prescribe 7 day course of metronidazole in preference to the 2g dose. Where compliance is an issue prescribe 2g stat dose **Pregnant/breastfeeding**: avoid 2g dose. Treating partners does not reduce relapse.	Oral Metronidazole	400mg BD **OR** 2g	7 days **OR** Stat
		Metronidazole 0.75% vaginal gel	5g applicator at night	5 nights
		Clindamycin 2% cream	5g applicator at night	7 nights
Genital herpes	**Advise**: saline bathing, analgesia, or topical lidocaine ointment for pain, and discuss transmission. **First episode**: treat within 5 days if new lesions or systemic symptoms, and refer to GUM. **Recurrent**: self-care if mild, or immediate short course antiviral treatment, or suppressive therapy if more than 6 episodes per year and refer to GUM.	Oral Aciclovir	400mg TDS	5 days
			800mg TDS (if recurrent)	2 days
Gonorrhoea	Antibiotic resistance is now very high. Use IM ceftriaxone if susceptibility not known prior to treatment. Use Ciprofloxacin **only** If susceptibility is known prior to treatment and the isolate is sensitive to ciprofloxacin at all sites of infection. Refer to GUM. Test of cure is essential.	Ceftriaxone	1000mg IM	Stat
		Ciprofloxacin *(only if known to be sensitive)* (see MHRA alerts)	500mg	Stat

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Trichomoniasis	Oral treatment needed as extravaginal infection common. Treat partners, and refer to GUM for other STIs. **Pregnant/breastfeeding**: avoid 2g single dose metronidazole; clotrimazole for symptom relief (not cure) if metronidazole declined.	Metronidazole	400mg BD **OR**	5–7 day **OR**
			2g (more adverse effects)	Stat
		Pregnancy to treat symptoms: Clotrimazole	100mg pessary at night	6 nights
Pelvic inflammatory disease	**Refer** women and sexual contacts to GUM for treatment. **Raised CRP** supports diagnosis, absent pus cells in HVS smear good negative predictive value. **Exclude**: ectopic pregnancy, appendicitis, endometriosis, UTI, irritable bowel, complicated ovarian cyst, functional pain. Always test for gonorrhoea, chlamydia, and *M. genitalium* if available.	**First line therapy**: Ceftriaxone **PLUS** Metronidazole **PLUS** Doxycycline	1000mg IM 400mg BD 100mg BD	Stat 14 days 14 days
		Second line therapy: Metronidazole **PLUS** Ofloxacin (see MHRA alerts)	400mg BD 400mg BD	14 days

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Skin and soft tissue infections **Note: Refer to RCGP Skin Infections online training. For MRSA, discuss therapy with microbiologist**				
Impetigo	Reserve topical antibiotics for very localised lesions to reduce risk of bacteria becoming resistant. Only use mupirocin if caused by MRSA.	Topical fusidic acid	Thinly TDS	5 days
		If MRSA: topical Mupirocin	2% ointment TDS	5 days
	Extensive, severe, or bullous: oral antibiotics.	**More severe**: Flucloxacillin	250 to 500mg QDS	7 days
		Penicillin allergy Clarithromycin	250 to 500mg BD	7 days
Cold sores	**Most resolve after 5 days without treatment**. Topical antivirals applied prodromally can reduce duration by 12 to 18 hours (available OTC). **If frequent, severe, and predictable triggers**: consider oral prophylaxis: aciclovir 400mg, twice daily, for 5 to 7 days.			
PVL-SA	Panton-Valentine leukocidin (PVL) is a toxin produced by 20.8 to 46% of *S. aureus* from boils/abscesses. PVL strains are rare in healthy people, but severe. **Risk factors for PVL**: recurrent skin infections; invasive infections; MSM; if there is more than one case in a home or close community (school children; military personnel; nursing home residents; household contacts). Discuss with microbiology where required.			
Eczema	**No visible signs of infection**: antibiotic use (alone or with steroids) encourages resistance and does not improve healing. **With visible signs of infection**: use oral flucloxacillin or clarithromycin, or topical treatment (as in impetigo).			

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Leg ulcer	Ulcers are always colonised. Antibiotics do not improve healing unless active infection (only consider if purulent exudate/odour; increased pain; cellulitis; pyrexia).	Flucloxacillin	500mg QDS	7 days If slow response continue for another 7 days
		Penicillin allergy Clarithromycin	500mg BD	
Acne	**Mild** (open and closed comedones) Or **Moderate** (inflammatory lesions)	**First line**: self-care (wash with mild soap; do not scrub; avoid make-up).		
		Second line: Topical retinoid Benzoyl peroxide (OTC)	 Thinly OD 5% cream OD-BD	 6–8 weeks 6–8 weeks
		Third-line: topical Clindamycin	1% cream, thinly BD	12 weeks
	Severe (nodules and cysts): Add oral antibiotic (for 3 months maximum) and refer.	**If treatment failure/severe**: Tetracycline **OR** Doxycycline	 500mg BD 100mg OD	 6–12 weeks 6–12 weeks

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Cellulitis and erysipelas NICE visual summary	**Class I**: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone. **If river or sea water exposure**: seek microbiology advice. **Class II**: patient febrile and ill, or comorbidity, admit for IV treatment, or use outpatient parenteral antimicrobial therapy. **Class III**: if toxic appearance, admit. Adding clindamycin does not improve outcomes **Erysipelas**: often facial and unilateral. Use flucloxacillin for non-facial erysipelas.	Flucloxacillin	500mg to 1000mg QDS	5- 7 days Continue for a further 7 days if required
		Penicillin allergy: Clarithromycin	500mg BD	
		Facial (non-dental): Co-amoxiclav	625mg TDS	7 days Continue for a further 7 days if required
Bites	**Human**: thorough irrigation is important. Antibiotic prophylaxis is advised. Assess risk of tetanus, rabies, HIV, and hepatitis B and C. **Cat**: always give prophylaxis. Risk of deep-seated infection; may need assessment for washout in hospital particularly if bitten on hands/wrists **Dog**: give prophylaxis if: puncture wound; bite to hand, foot, face, joint, tendon, or ligament; immunocompromised; cirrhotic; asplenic; or presence of prosthetic valve/joint. Consider rabies and rabies related viruses if the bite has occurred abroad or from bats. Click here for further information **Penicillin allergy**: Review all at 24 and 48 hours, as not all pathogens are covered.	**Prophylaxis/treatment all**: Co-amoxiclav	375mg to 625mg TDS	7 days
		Penicillin allergy – human bites: Metronidazole **AND** Clarithromycin	400mg TDS 250mg to 500mg BD	
		Penicillin allergy - animal bites: Metronidazole **AND** Doxycycline	400mg TDS 100mg BD	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Scabies	**First choice permethrin (OTC)**: Treat whole body from ear/chin downwards, and under nails. **If using permethrin** and patient is under 2 years, elderly or immunosuppressed, or **if treating with malathion (OTC)**: also treat face and scalp. **Home/sexual contacts**: treat within 24 hours.	Permethrin (OTC)	5% cream	Two applications, 1 week apart
		Permethrin allergy: Malathion (OTC)	0.5% aqueous liquid	
Mastitis	*S. aureus* is the most common infecting pathogen. Suspect if woman has a painful breast; fever and/or general malaise; a tender, red breast. **Breastfeeding**: oral antibiotics are appropriate, where indicated. Women should continue feeding, including from the affected breast.	Flucloxacillin	500mg QDS	10–14 days
		Penicillin allergy: Clarithromycin	500mg BD	
Dermatophyte infection: skin	**Most cases**: use terbinafine as fungicidal, treatment time shorter and more effective than with fungistatic imidazoles or undecenoates. If candida possible, use imidazole. **If intractable, or scalp**: send skin scrapings, and if infection confirmed: use oral terbinafine or itraconazole. **Scalp**: oral therapy, and discuss with specialist.	Topical terbinafine (available OTC) **OR** Clotrimazole 1% (available OTC)	1% OD to BD 1% OD to BD	1–4 weeks 4-6 weeks
		Alternative in athlete's foot: Mycota® (available OTC)	OD to BD	4–6 weeks

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Dermatophyte infection: nail	**Take nail clippings**; start therapy only if infection is confirmed. Oral terbinafine is more effective than oral azole. Liver reactions 0.1 to 1% with oral antifungals. If candida or non-dermatophyte infection is confirmed, use oral itraconazole. Topical nail lacquer is not as effective. **To prevent recurrence**: apply weekly 1% topical antifungal cream to entire toe area. **Children**: seek specialist advice.	**First line**: Terbinafine	250mg OD	Fingers: 6 weeks to 3 months Toes: 3-6 months
		Second line: Itraconazole	200mg BD	7 days- subsequent courses repeated after 21 day interval Fingers: 2 courses Toes: 3 courses
		Stop treatment when continual, new, healthy, proximal nail growth.		

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Varicella zoster/ chickenpox **Herpes zoster/ shingles**	**Pregnant/immunocompromised/neonate**: seek urgent specialist advice. **Chickenpox**: consider aciclovir if: onset of rash <24 hours, and 1 of the following: >14 years of age; severe pain; dense/oral rash; taking steroids; smoker. Give paracetamol for pain relief. **Shingles**: treat if >50 years of age (Postherpetic neuralgia [PHN] rare if <50 years) and within 72 hours of rash, or if 1 of the following: active ophthalmic; Ramsey Hunt; eczema; non-truncal involvement; moderate or severe pain; moderate or severe rash. Shingles treatment if not within 72 hours: consider starting antiviral drug up to 1 week after rash onset, if high risk of severe shingles or continued vesicle formation; older age; immunocompromised; or severe pain.	**First line for chicken pox and shingles**: Aciclovir	800mg 5 times daily	7 Days
		Second line for shingles if poor compliance: *Not for children:* Valaciclovir	1g TDS	
Tick bites (Lyme disease)	**Treatment**: Erythema migrans is diagnostic of Lyme disease and does not require confirmation with testing; serology is often negative early in infection. For other suspected Lyme disease such as neuroborreliosis (CN palsy, radiculopathy) seek advice.	**Treatment**: Doxycycline	100mg BD	21 days
		Second Line: Amoxicillin	1000mg TDS	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Eye infections				
Conjunctivitis	**Treat only if severe**, as most cases are viral or self-limiting. **Bacterial conjunctivitis**: usually unilateral and also self-limiting. It is characterised by red eye with mucopurulent, not watery discharge. 65% and 74% resolve on placebo by days 5 and 7 respectively. **Second line**: fusidic acid as it has less Gram-negative activity.	**Self care** Bath/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting.		
		First line Chloramphenicol (OTC) 0.5% eye drop **AND/OR** Chloramphenicol (OTC) 1% ointment	2 hourly for 2 days, then reduce frequency to 3–4 times daily 3 to 4 times daily or once daily at night if using antibiotic eye drops during the day.	48 hours after resolution
		Second line: Fusidic acid 1% gel	BD	

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Blepharitis	**First line - Self care** Lid hygiene for symptom control, including warm compresses; lid massage and scrubs; gentle washing; avoiding cosmetics.			
	Second line management: Topical antibiotics if hygiene measures are ineffective after 2 weeks	**Second line** Chloramphenicol 1% eye ointment	Apply BD	6-week trial
	Signs of meibomian gland dysfunction, or acne rosacea: consider oral antibiotics.	**Third line** Doxycycline	100mg OD 50mg OD	4 weeks initial 8 weeks maintenance

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Suspected dental infections in primary care (outside dental settings) This guidance is not designed to be a definitive guide to oral conditions, as GPs should not be involved in dental treatment. Patients presenting to non-dental primary care services with dental problems should be directed to their regular dentist, or if this is not possible, to the NHS 111 service (in England), who will be able to provided details of how to access emergency dental care. Note: Antibiotics do not cure toothache. First-line treatment is with paracetamol and/or ibuprofen; codeine is not effective for toothache.				
Mucosal ulceration and inflammation (simple gingivitis)	Use antiseptic mouthwash if more severe, and if pain limits oral hygiene to treat or prevent secondary infection. The primary cause for mucosal ulceration or inflammation (aphthous ulcers; oral lichen planus; herpes simplex infection; oral cancer) needs to be evaluated and treated.	**Self-care** Temporary pain and swelling relief can be attained with saline mouthwash (½ tsp salt in warm water)		
		Chlorhexidine 0.2% mouthwash (available OTC) (Do not use within 30 minutes of toothpaste) **OR** Hydrogen peroxide 6% Available OTC	1 minute BD with 10 ml 2 to 3 minutes BD/TDS with 15ml in ½ glass warm water	Always spit out after use. Use until lesions resolve or less pain allows for oral hygiene

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Acute necrotising ulcerative gingivitis	Refer to dentist for scaling and hygiene advice. Antiseptic mouthwash if pain limits oral hygiene. Commence metronidazole if systemic signs and symptoms.	Chlorhexidine 0.2% mouthwash (do not use within 30 minutes of toothpaste) **OR** Hydrogen peroxide 6%	1 minute BD with 10 ml 2 to 3 minutes BD/TDS with 15ml in ½ glass warm water	Until less pain allows for oral hygiene
		Metronidazole	400mg TDS	3 days
Pericoronitis	Refer to dentist for irrigation and debridement. If persistent swelling or systemic symptoms, use metronidazole or amoxicillin. Use antiseptic mouthwash if pain and trismus limit oral hygiene.	Metronidazole **OR** Amoxicillin	400mg TDS 500mg TDS	3 days
		Chlorhexidine 0.12 to 0.2% mouthwash (do not use within 30 minutes of toothpaste) **OR** Hydrogen peroxide 6%	1 minute BD with 10 ml 2 to 3 minutes BD/TDS with 15ml in ½ glass warm water	Until less pain allows for oral hygiene

Infection	Key Points	Medicine	Adult Dose (check cBNF for children doses unless stated)	Length of treatment
Dental abscess	Regular analgesia should be the first option until a dentist can be seen for urgent drainage, as repeated courses of antibiotics for abscesses are not appropriate. Repeated antibiotics alone, without drainage, are ineffective in preventing the spread of infection. Antibiotics are only recommended if there are signs of severe infection, systemic symptoms, or a high risk of complications. Patients with severe odontogenic infections (cellulitis, plus signs of sepsis; difficulty in swallowing; impending airway obstruction) should be referred urgently for hospital admission to protect airway, for surgical drainage and for IV antibiotics. The empirical use of cephalosporins, co-amoxiclav, clarithromycin, and clindamycin do not offer any advantage for most dental patients, and should only be used if there is no response to first-line drugs.			
	If pus is present, refer for drainage, tooth extraction, or root canal. Send pus for investigation. If spreading infection (lymph node involvement or systemic signs, that is, fever or malaise) ADD metronidazole. Use clarithromycin in true penicillin allergy and, if severe, refer to hospital.	Amoxicillin	500mg to 1000mg TDS	Up to 5 days; review at 3 days
		Metronidazole	400mg TDS	
		Penicillin allergy: clarithromycin	500mg BD	