NICE National Institute for Health and Care Excellence

Public Health England

Lincolnshire Primary care adaptation - antimicrobial prescribing guidance, managing common infections

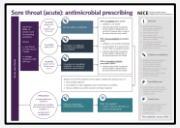
For further information and management of other infections not listed here or when empirical therapy has failed or special circumstances exist clinical advice can be obtained by contacting the on-call Microbiologist via ULHT Hospital site switchboards.

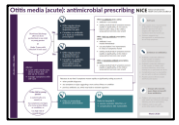
If a patient's condition is rapidly deteriorating despite appropriate antimicrobial therapy please consider urgent hospital referral.

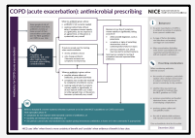
- For all PHE guidance, follow PHE's principles of treatment.
- See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.

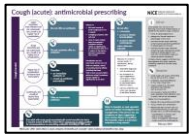
Key:  Click to access doses for children  Click to access NICE's printable visual summary

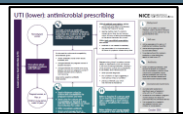
Jump to section on: Upper RTI | Lower RTI | UTI | Meningitis | GI | Genital | Skin | Eye | Dental

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Upper respiratory tract infections						
Acute sore throat	Advise paracetamol, or if preferred and suitable, ibuprofen for pain. Medicated lozenges may help pain in adults. Use FeverPAIN or Centor to assess symptoms:	**First choice**: phenoxymethylpenicillin	500mg QDS		5–10 days	
		Penicillin allergy: clarithromycin **OR**	250mg to 500mg BD		5 days	

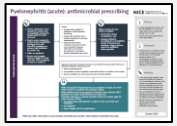
Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
NICE Last updated: Jan 2018	**FeverPAIN 0-1 or Centor 0-2**: no antibiotic; **FeverPAIN 2-3**: no or back-up antibiotic; **FeverPAIN 4-5 or Centor 3-4:** immediate or back-up antibiotic. **Systemically very unwell or high risk of complications:** immediate antibiotic. *For detailed information click the visual summary icon.*	erythromycin (preferred if pregnant)	250mg to 500mg QDS		5 days	
Influenza Public Health England Last updated: Feb 2019	**Annual vaccination is essential for all those 'at risk' of influenza.**[1D] Antivirals are not recommended for healthy adults.[1D,2A+] Treat 'at risk' patients with 5 days oseltamivir 75mg BD,[1D] when influenza is circulating in the community, and ideally within 48 hours of onset (36 hours for zanamivir treatment in children),[1D,3D] or in a care home where influenza is likely.[1D,2A+] **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).[4D] See the PHE Influenza guidance for the treatment of patients under 13 years.[4D] In severe immunosuppression, or oseltamivir resistance, use zanamivir 10mg BD[5A+,6A+] (2 inhalations twice daily by diskhaler for up to 10 days) and seek advice.[4D] *Access supporting evidence and rationales on the PHE website.*					
Scarlet fever (GAS) Public Health England Last updated: Oct 2018	**Prompt treatment** with appropriate antibiotics significantly reduces the risk of complications.[1D] Vulnerable individuals (immunocompromised, the comorbid, or those with skin disease) are at increased risk of developing complications.[1D]	Phenoxymethylpenicillin[2D]	500mg QDS[2D]	BNF for children	10 days[3A+,4A+,5A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Penicillin allergy: clarithromycin[2D]	250mg to 500mg BD[2D]	BNF for children	5 days[2D,5A+]	
		Optimise analgesia[2D] and give safety netting advice				
Acute otitis media NICE Last updated: Feb 2018	Regular paracetamol or ibuprofen for pain (right dose for age or weight at the right time and maximum doses for severe pain). **Otorrhoea or under 2 years with infection in both ears**: consider no antibiotic treatment, back-up antibiotic or immediate antibiotic. **Otherwise**: consider no antibiotic or back-up antibiotic. **Systemically very unwell or high risk of complications**: immediate antibiotic. *For detailed information click on the visual summary.*	**First choice**: amoxicillin			5–7 days	
		Penicillin allergy: clarithromycin **OR**			5–7 days	
		erythromycin (preferred if pregnant)			5–7 days	
		Second choice if not responding to amoxicillin: co-amoxiclav			5–7 days	
Acute otitis externa	**First line**: analgesia for pain relief,[1D,2D] and apply localised heat (such as a warm flannel).[2D] **Second line**: topical acetic acid or topical	**Second line**: topical acetic acid 2%[2D,4B-] **OR**	1 spray TDS[5A-]	BNF for children	7 days[5A]	*Not available. Access supporting*

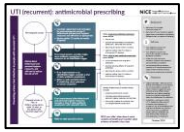
Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Public Health England Last updated: Nov 2017	antibiotic +/- steroid: similar cure at 7 days.[2D,3A+,4B-] **If cellulitis or disease extends outside ear canal**, or systemic signs of infection, start oral flucloxacillin and refer to exclude malignant otitis externa.[1D]	topical neomycin sulphate with corticosteroid[2D,5A-]	3 drops TDS[5A-]	BNF for children	7 days (min) to 14 days (max)[3A+]	*evidence and rationales on the PHE website*
		If cellulitis: flucloxacillin[6B+]	500mg QDS[2D]	BNF for children	7 days[2D]	
Sinusitis NICE Last updated: Oct 2017	Advise paracetamol or ibuprofen for pain. Little evidence that nasal saline or nasal decongestants help, but people may want to try them. **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. *For detailed information click on the visual summary.*	**First choice**: phenoxymethylpenicillin	500mg QDS		5 days	
		Penicillin allergy: doxycycline (not in under 12s) **OR**	200mg on day 1, then 100mg OD		5 days	
		clarithromycin **OR**	500mg BD		5 days	
		erythromycin (preferred if pregnant)	250 to 500mg QDS or 500 to 1000mg BD		5 days	
		Second choice or first choice if systemically very unwell or high risk of complications: co-amoxiclav	500/125mg TDS		5 days	
▼ Lower respiratory tract infections						
Note: Low doses of penicillins are more likely to select for resistance.[1D] Do not use fluoroquinolones (ciprofloxacin, ofloxacin) first line because they may have long-term side effects and there is poor pneumococcal activity.[2B--,3D-] Reserve all fluoroquinolones (including levofloxacin) for proven resistant organisms.[1D]						
Acute exacerbation of COPD	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 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.	**First choice: Doxycycline**	200mg on day 1, then 100mg OD (see BNF for severe infection)	-	5 days	
		Second choice: amoxicillin	500mg TDS (see BNF for severe infection)	-		
		Third choice: clarithromycin	500mg BD (see BNF for severe infection)	-		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		If severely unwell or higher risk of resistance (guided by susceptibilities where available), consider the following alternative choices co-amoxiclav **OR**	500/125mg TDS	-	5 days	
		levofloxacin (consider safety issues) **OR**	500mg OD	-		
		co-trimoxazole (consider safety issues)	960mg BD	-		
		IV antibiotics *(click on visual summary)*				
Acute cough NICE	Some people may wish to try honey (in over 1s), the herbal medicine pelargonium (in over 12s), cough medicines containing the expectorant guaifenesin (in over 12s) or cough medicines containing cough suppressants, except codeine, (in over 12s). These self-care treatments have limited evidence for the relief of cough symptoms. **Acute cough with upper respiratory tract infection**: no antibiotic. **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	**Adults first choice:** doxycycline	200mg on day 1, then 100mg OD	-	5 days	
		Adults alternative first choices: amoxicillin **OR**	500mg TDS	-		
		clarithromycin **OR**	250mg to 500mg BD	-		
		erythromycin (preferred if pregnant)	250mg to 500mg QDS or 500mg to 1000mg BD	-		
		Children first choice: amoxicillin	-			
		Children alternative first choices: clarithromycin **OR**	-			
		erythromycin **OR**	-			

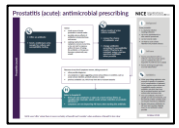
Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Last updated: Feb 2019	congestive heart failure, current use of oral corticosteroids. Do not offer a mucolytic, an oral or inhaled bronchodilator, or an oral or inhaled corticosteroid unless otherwise indicated. *For detailed information click on the visual summary. See also the NICE guideline on pneumonia for prescribing antibiotics in adults with acute bronchitis who have had a C-reactive protein (CRP) test (CRP<20mg/l: no routine antibiotic, CRP 20 to 100mg/l: back-up antibiotic, CRP>100mg/l: immediate antibiotic).*	doxycycline (not in under 12s)	-			
Community-acquired pneumonia Public Health England Last updated: Nov 2017	Use CRB65 score to guide mortality risk, place of care, and antibiotics.[1D] Each CRB65 parameter scores one: **C**onfusion (AMT<8 or new disorientation in person, place or time); **R**espiratory rate >30/minute; **B**P systolic <90, or diastolic <60; age >**65**. **Score 0**: low risk, consider home-based care; **1–2**: intermediate risk, consider hospital assessment; **3–4**: urgent hospital admission.[1D] **Give safety net advice**[1D] and likely duration of different symptoms, such as cough 6 weeks.[1D] Clinically assess need for dual therapy for atypicals. Mycoplasma infection is rare in over 65s.[2A+,3C]	**CRB65=0**: First choice amoxicillin[1D,4D]	500mg TDS[5A+]	BNF for children	5 days (review at 3 days);[1D] 7–10 days if poor response[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second choice doxycycline[2A+,4D]	200mg stat then 100mg OD[6A-]			
		Third choice clarithromycin[2A+,4D,5A+]	500mg BD[5A+]	- BNF for children		
		CRB65 = 1–2 and at home: Clinically assess need for dual therapy for atypicals: amoxicillin[1D, 4D] **AND**	500mg TDS[5A+]	BNF for children	7–10 days[1D]	
		clarithromycin[2A+,4D,5A+] **OR**	500mg BD[5A+]	BNF for children		
		doxycycline alone[4D]	200mg stat then 100mg OD[6A-]	-		
▼ **Urinary tract infections**						
Lower urinary tract infection	Advise paracetamol or ibuprofen for pain. **Non-pregnant women**: back up antibiotic (to use if no improvement in 48 hours or symptoms	**Non-pregnant women first choice**: nitrofurantoin (if eGFR ≥45 ml/minute)	100mg m/r BD OR if unavailable use 50mg QDS	-	3 days	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
NICE Last updated: Oct 2018	worsen at any time) or immediate antibiotic. **Pregnant women, men, children or young people**: 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. *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management.*	OR Trimethoprim if low risk of resistance or if eGFR <45ml/min or if sensitivity proven	200mg BD	-	3 days	
		Non-pregnant women second choice:		-		
		pivmecillinam (a penicillin)	400mg initial dose, then 200mg TDS	-	3 days	
		Non-pregnant women third choice: fosfomycin	3g single dose sachet	-	single dose	
		Pregnant women first choice: Send an MSU before treatment initiation nitrofurantoin (avoid at term) – if eGFR ≥45 ml/minute	100mg m/r BD OR if unavailable use 50mg QDS	-	7 days	
		Pregnant women second choice: Send an MSU before treatment initiation cefalexin	500mg BD	-	7 days	
		Treatment of asymptomatic bacteriuria in pregnant women: choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results				
		Men first choice: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD OR if unavailable use 50mg QDS	-	7 days	
		trimethoprim	200mg BD	-	7 days	
		Men second choice: consider alternative diagnoses basing antibiotic choice on recent culture and susceptibility results				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		Children and young people (3 months and over) first choice: trimethoprim (if low risk of resistance) **OR**	-			
		nitrofurantoin (if eGFR ≥45 ml/minute)	-			
		Children and young people (3 months and over) second choice: nitrofurantoin (if eGFR ≥45 ml/minute and not used as first choice) **OR**	-		-	
		amoxicillin (only if culture results available and susceptible) **OR**	-			
		cephalexin	-			
Acute pyelonephritis (upper urinary tract) NICE	Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12. 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. *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management.*	**Non-pregnant women and men first choice**:		-		
		First line: co-amoxiclav (only if culture results available and susceptible) **OR**	500/125mg TDS		7–10 days	
		Second line: ciprofloxacin (consider safety issues)	500mg BD		7 days	
		Pregnant women first choice: cefalexin	500mg TDS	-	7–10 days	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		Children and young people (3 months and over) first choice: cefalexin **OR**	-		-	
Last updated: Oct 2018		co-amoxiclav (only if culture results available and susceptible)	-	-	-	
Recurrent urinary tract infection NICE Last updated: Oct 2018	First advise about behavioural and personal hygiene measures, and self-care (with D-mannose or cranberry products) 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 3 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 3 months). *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management.*	**First choice antibiotic prophylaxis**: Consult ULHT on-call microbiology team for a discussion regarding antimicrobial prophylaxis for recurrent UTI's			-	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Catheter-associated urinary tract infection NICE Last updated: Nov 2018	Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter. 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. Offer an antibiotic for a symptomatic infection. 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. Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter. *For detailed information click on the visual summary.*	**Non-pregnant women and men first choice if no upper UTI symptoms:** First line nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD OR if unavailable use 50mg QDS	-	7 days	
		Second line trimethoprim (if low risk of resistance) **OR**	200mg BD	-		
		Third line pivmecillinam (a penicillin)	400mg initial dose, then 200mg TDS	-	7 days	
		Non-pregnant women and men first choice if upper UTI symptoms:		-	7–10 days	
		co-amoxiclav (only if culture results available and susceptible) **OR**	500/125mg TDS	-		
		ciprofloxacin (consider safety issues)	500mg BD	-	7 days	
		Pregnant women first choice: cefalexin	500mg TDS	-	7–10 days	
		Pregnant women second choice (if penicillin allergic) Consult on-call microbiology team	-	-	-	
		Children and young people (3 months and over) first choice: trimethoprim (if low risk of resistance) **OR**	-			
		amoxicillin (only if culture results available and susceptible) **OR**	-			

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		cefalexin **OR**	-			
		co-amoxiclav (only if culture results available and susceptible)	- -		-	
Acute prostatitis NICE Last updated: Oct 2018	Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable. Offer antibiotic. Review antibiotic treatment after 14 days and either stop antibiotics or continue for a further 14 days if needed (based on assessment of history, symptoms, clinical examination, urine and blood tests). For detailed information click on the visual summary.	**First choice** (guided susceptibilities when available): ciprofloxacin **OR**	500mg BD		14 days then review	
		trimethoprim (if unable to take quinolone)	200mg BD	-	14 days, then review	
		Second choice (after discussion with specialist): co-trimoxazole	960mg BD	-	14 days, then review	
▼ Meningitis						
Suspected meningococcal disease Public Health England Last updated: Feb 2019	**Transfer all patients to hospital immediately**.[1D] If time before hospital admission,[2D,3A+] if suspected meningococcal septicaemia or non-blanching rash,[2D,4D] give IV benzylpenicillin[1D,2D,4D] as soon as possible.[2D] Do not give benzylpenicillin if there is a definite history of anaphylaxis;[1D] NOTE: rash is not a contraindication.[1D]	IV or IM benzylpenicillin[1D,2D]	Child <1 year: 300mg[5D] Child 1–9 years: 600mg[5D] Adult/child 10+ years: 1.2g[5D]		Stat dose;[1D] give IM, if vein cannot be accessed [1D]	*Not available. Access the supporting evidence and rationales on the PHE website*
Prevention of secondary case of meningitis Public Health England Last updated: Nov 2017	Only prescribe following advice from your local health protection specialist/consultant: ☎ 0344 225 4524 Out of hours: contact on-call doctor: ☎ [INSERT PHONE NUMBER] Expert advice is available for managing clusters of meningitis. Please alert the appropriate organisation to any cluster situation. Public Health England, Collindale (tel: 0208 200 4400) *Access the supporting evidence and rationales on the PHE website.*					

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Gastrointestinal tract infections						
Oral candidiasis Public Health England Last updated: Oct 2018	**Topical azoles** are more effective than topical nystatin.[1A+] Oral candidiasis is rare in immunocompetent adults;[2D] consider undiagnosed risk factors, including HIV.[2D] Use 50mg fluconazole if extensive/severe candidiasis;[3D,4D] if HIV or immunocompromised, use 100mg fluconazole.[3D,4D]	Miconazole oral gel[1A+,4D,5A-]	2.5ml of 24mg/ml QDS (hold in mouth after food) [4D]	BNF for children	7 days; continue for 7 days after resolved[4D,6D]	*Not available. Access supporting evidence and rationales on the PHE website*
		If not tolerated: nystatin suspension[2D,6D,7A-]	1ml; 100,000units/mL QDS (half in each side) [2D,4D,7A-]	BNF for children	7 days; continue for 2 days after resolved[4D]	
		fluconazole capsules[6D,7A-]	50mg/100mg OD[3D,6D,8A-]	BNF for children	7 to 14 days[6D,7A-,8A-]	
Infectious diarrhoea Public Health England Last updated: Oct 2018	Refer previously healthy children with acute painful or bloody diarrhoea, to exclude *E. coli* O157 infection.[1D] **Antibiotic therapy is not usually indicated unless patient is systemically unwell**.[2D] If systemically unwell and campylobacter suspected (such as undercooked meat and abdominal pain),[3D] consider clarithromycin 250–500mg BD for 5–7 days, if treated early (within 3 days).[3D,4A+] If giardia is confirmed or suspected – tinidazole 2g single dose is the treatment of choice.[5A+] *Access the supporting evidence and rationales on the PHE website.*					
Helicobacter pylori Public Health England See PHE quick reference guide for diagnostic advice: PHE *H.*	Always test for *H.pylori* before giving antibiotics. Treat all positives, if known DU, GU,[1A+] or low-grade MALToma.[2D,3D] NNT in non-ulcer dyspepsia: 14.[4A+] Do not offer eradication for GORD.[3D] Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection.[5A+,6B+,7A+] **Penicillin allergy**: use PPI **PLUS** clarithromycin **PLUS** metronidazole.[2D] If previous clarithromycin, use PPI **PLUS** bismuth salt **PLUS** metronidazole **PLUS** tetracycline hydrochloride.[2D,8A-,9D] **Relapse and no penicillin allergy** use PPI **PLUS** amoxicillin **PLUS** clarithromycin or metronidazole (whichever was not used first line) [2D] **Relapse and previous metronidazole and clarithromycin**: use PPI **PLUS** amoxicillin **PLUS**	**Always use PPI**[2D,3D,5A+,12A+] **First line and first relapse and no penicillin allergy** PPI **PLUS** 2 antibiotics	-	BNF for children	7 days[2D] MALToma 14 days[7A+,16A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		amoxicillin[2D,6B+] **PLUS**	1000mg BD[14A+]	BNF for children		
		clarithromycin[2D,6B+] **OR**	500mg BD[8A-]	BNF for children		
		metronidazole[2D,6B+]	400mg BD[2D]	BNF for children		
		Penicillin allergy and previous clarithromycin: PPI **WITH** bismuth subsalicylate PLUS 2 antibiotics	-	-		
		bismuth subsalicylate[13A+] **PLUS**	525mg QDS[15D]			
		metronidazole[2D] **PLUS**	400mg BD[2D]	BNF for children		
		tetracycline[2D]	500mg QDS[15D]			

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
pylori Last updated: Feb 2019	either tetracycline **OR** levofloxacin (if tetracycline not tolerated).[2D,7A+] **Relapse and penicillin allergy (no exposure to quinolone)**: use PPI **PLUS** metronidazole **PLUS** levofloxacin.[2D] **Relapse and penicillin allergy (with exposure to quinolone)**: use PPI **PLUS** bismuth salt **PLUS** metronidazole **PLUS** tetracycline.[2D] **Retest for *H. pylori*:** post DU/GU, or relapse after second-line therapy,[1A+] using UBT or SAT,[10A+,11A+] consider referral for endoscopy and culture.[2D]	Relapse **and previous metronidazole and clarithromycin**: PPI **PLUS** 2 antibiotics	-	-		
		amoxicillin[2D,7A+] **PLUS**	1000mg BD[14A+]	BNF for children		
		tetracycline[2D,7A+] **OR**	500mg QDS[15D]			
		levofloxacin[2D,7A+]	250mg BD[7A+]			
		Third line on advice: PPI **WITH**	-	-	10 days	
		bismuth subsalicylate **PLUS**	525mg QDS[15D]	-		
		2 antibiotics as above not previously used **OR**	-	-		
		rifabutin[14A+] **OR**	150mg BD	-		
		furazolidone[17A+]	200mg BD	-		
Clostridium difficile Public Health England Last updated: Oct 2018	Review need for antibiotics,[1D,2D] PPIs,[3B-] and antiperistaltic agents and discontinue use where possible.[2D] Mild cases (<4 episodes of stool/day) may respond without metronidazole;[2D] 70% respond to metronidazole in 5 days; 92% respond to metronidazole in 14 days.[4B-] **If severe (T>38.5, or WCC>15, rising creatinine, or signs/symptoms of severe colitis)**:[2D] treat with oral vancomycin,[1D,2D,5A-] review progress closely,[1D,2D] and consider hospital referral.[2D]	**First episode**: (do not prescribe metronidazole liquid as this could be ineffective. Crush and disperse tablets if necessary (unlicensed administration) metronidazole[2D,4B-]	400mg TDS[1D,2D]	BNF for children	10–14 days[1D,4B-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Severe, type 027 or second line oral vancomycin[1D,2D,5A-]	125mg QDS[1D,2D,5A-]	BNF for children	10–14 days,[1D,2D] then taper[2D]	
		Recurrent or third line: Following consultation with on-call microbiology team fidaxomicin[2D,5A-]	200mg BD[5A-]	-	10 days[5A-]	
Traveller's diarrhoea	Prophylaxis rarely, if ever, indicated.[1D] Consider **standby** antimicrobial only for patients at high	**Standby**: azithromycin	500mg OD[1D,3A+]	-	1–3 days[1D,2D,3A+]	*Not available. Access*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Public Health England Last updated: Oct 2018	risk of severe illness,[2D] or visiting high-risk areas.[1D,2D]	**Prophylaxis/treatment**: bismuth subsalicylate	2 tablets QDS[1D,2D]	-	2 days[1D,2D,4A-]	*supporting evidence and rationales on the PHE website*
Threadworm Public Health England Last updated: Nov 2017	**Treat all household contacts at the same time**.[1D] **Advise hygiene measures for 2 weeks**[1D] (hand hygiene;[2D] pants at night; morning shower, including perianal area).[1D,2D] Wash sleepwear, bed linen, and dust and vacuum.[1D] **Child <6 months**, add perianal wet wiping or washes 3 hourly.[1D]	**Child >6 months**: mebendazole[1D,3B-]	100mg stat[3B-]	BNF for children	1 dose;[3B-] repeat in 2 weeks if persistent[3B-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Child <6 months or pregnant (at least in first trimester): only hygiene measure for 6 weeks[1D]	-	-	-	
▼ Genital tract infections						
STI screening Public Health England Last updated: Nov 2017	People with risk factors should be screened for chlamydia, gonorrhoea, HIV and syphilis.[1D] Refer individual and partners to GUM.[1D] **Risk factors**: <25 years; no condom use; recent/frequent change of partner; symptomatic or infected partner; area of high HIV.[2B-] *Access the supporting evidence and rationales on the PHE website.*					
Chlamydia trachomatis/ urethritis	Opportunistically screen all sexually active patients aged 15 to 24 years for chlamydia annually and on change of sexual partner.[1B-] If positive, treat index case, refer to GUM and	**First line**: doxycycline[4A+,11A-,12A+]	100mg BD[4A+,11A-,12A+]	-	7 days[4A+,11A-,12A+]	*Not available. Access supporting evidence and rationales on the*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Public Health England Last updated: Feb 2019	initiate partner notification, testing and treatment.[2D,3A+] As single dose azithromycin has led to increased resistance in GU infections, doxycycline should be used first line for chlamydia and urethritis.[4A+] Advise patients with chlamydia to abstain from sexual intercourse until doxycycline is completed or for 7 days after treatment with azithromycin(14 days after azithromycin started and until symptoms resolve if urethritis).[3A+,4A+] If chlamydia, test for reinfection at 3 to 6 months following treatment if under 25 years; or consider if over 25 years and high risk of re-infection.[1B-, 3B+,5B-] **Second line, pregnant, breastfeeding, allergy, or intolerance**: azithromycin is most effective.[6A+,7D,8A+,9A+,10D] As lower cure rate in pregnancy, test for cure at least 3 weeks after end of treatment.[3A+] Consider referring all patients with symptomatic urethritis to GUM as testing should include *Mycoplasma genitalium* and *Gonorrhoea*.[11A-] If *M.genitalium* is proven, use doxycycline followed by azithromycin using the same dosing regimen and advise to avoid sex for 14 days after start of treatment until the symptoms have resolved.[11A-,12A+]	**Second line/ pregnant/breastfeeding/ allergy/intolerance**: azithromycin[4A+,11A-,12A+]	1000mg[4A+,11A-,12A+] then 500mg OD[4A+,11A-,12A+]		Stat[4A+,11A-,12A+] 2 days[4A+,11A-,12A+] (total 3 days)	PHE website
Epididymitis Public Health England Last updated: Nov 2017	Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI.[1A+,2D] If under 35 years or STI risk, refer to GUM.[1A+,2D]	First line ciprofloxacin[1A+,2D]	500mg BD 1A+2D,3A+	-	10 days[1A+,2D,3A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second line Doxycycline[1A+,2D]	100mg BD[1A+,2D]		10 to 14 days[1A+,2D]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Vaginal candidiasis Public Health England Last updated: Oct 2018	All topical and oral azoles give over 80% cure.[1A+,2A+] **Pregnant**: avoid oral azoles, the 7 day courses are more effective than shorter ones.[1A+,3D,4A+] **Recurrent (>4 episodes per year):**[1A+] 150mg oral fluconazole every 72 hours for 3 doses induction,[1A+] followed by 1 dose once a week for 6 months maintenance.[1A+]	First line: Over the Counter if appropriate Clotrimazole[1A+,5D] **OR**	500mg pessary[1A+]	-	Stat[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		clotrimazole[1A+] **OR**	100mg pessary[1A+]		6 nights[1A+]	
		Over the Counter if appropriate oral fluconazole[1A+,3D]	150mg[1A+,3D]		Stat[1A+]	
		If recurrent: fluconazole (induction/maintenance)[1A+]	150mg every 72 hours **THEN** 150mg once a week[1A+,3D]	-	3 doses 6 months[1A+]	
Bacterial vaginosis Public Health England Last updated: Nov 2017	Oral metronidazole is as effective as topical treatment,[1A+] and is cheaper.[2D] 7 days of 400mg BD results in fewer relapses than 2g stat at 4 weeks.[1A+,2D] **Pregnant/breastfeeding**: avoid 2g dose.[3A+,4D] Treating partners does not reduce relapse.[5A+]	Oral metronidazole[1A+,3A+] **OR**	400mg BD[1A+,3A+]	-	7 days[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		metronidazole 0.75% vaginal gel[1A+,2D,3A+] **OR**	5g applicator at night[1A+,2D,3A+]		5 nights[1A+,2D,3A+]	
		clindamycin 2% cream[1A+,2D]	5g applicator at night[1A+,2D]		7 nights[1A+,2D,3A+]	
Genital herpes Public Health England Last updated: Nov 2017	**Advise**: saline bathing,[1A+] analgesia,[1A+] or topical lidocaine for pain,[1A+] and discuss transmission.[1A+] **First episode**: treat within 5 days if new lesions or systemic symptoms,[1A+,2D] and refer to GUM.[2D] **Recurrent**: self-care if mild,[2D] or immediate short course antiviral treatment,[1A+,2D] or suppressive therapy if more than 6 episodes per year.[1A+,2D]	First line Oral aciclovir[1A+,2D,3A+,4A+] **OR**	400mg TDS[1A+,3A+]	-	5 days[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
			800mg TDS (if recurrent)[1A+]		2 days[1A+]	
		Second line valaciclovir[1A+,3A+,4A+] **OR**	500mg BD[1A+]		5 days[1A+]	
		famciclovir[1A+,4A+]	250mg TD[1A+]		5 days[1A+]	
			1000mg BD (if recurrent)[1A+]		1 day[1A+]	
Gonorrhoea Public Health	Antibiotic resistance is now very high.[1D,2D] Use IM ceftriaxone if susceptibility not known	Ceftriaxone[2D] **OR**	1000mg IM[2D]	-	Stat[2D]	*Not available. Access supporting*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
England Last updated: Feb 2019	prior to treatment[2D]. Use Ciprofloxacin **only** If susceptibility is known prior to treatment and the isolate is sensitive to ciprofloxacin at all sites of infection[1D,2D] Refer to GUM.[3B-] Test of cure is essential.[2D]	ciprofloxacin[2D] (only if known to be sensitive)	500mg[2D]		Stat[2D]	*evidence and rationales on the PHE website*
Trichomoniasis Public Health England Last updated: Nov 2017	Oral treatment needed as extravaginal infection common.[1D] Treat partners,[1D] and refer to GUM for other STIs.[1D] **400mg BD preferable to 2g stat dose as lesser risk of adverse effects.** **Pregnant/breastfeeding**: avoid 2g single dose metronidazole;[2A+,3D] clotrimazole for symptom relief (not cure) if metronidazole declined.[2A+,4A-,5D]	Metronidazole[1A+,2A+,3D,6A+]	400mg BD[1A+,6A+]	-	5–7 day[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Pregnancy to treat symptoms: clotrimazole[2A+,4A-,5D]	100mg pessary at night[5D]		6 nights[5D]	
Pelvic inflammatory disease Public Health England Last updated: Feb 2019	**Refer** women and sexual contacts to GUM.[1A+] **Raised CRP** supports diagnosis, absent pus cells in HVS smear good negative predictive value.[1A+] **Exclude**: ectopic pregnancy, appendicitis, endometriosis, UTI, irritable bowel, complicated ovarian cyst, functional pain. Moxifloxacin has greater activity against likely pathogens, but always test for gonorrhoea, chlamydia, and *M. genitalium* .[1A+] *If M. genitalium* tests positive use moxifloxacin.[1A+]	**First line therapy**: Ceftriaxone[1A+,3C,4C] **PLUS**	1000mg IM[1A+,3C]	-	Stat[1A+,3C]	*Not available. Access supporting evidence and rationales on the PHE website*
		metronidazole[1A+,5A+] **PLUS**	400mg BD[1A+]		14 days[1A+]	
		doxycycline[1A+,5A+]	100mg BD[1A+]		14 days[1A+]	
		Second line therapy: metronidazole[1A+,5A+] **PLUS**	400mg BD[1A+]		14 days[1A+]	
		ofloxacin[1A+,2A-,5A+] **OR**	400mg BD[1A+,2A-]		14 days[1A+]	
		moxifloxacin alone[1A+] **(**first line for *M. genitalium associated PID***)**	400mg OD[1A+]		14 days[1A+]	
▼ Skin and soft tissue infections						
Note: Refer to RCGP Skin Infections online training.[1D] For MRSA, discuss therapy with microbiologist.[1D]						
Impetigo Public Health	Reserve topical antibiotics for very localised lesions to reduce risk of bacteria becoming resistant.[1D,2B+] Only use mupirocin if caused by MRSA.[1D,3A+]	Topical fusidic acid[2D,3A+]	Thinly TDS[4D]	BNF for children	5 days[1D,2D]	*Not available. Access supporting evidence and rationales on the*
		If MRSA: topical mupirocin [3A+]	2% ointment TDS[3A+]	BNF for children	5 days[1D,2D,3A+]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
England Last updated: Nov 2017	**Extensive, severe, or bullous**: oral antibiotics.[4D]	**More severe**: First line: oral flucloxacillin[1D,3A+]	500mg QDS[3A+]	BNF for children	7 days[3A+]	*PHE website*
		Second line: oral clarithromycin[1D,4D]	250 to 500mg BD[1D,4D]	BNF for children	7 days[4D]	
Cold sores Public Health England Last updated: Nov 2017	**Most resolve after 5 days without treatment**.[1A-,2A-] Topical antivirals applied prodromally can reduce duration by 12 to 18 hours.[1A-,2A-,3A-] **If frequent, severe, and predictable triggers**: consider oral prophylaxis:[4D,5A+] aciclovir 400mg, twice daily, for 5 to 7 days.[5A+,6A+] *Access supporting evidence and rationales on the PHE website*					
PVL-SA Public Health England Last updated: Nov 2017	Panton-Valentine leukocidin (PVL) is a toxin produced by 20.8 to 46% of *S. aureus* from boils/abscesses.[1B+,2B+,3B-] PVL strains are rare in healthy people, but severe.[2B+] **Suppression therapy** should only be started after primary infection has resolved, as ineffective if lesions are still leaking.[4D] **Risk factors for PVL**: recurrent skin infections;[2B+] invasive infections;[2B+] MSM;[3B-] if there is more than one case in a home or close community[2B+,3B-] (school children;[3B-] military personnel;[3B-] nursing home residents;[3B-] household contacts).[3B-] *Access the supporting evidence and rationales on the PHE website.*					
Eczema Public Health England Last updated: Nov 2017	**No visible signs of infection**: antibiotic use (alone or with steroids)[1A+] encourages resistance and does not improve healing.[1A+] **With visible signs of infection**: use oral flucloxacillin[2D] or clarithromycin,[2D] or topical treatment (as in impetigo).[2D] *Access the supporting evidence and rationales on the PHE website.*					
Leg ulcer Public Health England Last updated: Feb 2019	Ulcers are always colonised.[1C,2A+] Antibiotics do not improve healing unless active infection[2A+] (only consider if purulent exudate/odour; increased pain; cellulitis; pyrexia).[3D]	1st line Flucloxacillin[5D]	500mg QDS[5D]	BNF for children	7 days If slow response continue for another 7 days[5D]	*Not available. Access supporting evidence and rationales on the PHE website*
		2nd line clarithromycin[5D]	500mg BD[5D]	BNF for children		
		Non-healing ulcers: antimicrobial-reactive oxygen gel may reduce bacterial load.[6D,7B-]				
Acne Public Health England	**Mild** (open and closed comedones)[1D] or **moderate** (inflammatory lesions):[1D] **First line**: self-care[1D] (wash with mild soap; do not scrub; avoid make-up).[1D]	**Second line**: topical retinoid[1D,2D,3A+] **OR**	Thinly OD[3A+]	BNF for children	6–8 weeks[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		benzoyl peroxide[1A-,2D,3A+,4A-]	5% cream OD-BD[3A+]	BNF for children	6–8 weeks[1D]	
		Third-line: topical clindamycin[3A+]	1% cream, thinly BD[3A+]	BNF for children	12 weeks[1A-,2D]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Last updated: Nov 2017	**Second line**: topical retinoid or benzoyl peroxide.[2D] **Third-line**: add topical antibiotic,[1D,3A+] or consider addition of oral antibiotic.[1D] **Severe (nodules and cysts)**:[1D] add oral antibiotic (for 3 months max)[1D,3A+] and refer.[1D,2D]	**If treatment failure/severe**: oral tetracycline[1A-,3A]+ **OR**	500mg BD[3A+]	BNF for children	6–12 weeks[3A+]	
		If compliance is an issue: oral doxycycline[3A+,4A-]	100mg OD[3A+]	BNF for children	6–12 weeks[3A+]	
Cellulitis and erysipelas Public Health England Last updated: Oct 2018	**Class I**: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.[1D,2D,3A+] **If river or sea water exposure**: seek advice.[1D] **Class II**: patient febrile and ill, or comorbidity, admit for IV treatment,[1D] or use outpatient parenteral antimicrobial therapy.[1D] **Class III**: if toxic appearance, admit.[1D] Adding clindamycin does not improve outcomes[4B+] **Erysipelas**: often facial and unilateral.[5B+] Use flucloxacillin for non-facial erysipelas.[1D,2D,3A+]	Flucloxacillin[1D,2D,3A+]	500mg QDS[1D,2D]	BNF for children	7 days;[1D] if slow response, continue for a further 7 days[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Penicillin allergy: clarithromycin[1D,2D,3A+,6A+]	500mg BD[1D,2D]	BNF for children		
		Penicillin allergy and taking statins: doxycycline[2D]	200mg stat then 100mg OD[2D]	BNF for children		
		Facial (non-dental): co-amoxiclav[7B-]	500/125mg TDS[1D]	BNF for children		
Bites Public Health England Last updated: Oct 2018	**Human**: thorough irrigation is important.[1A+,2D] Antibiotic prophylaxis is advised.[1A+,2D,3D] Assess risk of tetanus, rabies,[1A+] HIV, and hepatitis B and C.[3D] **Cat**: always give prophylaxis.[1A+,3D] **Dog**: give prophylaxis if: puncture wound;[1A+,3D] bite to hand, foot, face, joint, tendon, or ligament;[1A+] immunocompromised; cirrhotic; asplenic; or presence of prosthetic valve/joint.[2D,4A+] **Penicillin allergy**: Review all at 24 and 48 hours,[3D] as not all pathogens are covered.[2D,3]	**Prophylaxis/treatment all**: co-amoxiclav[2D,3D]	500/125mg TDS[3D]	BNF for children	7 days3D	*Not available. Access supporting evidence and rationales on the PHE website*
		Human bite PLUS penicillin allergy: metronidazole[3D,4A+] **AND**	400mg TDS[2D]	BNF for children	7 days[3D]	
		clarithromycin[3D,4A+]	250mg–500mg BD[2D]	BNF for children		
		Animal bite PLUS penicillin allergy: metronidazole[3D,4A+] **AND**	400mg TDS[2D]	BNF for children	7 days[3D]	
		doxycycline[3D]	100mg BD[2D]	BNF for children		
		If pregnant: consult microbiologist on call or refer to A&E				
Scabies	**First choice permethrin**: Treat whole body from	Permethrin[1D,2D,3A+]	5% cream[1D,2D]	BNF for children	2 applications,	*Not available. Access*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Public Health England Last updated: Oct 2018	ear/chin downwards,[1D,2D] and under nails.[1D,2D] **If using permethrin** and patient is under 2 years, elderly or immunosuppressed, or **if treating with malathion**: also treat face and scalp.[1D,2D] **Home/sexual contacts**: treat within 24 hours.[1D]	**Permethrin allergy**: malathion[1D]	0.5% aqueous liquid[1D]	BNF for children	1 week apart[1D]	*supporting evidence and rationales on the PHE website*
Mastitis Public Health England Last updated: Nov 2017	*S. aureus* is the most common infecting pathogen.[1D] Suspect if woman has: a painful breast;[2D] fever and/or general malaise;[2D] a tender, red breast.[2D] **Breastfeeding**: oral antibiotics are appropriate, where indicated.[2D,3A+] Women should continue feeding,[1D,2D] including from the affected breast.[2D]	Flucloxacillin[2D]	500mg QDS[2D]	-	10–14 days[2D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Penicillin allergy: erythromycin[2D] **OR**	250–500mg QDS[2D]			
		clarithromycin[2D]	500mg BD[2D]			
Dermatophyte infection: skin Public Health England Last updated: Feb 2019	**Most cases**: use terbinafine as fungicidal, treatment time shorter and more effective than with fungistatic imidazoles or undecenoates.[1D,2A+,] If candida possible, use imidazole.[4D] **If intractable, or scalp**: send skin scrapings,[1D] and if infection confirmed: use oral terbinafine[1D,3A+,4D] or itraconazole.[2A+,3A+,5D] **Scalp**: oral therapy,[6D] and discuss with specialist.[1D]	Topical terbinafine[3A+,4D] **OR**	1% OD to BD[2A+]	BNF for children	1–4 weeks[3A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		topical imidazole[2A+,3A+]	1% OD to BD[2A+]	BNF for children	4–6 weeks[2A+,3A+]	
		Alternative in athlete's foot: topical undecenoates2A+ (such as Mycota®)2A+	OD to BD[2A+]	BNF for children		
Dermatophyte infection: nail Public Health England Last updated: Oct 2018	**Take nail clippings**;[1D] start therapy only if infection is confirmed.[1D] Oral terbinafine is more effective than oral azole.[1D,2A+,3A+,4D] Liver reactions 0.1 to 1% with oral antifungals.[3A+] If candida or non-dermatophyte infection is confirmed, use oral itraconazole.[1D,3A+,4D] Topical nail lacquer is not as effective.[1D,5A+,6D] **To prevent recurrence**: apply weekly 1% topical antifungal cream to entire toe area.[6D] **Children**: seek specialist advice.[4D]	**First line**: terbinafine[1D,2A+,3A+,4D,6D]	250mg OD[1D,2A+,6D]	BNF for children	Fingers: 6 weeks[1D,6D] Toes: 12 weeks[1D,6D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second line: itraconazole[1D,3A+,4D,6D]	200mg BD[1D,4D]	BNF for children	1 week a month[1D] Fingers: 2 courses[1D] Toes: 3 courses[1D]	
		Stop treatment when continual, new, healthy, proximal nail growth.[6D]				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Varicella zoster/ chickenpox **Herpes zoster/ shingles** Public Health England Last updated: Oct 2018	**Pregnant/immunocompromised/ neonate**: seek urgent specialist advice.[1D] **Chickenpox**: consider aciclovir[2A+,3A+,4D] if: onset of rash <24 hours,[3A+] and 1 of the following: >14 years of age;[4D] severe pain;[4D] dense/oral rash;4D,[5B+] taking steroids;[4D] smoker.[4D,5B+] Give paracetamol for pain relief.[6C] **Shingles**: treat if >50 years[7A+,8D] (PHN rare if <50 years)[9B+] and within 72 hours of rash,[10A+] or if 1 of the following: active ophthalmic;[11D] Ramsey Hunt;[4D] eczema;[4D] non-truncal involvement;[8D] moderate or severe pain;[8D] moderate or severe rash.[5B+,8D] Shingles treatment if not within 72 hours: consider starting antiviral drug up to 1 week after rash onset,[12B+] if high risk of severe shingles[12B+] or continued vesicle formation;[4D] older age;[7A+,8D,12B+] immunocompromised;[4D] or severe pain.[7D,11B+]	**First line for chicken pox and shingles**: aciclovir[3A+,7A+,10A+,13B+,14A-,15A+]	800mg 5 times daily[16A-]	BNF for children	7 days[14A-,16A-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second line for shingles if poor compliance: *not for children:* famciclovir[8D,14A-, 16A-] **OR**	250–500mg TDS[15A+] **OR** 750mg BD[15A+]	-		
		valaciclovir[8D,10A+,14A-] NOTE: Restrictions on formulary, contact microbiologist on call for approval	1g TDS[14A-]	BNF for children		
Tick bites (Lyme disease) Public Health England Last updated: Oct 2018	**Prophylaxis**:[1A+] not routinely recommended in Europe.[2D] **In pregnancy**, consider amoxicillin.[2D] **If immunocompromised**, consider prophylactic doxycycline.[2D] Risk increased if high prevalence area and the longer tick is attached to the skin.[3D] Only give prophylaxis within 72 hours of tick removal.[1A+,2D,4A-] Give safety net advice about erythema migrans[2D] and other possible symptoms[2D] that may occur within 1 month of tick removal.[2D]	**Prophylaxis**:[1A+] doxycycline[2D,4A-,5D]	200mg[2D,4A,5D]	BNF for children	Stat[2D,4A-,5D]	*Not available. Access supporting evidence and rationales on the PHE website*
	Treatment: Treat erythema migrans **empirically**; serology is often negative early in infection.[3D] For other suspected Lyme disease such as neuroborreliosis (CN palsy, radiculopathy) seek advice.[3D]	**Treatment**: doxycycline[2D,3D,5D]	100mg BD[2D,3D,5D]	BNF for children	21 days[2D,3D,5D]	
		First alternative: amoxicillin[2D,3D,5D]	1g TDS[2D,3D,5D]	BNF for children		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Eye infections						
Conjunctivitis Public Health England Last updated: Oct 2018	**First line**: bath/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting.[1D] **Treat only if severe**,[2A+] as most cases are viral[3D] or self-limiting.[2A+] **Bacterial conjunctivitis**: Do not use steroid-containing eye medications. If no response after 3 days, seek advice from ophthalmologists. Usually unilateral and also self-limiting.[2A+,3D] It is characterised by red eye with mucopurulent, not watery discharge.[3D] 65% and 74% resolve on placebo by days 5 and 7.[4A-,5A]+ **Third line**: fusidic acid as it has less Gram-negative activity.[6A-,7D]	**Second line (if no wearing contact lenses)**: chloramphenicol[1D,2A+,4A-,5A+] 0.5% eye drop[1D,2A+] **OR** 1% ointment[1D,5A+]	Eye drops: 2 hourly for 2 days,[1D,2A+] then reduce frequency[1D] to 3–4 times daily,[1D] OR Eye ointment: 3-4 times daily or once daily at night if using antibiotic eye drops during the day[1D]	BNF for children	48 hours after resolution[2A+,7D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Third line (if not wearing contact lenses): fusidic acid 1% gel[2A+,5A+,6A-] If wearing contact lenses First line: Moxifloxacin 0.5% eye drops	BD[1D,7D] Apply 1 drop every 2 hours for first 2 days then reduce to every 6 hours up to 7 days	BNF for children		
Blepharitis Public Health England Last updated: Nov 2017	**First line**: lid hygiene[1D,2A+] for symptom control,[1D] including: warm compresses;[1D,2A+] lid massage and scrubs;[1D] gentle washing;[1D] avoiding cosmetics.[1D] **Second line**: topical antibiotics if hygiene measures are ineffective after 2 weeks.[1D,3A+] **Signs of meibomian gland dysfunction**,[3D] or acne rosacea:[3D] consider oral antibiotics.[1D]	**Second line**: topical chloramphenicol[1D,2A+,3A-]	1% ointment BD[2A+,3D]	BNF for children	6-week trial[3D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Third line: oral oxytetracycline[1D,3D] **OR**	500mg BD[3D] 250mg BD[3D]	BNF for children	4 weeks (initial)[3D] 8 weeks (maint)[3D]	
		If poor compliance (higher risk of photosensitivity with doxycyline therefore oxytetracycline preferred) oral doxycycline[1D,2A+,3D]	100mg OD[3D] 50mg OD[3D]	BNF for children	4 weeks (initial)[3D] 8 weeks (maint)[3D]	
▼ Suspected dental infections in primary care (outside dental settings)						
Derived from the Scottish Dental Clinical Effectiveness Programme (SDCEP) 2013 Guidelines. 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.[1D] First-line treatment is with paracetamol[1D] and/or ibuprofen;[1D] codeine is not effective for toothache.[1D]						

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Mucosal ulceration and inflammation (simple gingivitis) Public Health England Last updated: Nov 2017	Temporary pain and swelling relief can be attained with saline mouthwash (½ tsp salt in warm water)[1D]. Use antiseptic mouthwash if more severe,[1D] and if pain limits oral hygiene to treat or prevent secondary infection.[1D,2A-] The primary cause for mucosal ulceration or inflammation (aphthous ulcers;[1D] oral lichen planus;[1D] herpes simplex infection;[1D] oral cancer)[1D] needs to be evaluated and treated.[1D]	Chlorhexidine 0.12 to 0.2%[1D, 2A-,3A+,4A+] (do not use within 30 minutes of toothpaste)[1D] **OR**	1 minute BD with 10 ml[1D]	BNF for children BNF for children	Always spit out after use.[1D] Use until lesions resolve[1D] or less pain allows for oral hygiene[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		hydrogen peroxide 6%[5A- 1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water[1D]	BNF for children		
Acute necrotising ulcerative gingivitis Public Health England Last updated: Nov 2017	Refer to dentist for scaling and hygiene advice.[1D,2D] Antiseptic mouthwash if pain limits oral hygiene.[1D] Commence metronidazole if systemic signs and symptoms.[1D,2D,3B-,4B+,5A-]	Chlorhexidine 0.12 to 0.2% (do not use within 30 minutes of toothpaste)[1D] **OR**	1 minute BD with 10ml[1D]	BNF for children	Until pain allows for oral hygiene[6D]	*Not available. Access supporting evidence and rationales on the PHE website*
		hydrogen peroxide 6%[1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water	BNF for children		
		metronidazole[1D,3B-,4B+,5A-]	400mg TDS[1D,2D]	BNF for children	3 days[1D,2D]	
Pericoronitis Public Health England Last updated: Nov 2017	Refer to dentist for irrigation and debridement.[1D] If persistent swelling or systemic symptoms,[1D] use metronidazole[1D,2A+,3B+] or amoxicillin.[1D,3B+] Use antiseptic mouthwash if pain and trismus limit oral hygiene.[1D]	Metronidazole[1D,2A+,3B+] **OR**	400mg TDS[1D]	BNF for children	3 days[1D,2A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		amoxicillin[1D,3B+]	500mg TDS[1D]	BNF for children	3 days[1D]	
		chlorhexidine 0.2% (do not use within 30 minutes of toothpaste)[1D] **OR**	1 minute BD with 10ml[1D]	BNF for children	Until less pain allows for oral hygiene[1D]	
		hydrogen peroxide 6%[1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water[1D]	BNF for children		
Dental abscess Public Health	Regular analgesia should be the first option[1A+] until a dentist can be seen for urgent drainage,[1A+,2B-,3A+] as repeated courses of antibiotics for abscesses are not appropriate.[1A+,4A+] Repeated antibiotics alone, without drainage, are ineffective in preventing the spread of infection.[1A+,5C] Antibiotics are only recommended if there are signs of severe infection,[3A+] systemic symptoms,[1A+,2B-,4A+] or a high risk of complications.[1A+] Patients with severe odontogenic infections (cellulitis,[1A+,3A+] plus signs of sepsis;[3A+,4A+] difficulty in swallowing;[6D] impending airway obstruction)6D should be referred urgently for hospital admission to protect airway,6D for surgical drainage3A+ and for IV antibiotics.[3A+] The empirical use of cephalosporins,[6D] co-amoxiclav,[6D] clarithromycin,[6D] and clindamycin[6D] do not offer any advantage for most dental patients,[6D] and should only be used if there is no response to first-line drugs.[6D]					
	If pus is present, refer for drainage,[1A+,2B-] tooth	Amoxicillin[6D,8B+,9C,10B+] **OR**	500mg to 1g TDS[6D]	BNF for children	Up to 5 days; [6D,10B+] review at	*Not available. Access*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
England Last updated: Oct 2018	extraction,[2B-] or root canal.[2B-] Send pus for investigation.[1A+] If spreading infection[1A+] (lymph node involvement[1A+,4A+] or systemic signs,[1A+,2B-,4A+] that is, fever[1A+] or malaise)[4A+] ADD metronidazole.[6D,7B+] Use clarithromycin in true penicillin allergy[6D] and, if severe, refer to hospital.[3A+,6D]	**Penicillin allergy**: clarithromycin[6D]	500mg BD[6D]	BNF for children	3 days[9C,10B+]	*supporting evidence and rationales on the PHE website*
		If signs of spreading infection, consider addition of metronidazole[6D,8B+,9C]	400mg TDS[6D]	BNF for children		

▼ Abbreviations

BD, twice a day; eGFR, estimated glomerular filtration rate; IM, intramuscular; IV, intravenous; MALToma, mucosa-associated lymphoid tissue lymphoma; m/r, modified release; MRSA, methicillin-resistant *Staphylococcus aureus*; MSM, men who have sex with men; stat, given immediately; OD, once daily; TDS, 3 times a day; QDS, 4 times a day.