

## MANAGEMENT AND TREATMENT OF COMMON INFECTIONS IN PRIMARY CARE

This guidance is based on the best available evidence but use professional judgement and involve patients

### PRINCIPLES OF TREATMENT

1. This guidance should not be used in isolation; it should be supported with patient information about safety netting, delayed/back-up antibiotics, self-care, infection severity and usual duration, clinical staff education, and audits. Materials are available on the [RCGP TARGET](#) website.
2. Prescribe an antibiotic only when there is likely to be a clear clinical benefit, giving alternative, non-antibiotic self-care advice, where appropriate. Limit telephone prescribing to exceptional cases.
3. Always check for antibiotic allergies. Confirm true allergy (i.e. rash, swelling of lips, tongue or face, anaphylaxis, etc.) to recommended antibiotic before prescribing an alternative to ensure appropriate antibiotics are not excluded from the options.
4. Consider a no, or delayed/back up, antibiotic strategy for acute self-limiting upper respiratory tract infections and mild UTI symptoms.
5. In severe infection, or immunocompromised, it is important to initiate antibiotics as soon as possible, particularly if sepsis is suspected. If the 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.
6. Where an empirical therapy has failed or special circumstances exist, microbiological advice can be obtained from St George's Hospital on ☎ 020 8725 1970, Kingston Hospital on ☎ 020 8546 7711 or St Helier Hospital on ☎ 020 8296 2468 and ask to be connected to the Microbiology Consultant's mobile.
7. Use simple generic antibiotics first if possible. Avoid broad spectrum antibiotics (e.g. co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase the risk of *Clostridium difficile*, MRSA and resistant UTIs.
8. Modify suggested adult doses/duration for age, weight and renal function. Consider a larger dose or longer course in severe or recurrent cases. Doses are for guidance only, are oral and for adults unless otherwise stated. Children's doses are provided when appropriate and can be accessed through the ☺ symbol. Refer to the BNF for further dosing and interaction information (e.g. interaction between macrolides and statins, clozapine and ciprofloxacin, etc) if needed. Check for hypersensitivity.
9. The use of new and more expensive antibiotics (e.g. quinolones and cephalosporins) is inappropriate when standard and less expensive antibiotics remain effective.
10. Lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture/specimens and seek advice.
11. Avoid widespread use of topical antibiotics, especially those agents also available systemically; in most cases, topical use should be limited.
12. In pregnancy take specimens to inform treatment. Where possible AVOID tetracyclines, aminoglycosides, quinolones, azithromycin (except in chlamydial infection), clarithromycin, and high dose metronidazole (2g STAT), unless benefits outweigh the risks. Penicillins, cephalosporins and erythromycin are safe in pregnancy. Short term use of nitrofurantoin is not expected to cause foetal problems (theoretical risk of neonatal haemolysis). Trimethoprim is also unlikely to cause problems unless poor dietary folate intake, or taking another folate antagonist. Seek further advice from the [UK Teratology Information Service](#) on ☎ 0844 892 0909 if needed.
13. Avoid all tetracyclines in children under 12 years due to deposition in growing bone and teeth, by binding to calcium, causing staining and occasionally dental hypoplasia.
14. Where there are two clinically appropriate options consider adherence and cost effectiveness.
15. Disabling, long-lasting or potentially irreversible adverse reactions affecting musculoskeletal and nervous systems have been reported very rarely with fluoroquinolone antibiotics. Fluoroquinolone treatment should be discontinued at the first signs of a serious adverse reaction, including tendon pain or inflammation. For further information click [here](#).

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>UPPER RESPIRATORY TRACT INFECTIONS</b>					
<b><u>NICE CG69</u>: Consider delayed antibiotic prescriptions. Do not prescribe antibiotics for viral sore throat, simple coughs &amp; colds.</b>					
Influenza & Influenza prophylaxis  <a href="#">PHE Influenza</a>  <a href="#">NICE Influenza</a>	Oseltamivir	<b>Prophylaxis:</b> Aged 13 years & over & adults unless weight <40kg: 75mg OD ☺	10 days	<ul style="list-style-type: none"> <li>• <b>Annual vaccination is essential for all those “at risk” of influenza.</b></li> <li>• Antivirals are not recommended for healthy adults.</li> <li>• <b>Treat “at risk” patients</b> 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.</li> <li>• <b>At risk:</b> <ul style="list-style-type: none"> <li>➢ pregnant (including up to two weeks post-partum);</li> <li>➢ children under six months;</li> <li>➢ adults 65 years or older;</li> <li>➢ chronic respiratory disease (including COPD and asthma);</li> <li>➢ significant cardiovascular disease (not hypertension);</li> <li>➢ severe immunosuppression;</li> <li>➢ diabetes mellitus;</li> <li>➢ chronic neurological,</li> <li>➢ renal or liver disease;</li> <li>➢ morbid obesity (BMI&gt;40).</li> </ul> </li> <li>• <b>For pregnant women:</b> <ul style="list-style-type: none"> <li>➢ Discuss risk benefit with patient before prescribing oseltamivir.</li> <li>➢ Decision to prescribe zanamivir should be discussed with local infection specialist.</li> </ul> </li> </ul> See the <a href="#">PHE Influenza</a> guidance for the treatment of patients under 13 years of age.	
		<b>Treatment:</b> Aged 13 years & over & adults unless weight <40kg: 75mg BD ☺	5 days		
	<b>Severe immunosuppression &amp; complicated influenza or oseltamivir resistance (plus seek advice):</b>				
	Zanamivir	<b>Prophylaxis:</b> Aged 13 years & over & adults unless weight <40kg: 10mg OD (two inhalations by diskhaler) ☺	10 days		
<b>Treatment:</b> Aged 13 years & over & adults: 10mg BD (two inhalations by diskhaler) ☺		5 days			
Acute sore throat  <a href="#">NICE RTIs</a>  <a href="#">FeverPAIN</a>  <a href="#">NICE: Sore throat (acute) NG84: antimicrobial prescribing</a>	<ul style="list-style-type: none"> <li>• <b>No antibiotic. Give self-care advice – see comments section.</b></li> </ul>				
	1. Penicillin V	500mg QDS/1g BD ☺	5-10 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>• Paracetamol/ibuprofen for pain.</li> <li>• Medicated lozenges may help pain in adults and can be bought OTC.</li> <li>• Drink adequate fluids.</li> <li>• Explain soreness will take about 7 days to resolve and safety net.</li> <li>• <a href="#">Self Care Forum Factsheet</a></li> <li>• <b>Avoid antibiotics</b> as 82% of cases resolve in 7 days, and pain is only reduced by 16 hours.</li> <li>• Use <a href="#">FeverPAIN</a> or <a href="#">Centor</a> to assess symptoms.</li> <li>• <b>FeverPAIN 0-1 or Centor 0-2:</b> No antibiotic</li> <li>• <b>FeverPAIN 2-3:</b> No antibiotic or back up antibiotic</li> <li>• <b>FeverPAIN 4-5 or Centor 3-4:</b> immediate or back-up antibiotic</li> <li>• <b>Systemically very unwell or high risk of complications:</b> immediate antibiotic</li> <li>• Complications are rare: antibiotics to prevent quinsy NNT&gt;4000; otitis media NNT200.</li> <li>• 10 days penicillin has lower relapse than 5 days in patients under 18 years of age.</li> </ul>	
	<b>Penicillin allergy:</b>				
	Clarithromycin	250-500mg BD ☺	5 days		
<b>OR</b>  Erythromycin (preferred if pregnant)	250-500mg QDS/500mg-1g BD ☺	5 days			
Scarlet fever (Group A Streptococcus)  <a href="#">PHE Scarlet fever</a>	<i>Optimise analgesia, give safety netting advice AND:</i>				
	Penicillin V	500mg QDS ☺	10 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>• Paracetamol/ibuprofen for pain.</li> <li>• Drink adequate fluids.</li> <li>• <b>Prompt treatment</b> with appropriate antibiotics significantly reduces the risk of complications.</li> <li>• <b>Vulnerable individuals</b> (immunocompromised, the comorbid, or those with skin disease) are at increased risk of developing complications.</li> <li>• <b>CKS:</b> Offer paracetamol or ibuprofen, encourage rest and to drink adequate fluids.</li> <li>• <b>CKS:</b> Scarlet fever is a notifiable disease. If there is any suspicion of infection because of clinical features, a notification form should be completed and sent to the local Public Health England (PHE) centre within 3 days.</li> </ul>	
	<b>Penicillin allergy:</b>				
Clarithromycin	250-500mg BD ☺	5 days			

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>Acute sinusitis</b>  <a href="#">NICE: Sinusitis (acute) NG79: antimicrobial prescribing</a>  <a href="#">NICE RTIs</a>	<ul style="list-style-type: none"> <li><b>No antibiotic. Give self-care advice – see comments section.</b></li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Paracetamol/ibuprofen for pain/fever.</li> <li>Little evidence that nasal decongestants or nasal saline help, but people may want to try them.</li> <li><b>Symptoms &lt;10 days:</b> do not offer antibiotics as most resolve in 14 days without, and antibiotics only offer marginal benefit after 7 days (NNT15).</li> <li><b>Symptoms with no improvement &gt;10 days:</b> no antibiotic, or <b>delayed antibiotic</b> if several of: <ul style="list-style-type: none"> <li>purulent nasal discharge;</li> <li>severe localised unilateral pain;</li> <li>fever;</li> <li>marked deterioration after initial milder phase.</li> </ul> </li> <li>Consider high-dose nasal steroid if &gt;12 years.</li> <li><b>Systemically very unwell, or high risk of complications:</b> immediate antibiotic.</li> <li><b>Suspected complications:</b> e.g. sepsis, intraorbital or intracranial, refer to secondary care.</li> <li><b>CKS:</b> Explain that acute sinusitis is caused by a virus in more than 98% of people, takes on average 2.5 weeks to resolve, and that antibiotics are only likely to help when there are features indicative of bacterial infection.</li> </ul>	
	1. Penicillin V	500mg QDS ☺	5 days		
	<b>Penicillin allergy:</b>				
	Doxycycline (not in under 12yrs) <b>OR</b>	200mg STAT then 100mg OD ☺	5 days		
	Clarithromycin <b>OR</b>	500mg BD ☺	5 days		
	Erythromycin (preferred if pregnant)	250-500mg QDS ☺ <b>OR</b> 500-1000mg BD	5 days		
<b>Third choice or very unwell or worsening:</b>					
Co-amoxiclav	500/125mg TDS ☺	5 days			
<b>Acute Otitis Externa</b>  <a href="#">CKS Otitis externa</a>	<ul style="list-style-type: none"> <li><b>No antibiotic. Give self-care advice – see comments section.</b></li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Analgesia for pain relief and apply localised heat (e.g. a warm flannel).</li> <li>*EarCalm® available over the counter</li> <li>Second line: topical acetic acid or topical antibiotic +/- steroid: similar cure at 7 days.</li> <li>If cellulitis or disease extends outside ear canal or systemic signs of infection, start oral flucloxacillin and refer to exclude malignant otitis externa.</li> </ul>	
	1. Acetic acid 2% (over 12 years only)*	1 spray TDS ☺	7 days		
	2. Neomycin sulphate with corticosteroid	3 drops TDS ☺	7 days (min) to 14 days (max)		
	<b>If cellulitis:</b>				
Flucloxacillin	250mg QDS ☺ If severe: 500mg QDS	7 days 7 days			
<b>Acute Otitis Media</b>  <a href="#">NICE RTIs</a>  <a href="#">NICE: Otitis media (acute) NG91: antimicrobial prescribing</a>	<ul style="list-style-type: none"> <li><b>No antibiotic. Give self-care advice – see comments section.</b></li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Regular paracetamol or ibuprofen for pain (right dose for age or weight at the right time and maximum doses for severe pain).</li> <li><b>Otorrhoea or under 2 years with infection in both ears:</b> no, back-up or immediate antibiotic.</li> <li><b>Otherwise:</b> no or back-up antibiotic.</li> <li><b>Systemically very unwell or high risk of complications:</b> immediate antibiotic.</li> <li>AOM resolves in 60% of cases in 24 hours without antibiotics.</li> <li>Antibiotics reduce pain only at two days (NNT15), and do not prevent deafness.</li> <li><b>Consider 2 or 3-day delayed, or immediate antibiotics for pain relief if:</b> &lt;2 years AND bilateral AOM (NNT4), bulging membrane, or symptom score &gt;8 for: <ul style="list-style-type: none"> <li>fever;</li> <li>tugging ears;</li> <li>crying;</li> <li>irritability;</li> <li>difficulty sleeping;</li> <li>less playful;</li> <li>eating less</li> <li>(0 = no symptoms; 1 = a little; 2 = a lot).</li> </ul> </li> <li>All ages with otorrhoea NNT3.</li> <li>Antibiotics to prevent mastoiditis NNT&gt;4000.</li> <li>Refer to hospital if: severe systemic infection, or complications like mastoiditis</li> </ul>	
	1. Amoxicillin	1-11 months: 125mg TDS ☺ 1-4 years: 250mg TDS 5-17 years: 500mg TDS	5-7 days		
	<b>Penicillin allergy or intolerance:</b>				
	Clarithromycin	1 month - 11 years: ☺ Under 8kg: 7.5mg/kg BD 8-11kg: 62.5mg BD 12-19kg: 125 mg BD 20-29kg: 187.5mg BD 30-40 kg: 250mg BD <b>OR</b> 12-17 years: 250-500mg BD	5-7 days		
	<b>OR</b>				
	Erythromycin	1 month to 1 year: 125mg QDS ☺ <b>OR</b> 250mg BD 2-7 years: 250mg QDS <b>OR</b> 500mg BD 8-17 years: 250-500mg QDS <b>OR</b> 500 – 1000mg BD	5-7 days		
<b>Worsening symptoms on first choice taken for at least 2 to 3 days</b>					
Co-amoxiclav	1-11 months: 0.25 ml/kg of 125/31 suspension TDS ☺ 1-5 years: 5ml of 125/31 suspension TDS <b>OR</b> 0.25ml/kg of 125/31 suspension TDS 6-11 years: 5ml of 250/62 suspension TDS <b>OR</b> 0.15 ml/kg of 250/62 suspension TDS 12-17 years: 250/125mg TDS <b>OR</b> 500/125mg TDS	5-7 days			

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>LOWER RESPIRATORY TRACT INFECTIONS</b>					
<i>Note: Low doses of penicillins are more likely to select out resistance, we recommend 500mg of amoxicillin. Do not use quinolones (ciprofloxacin and ofloxacin) 1<sup>st</sup> line due to poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.</i>					
Acute cough and bronchitis  <a href="#">NICE RTIs</a>  <a href="#">NICE: Cough (acute)</a> <a href="#">NG120: antimicrobial prescribing</a>	<ul style="list-style-type: none"> <li>Give self-care advice &amp; safety net – see comments section.</li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>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.</li> <li><b>Acute cough with upper respiratory tract infection:</b> no antibiotic.</li> <li><b>Acute bronchitis:</b> no routine antibiotic.</li> <li><b>Acute cough and higher risk of complications (at face-to-face examination):</b> immediate or back-up antibiotic.</li> <li><b>Acute cough and systemically very unwell (at face to face examination):</b> immediate antibiotic.</li> <li>Higher risk of complications includes:               <ul style="list-style-type: none"> <li>people with pre-existing comorbidity;</li> <li>young children born prematurely;</li> <li>people over 65 with 2 or more of, or over 80 with 1 or more of:                   <ul style="list-style-type: none"> <li>hospitalisation in previous year,</li> <li>type 1 or 2 diabetes,</li> <li>history of congestive heart failure,</li> <li>current use of oral corticosteroids.</li> </ul> </li> </ul> </li> <li>Do not offer a mucolytic, an oral or inhaled bronchodilator, or an oral or inhaled corticosteroid unless otherwise indicated.</li> <li>Antibiotics have little benefit if no co-morbidity.</li> <li><b>Consider delayed antibiotic as second line, with safety netting, and advise that symptoms can last up to 3 to 4 weeks.</b></li> </ul>	
	<b>Adults aged 18 years &amp; over:</b>				
	1. Doxycycline	200mg STAT then 100mg OD ☺	5 days		
	<b>Adults aged 18 years &amp; over – alternative first choice antibiotics</b>				
	Amoxicillin <b>OR</b> (preferred if pregnant)	500mg TDS ☺	5 days		
		250-500mg BD ☺	5 days		
	Clarithromycin <b>OR</b>	250-500mg QDS ☺	5 days		
	Erythromycin (preferred if pregnant)	<b>OR</b> 500-1000mg BD			
	<b>Children &amp; young people under 18 years:</b>				
	1. Amoxicillin	1-11 months: 125mg TDS ☺ 1-4 years: 250mg TDS 5-17 years: 500mg TDS	5 days		
<b>Children &amp; young people under 18 years - alternative first choice antibiotics:</b>					
Clarithromycin	1 month - 11 years: ☺ Under 8kg: 7.5mg/kg BD 8-11kg: 62.5mg BD 12-19kg: 125 mg BD 20-29kg: 187.5mg BD 30-40 kg: 250mg BD <b>OR</b> 12-17 years: 250-500mg BD	5 days			
<b>OR</b>					
Erythromycin	1 month to 1 year: 125mg QDS ☺ <b>OR</b> 250mg BD 2-7 years: 250mg QDS <b>OR</b> 500mg BD 8-17 years: 250-500mg QDS <b>OR</b> 500 – 1000mg BD	5 days			
<b>OR</b>					
Doxycycline (Not for use in children under 12 years)	200mg STAT then 100mg OD ☺	5 days			
Acute exacerbation of COPD  <a href="#">NICE (acute exacerbation)</a> <a href="#">NG114: antimicrobial prescribing</a>  <a href="#">NICE COPD</a>  <a href="#">GOLD COPD</a>	1. Amoxicillin <b>OR</b>	500mg TDS (see BNF for severe infection)	5 days	<ul style="list-style-type: none"> <li>Many exacerbations are not caused by bacterial infections so will not respond to antibiotics.</li> <li>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.</li> <li>Some people at risk of exacerbations may have antibiotics to keep at home as part of their exacerbation action plan.</li> <li>Risk factors for antibiotic resistance:               <ul style="list-style-type: none"> <li>severe COPD (MRC&gt;3);</li> <li>co-morbidity;</li> <li>frequent exacerbations;</li> <li>antibiotics in the last 3 months.</li> </ul> </li> </ul>	
	Doxycycline <b>OR</b>	200mg STAT then 100mg OD (see BNF for severe infection)	5 days		
	Clarithromycin	500mg BD (see BNF for severe infection)	5 days		
	Second choice oral antibiotics if no improvement in symptoms on first choice taken for at least 2 to 3 days; guided by susceptibilities when available.				
	<b>Alternative choice (if person at higher risk of treatment failure):</b>				
	2. Co-amoxiclav <b>OR</b>	500/125mg TDS	5 days		
Co-trimoxazole (consider safety issues) <b>OR</b>	960mg BD	5 days			
Levofloxacin (consider safety issues)	500mg OD	5 days			

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
Acute exacerbation of Bronchiectasis  CKS Bronchiectasis	<b>Adults aged 18 years &amp; over</b> <b>Send a sputum sample for culture and susceptibility testing and start empirical treatment:</b>			<p><b>Do not await the results of culture.</b></p> <ul style="list-style-type: none"> <li>When choosing antibiotics, take account of: severity of symptoms, previous exacerbations, hospitalisations and risk of complications and treatment failure, previous sputum culture and susceptibility results</li> <li>If unable to take oral antibiotics or severely unwell refer to hospital for IV antibiotics.</li> <li>Course length based on an assessment of the person's severity of bronchiectasis, exacerbation history, severity of exacerbation symptoms, previous culture and susceptibility results, and response to treatment.</li> <li>People who may be at higher risk of treatment failure include people who have had repeated courses of antibiotics, a previous sputum culture with resistant or atypical bacteria, or a higher risk of developing complications.</li> </ul> <p><b>Antibiotic prophylaxis</b></p> <ul style="list-style-type: none"> <li>Only start a trial of antibiotic prophylaxis on specialist advice</li> <li>When considering antibiotic prophylaxis, discuss the possible benefits (reduced exacerbations), harms (increased antimicrobial resistance, adverse effects and interactions with other medicines) and the need for regular review with the patient.</li> <li>Where a person is receiving antibiotic prophylaxis, treatment should be with an antibiotic from a different class.</li> </ul> <p><b>*Local consultant microbiologist recommendation (Dr John Clark, ESTH; Dr Marina Basarab, SGH)</b></p>
	1. Amoxicillin <b>OR</b> (preferred if pregnant)	500mg TDS	7-14 days	
	Doxycycline <b>OR</b>	200mg STAT then 100mg OD	7-14 days	
	Clarithromycin	500mg BD	7-14 days	
	<b>Adults aged 18 years &amp; over - alternative choice oral antibiotics (if person at higher risk of treatment failure) empirical treatment:</b>			
	2. Co-amoxiclav <b>OR</b>	500/125mg TDS	7-14 days	
	Levofloxacin (consider safety issues)	500mg OD/BD	7 - 14 days	
	<b>Children &amp; young people under 18 years</b> <b>Send a sputum sample for culture and susceptibility testing and start empirical treatment:</b>			
	1. Amoxicillin <b>OR</b>	1-11 months: 125mg TDS ☺ 1-4 years: 250mg TDS 5-17 years: 500mg TDS	7 - 14 days	
	Clarithromycin <b>OR</b>	1 month - 11 years: ☺ Under 8kg: 7.5mg/kg BD 8-11kg: 62.5mg BD 12-19kg: 125 mg BD 20-29kg: 187.5mg BD 30-40 kg: 250mg BD <b>OR</b> 12-17 years: 250-500mg BD	7 - 14 days	
Doxycycline <b>(Not for use in children under 12 years)</b>	200mg STAT then 100mg OD ☺	7 - 14 days		
<b>Children &amp; young people under 18 years – alternative choice oral antibiotics (if person at higher risk of treatment failure) empirical treatment:</b>				
2. Co-amoxiclav <b>OR</b>	1-11 months: 0.25 ml/kg of 125/31 suspension TDS ☺ 1-5 years: 5ml of 125/31 suspension TDS <b>OR</b> 0.25ml/kg of 125/31 suspension TDS 6-11 years: 5ml of 250/62 suspension TDS <b>OR</b> 0.15 ml/kg of 250/62 suspension TDS 12-17 years: 250/125mg TDS <b>OR</b> 500/125mg TDS	7 - 14 days		
Ciprofloxacin <b>(on microbiologist advice only) (consider safety issues)</b>	1-17 years: 20mg/kg BD (max. 750mg per dose) ☺	7 - 14 days		
<b>AND*</b>				
Clarithromycin* <b>OR</b>	1 month - 11 years: ☺ Under 8kg: 7.5mg/kg BD 8-11kg: 62.5mg BD 12-19kg: 125 mg BD 20-29kg: 187.5mg BD 30-40 kg: 250mg BD <b>OR</b> 12-17 years: 250-500mg BD	7 - 14 days		
Doxycycline* <b>(Not for use in children under 12 years)</b>	200mg STAT then 100mg OD ☺	7 - 14 days		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
<p>Community-acquired pneumonia</p> <p><a href="#">NICE Pneumonia</a></p> <p><a href="#">NICE (pneumonia community acquired) NG138: antimicrobial prescribing</a></p>	<b>Low severity in adults or non-severe in children</b>			<ul style="list-style-type: none"> <li>Assess severity in adults based on clinical judgement guided by mortality risk score (CRB65 or CURB65). See the NICE guideline on <a href="#">pneumonia</a> for full details: <ul style="list-style-type: none"> <li><b>Low severity</b> – CRB65 0 or CURB65 0 or 1</li> <li><b>Moderate severity</b> – CRB65 1 or 2 or CURB65 2</li> <li><b>High severity</b> – CRB65 3 or 4 or CURB65 3 to 5.</li> </ul> </li> <li>1 point for each parameter: <ul style="list-style-type: none"> <li><b>confusion</b>,</li> <li><b>(urea &gt;7 mmol/l)</b>,</li> <li><b>respiratory rate</b> ≥30/min,</li> <li>low systolic (&lt;90 mm Hg) or diastolic (≤60 mm Hg) <b>blood pressure</b>,</li> <li><b>age</b> ≥65.</li> </ul> </li> <li>Assess severity in children based on clinical judgement.</li> <li>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 <a href="#">sepsis</a>)</li> <li>When choosing an antibiotic, take account of severity, risk of complications, local antimicrobial resistance and surveillance data, recent antibiotic use and microbiological results</li> <li>* Stop antibiotics after 5 days unless microbiological results suggest a longer course is needed or the person is not clinically stable</li> <li>Give advice about: <ul style="list-style-type: none"> <li>possible adverse effects of the antibiotic(s)</li> <li>how long symptoms are likely to last (see also the NICE guideline on <a href="#">pneumonia</a>)</li> <li>seeking medical help if symptoms worsen rapidly or significantly, or do not start to improve within 3 days, or the person becomes systemically very unwell</li> </ul> </li> <li><b>Refer adults to hospital</b> in line with NICE's guideline on <a href="#">pneumonia</a> or if: <ul style="list-style-type: none"> <li>symptoms or signs suggest a more serious illness such as sepsis, or</li> <li>symptoms are not improving as expected with antibiotics</li> </ul> </li> <li>Consider referring adults or seeking specialist advice if they have bacteria resistant to oral antibiotics or they cannot take oral medicines</li> <li>Consider referring children and young people to hospital or seek specialist paediatric advice on further investigation and management</li> </ul>
	1. Amoxicillin	500mg TDS ☺ (higher doses can be used - see <a href="#">BNF/BNFC</a> )	5 days*	
	<b>Low severity in adults or non-severe in children – alternative first choice</b>			
	Doxycycline <b>(Not for use in children under 12 years)</b>	200mg STAT then 100mg OD ☺	5 days*	
	<b>OR</b>			
	Clarithromycin	500mg BD ☺	5 days*	
	<b>OR</b>			
	Erythromycin (preferred if pregnant)	500mg QDS ☺	5 days*	
	<b>Moderate severity in adults</b>			
	1. Amoxicillin	500mg TDS (higher doses can be used - see <a href="#">BNF</a> )	5 days*	
	<b>AND (if atypical pathogens suspected)</b>			
	Clarithromycin	500mg BD	5 days*	
	<b>OR</b>			
Erythromycin (preferred if pregnant)	500mg QDS	5 days*		
<b>Moderate severity in adults – alternative first choice</b>				
Doxycycline <b>(Not for use in children under 12 years)</b>	200mg STAT then 100mg OD	5 days*		
<b>OR</b>				
Clarithromycin	500mg BD	5 days*		
<b>High severity in adults or severe in children</b>				
1. Co-amoxiclav	500/125mg TDS ☺	5 days*		
<b>AND (if atypical pathogens suspected)</b>				
Clarithromycin	500mg BD ☺	5 days*		
<b>OR</b>				
Erythromycin (preferred if pregnant)	500mg QDS ☺	5 days*		
<b>High severity in adults – alternative first choice</b>				
Levofloxacin <a href="#">(consider safety issues)</a>	500mg BD	5 days*		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>HOSPITAL ACQUIRED PNEUMONIA</b>					
<ul style="list-style-type: none"> <li>Hospital-acquired pneumonia develops 48 hours or more after hospital admission</li> <li>If symptoms or signs of pneumonia start within 48 hours of hospital admission, see community acquired pneumonia.</li> </ul>					
<p>Hospital-acquired pneumonia</p> <p><a href="#">NICE (pneumonia hospital acquired) NG139: antimicrobial prescribing</a></p>	<b>Non-severe and not higher risk of resistance</b>			<ul style="list-style-type: none"> <li>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 <a href="#">sepsis</a>).</li> <li>When choosing an antibiotic, take account of: <ul style="list-style-type: none"> <li>severity of symptoms or signs,</li> <li>number of days in hospital before onset of symptoms,</li> <li>risk of developing complications,</li> <li>local hospital and ward-based antimicrobial resistance data,</li> <li>recent antibiotic use and microbiological results,</li> <li>recent contact with a health or social care setting before current admission,</li> <li>risk of adverse effects with broad spectrum antibiotics.</li> </ul> </li> <li>No validated severity assessment tools are available. Assess severity of symptoms or signs based on clinical judgement.</li> <li>Higher risk of resistance includes: <ul style="list-style-type: none"> <li>relevant comorbidity (such as severe lung disease or immunosuppression),</li> <li>recent use of broad spectrum antibiotics,</li> <li>colonisation with multi-drug resistant bacteria,</li> <li>recent contact with health and social care settings before current admission.</li> </ul> </li> <li>If symptoms or signs of pneumonia start within days 3 to 5 of hospital admission in people not at higher risk of resistance, consider following community acquired pneumonia for choice of antibiotic.</li> <li>Seek specialist advice from a microbiologist for: <ul style="list-style-type: none"> <li>symptoms that are not improving as expected with antibiotics,</li> <li>multi-drug resistant bacteria</li> </ul> </li> <li>Follow the NICE guideline on <a href="#">care of dying adults in the last days of life</a> for adults approaching the end of life</li> </ul>	
	1. Co-amoxiclav	500/125mg TDS ☺			5 days then review
	<b>Non-severe and not higher risk of resistance – ADULTS alternative first choice. (Choice based on specialist microbiological advice and local resistance data)</b>				
	<b>Options include:</b> Doxycycline <b>(Not for use in children under 12 years)</b>	200mg STAT then 100mg OD			5 days then review
	<b>OR</b> Cefalexin (caution in penicillin allergy)	500 mg BD or TDS (can increase to 1 to 1.5g TDS or QDS)			5 days then review
	<b>OR</b> Co-trimoxazole	960mg BD			5 days then review
<b>OR</b> Levofloxacin <b>(only if switching from IV levofloxacin with specialist advice; (consider safety issues))</b>	500mg OD or BD		5 days then review		
<b>Non-severe and not higher risk of resistance – CHILDRENS alternative first choice</b>					
Clarithromycin <b>(Other options may be suitable based on specialist microbiological advice and local resistance data)</b>	1 month - 11 years: ☺ Under 8kg: 7.5mg/kg BD 8-11kg: 62.5mg BD 12-19kg: 125 mg BD 20-29kg: 187.5mg BD 30-40 kg: 250mg BD <b>OR</b> 12-17 years: 500mg BD		5 days then review		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>URINARY TRACT INFECTIONS</b>					
<i>Note: As antibiotic resistance and Escherichia coli bacteraemia in the community is increasing, use nitrofurantoin first line, always give safety net and self-care advice, and consider risks for resistance. Give <a href="#">TARGET UTI</a> leaflet, and refer to the <a href="#">PHE UTI</a> guidance for diagnostic information.</i>					
Uncomplicated lower UTI (i.e. no fever or flank pain) in men & non-pregnant women 16 years & over  <a href="#">NICE NG109 UTI (lower): antimicrobial prescribing</a>  <a href="#">PHE UTI Diagnosis</a>  <a href="#">TARGET UTI</a>  <a href="#">RCGP UTI</a>  <a href="#">SIGN UTI</a>  <a href="#">NHS Scotland UTI</a>	1. Nitrofurantoin  <b>OR</b>  <i>If low risk of resistance:</i> Trimethoprim	100mg m/r BD (BD dose preferred due to increased compliance)  <b>OR</b> 50mg i/r QDS  200mg BD	Women: 3 days Men: 7 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol or ibuprofen for pain &amp; drinking enough fluid to avoid dehydration.</li> <li>No evidence for cranberry products or urine alkalinising agents to treat lower UTI.</li> <li>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.</li> <li><b>BNF:</b> Nitrofurantoin may be used with caution if eGFR 30-44ml/min to treat uncomplicated lower UTI caused by suspected or proven multidrug resistant bacteria and only if potential benefit outweighs risk.</li> <li><b>Low risk of resistance:</b> younger women with acute UTI and no risk.</li> <li><b>Risk factors for increased resistance include:</b> <ul style="list-style-type: none"> <li>care-home resident;</li> <li>recurrent UTI;</li> <li>hospitalisation for &gt;7 days in the last 6 months;</li> <li>unresolving urinary symptoms;</li> <li>recent travel to a country with increased resistance;</li> <li>previous UTI resistant to trimethoprim, cephalosporins, or quinolones.</li> </ul> </li> <li><b>If risk of resistance:</b> send urine for culture and susceptibilities; safety net.</li> <li><b>Women:</b> <ul style="list-style-type: none"> <li>Treat women with severe/≥3 symptoms.</li> <li><b>Women &lt;65 years (mild/≤2 symptoms):</b> pain relief, and consider back up antibiotic (to use if no improvement in 48 hours or symptoms worsen at any time) or immediate antibiotic If urine not cloudy, 97% NPV of no UTI. If urine cloudy, use dipstick to guide treatment: nitrite, leukocytes, blood all negative 76% NPV; nitrite plus blood or leukocytes 92% PPV of UTI.</li> </ul> </li> <li><b>Men:</b> <ul style="list-style-type: none"> <li>Immediate antibiotic.</li> </ul> </li> <li><b>Men &lt;65 years:</b> consider prostatitis and send MSU, or if symptoms mild or non-specific, use negative dipstick to exclude UTI.</li> <li>Nitrofurantoin is not recommended for men with suspected prostate involvement because it is unlikely to reach therapeutic levels in the prostate.</li> <li><b>All patients &gt;65 years:</b> treat if fever &gt;38°C, or 1.5°C above base twice in 12 hours, and &gt;1 other symptom.</li> </ul>	
	<b>If treatment failure always perform culture.</b>				
	<ul style="list-style-type: none"> <li>Consider alternative diagnoses and follow recommendations in the <a href="#">acute pyelonephritis</a> or <a href="#">acute prostatitis</a> sections, basing antibiotic choice on recent culture and susceptibility results.</li> </ul>				
<b>If first line unsuitable or eGFR &lt;45ml/min &amp; MSU indicates susceptible:</b>					
	Pivmecillinam  <b>OR</b>  <i>If high resistance risk &amp; MSU indicates susceptible:</i> Fosfomycin	400mg STAT then 200mg TDS  3g STAT	Women: 3 days Men: 7 days  Single dose		
UTI in pregnancy  <a href="#">NICE NG109 UTI (lower): antimicrobial prescribing</a>  <a href="#">SIGN UTI</a>	<b>Send MSU for culture; start antibiotics in all with significant bacteriuria, even if asymptomatic.</b>				
	<i>If eGFR ≥45ml/min:</i> 1. Nitrofurantoin (avoid at term)	100mg m/r BD (BD dose preferred due to increased compliance) <b>OR</b> 50mg i/r QDS	7 days	<ul style="list-style-type: none"> <li>Pregnant women: immediate antibiotic.</li> <li><b>Treatment of asymptomatic bacteriuria in pregnant women:</b> choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results.</li> <li>Review treatment on results of any available previous MSU.</li> <li><b>SPC:</b> Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus but avoid at term due to possible risk of neonatal haemolysis.</li> </ul>	
	<b>Only if culture results available and susceptible:</b>				
2. Amoxicillin <b>OR</b> Cefalexin	500mg TDS 500mg BD	7 days 7 days			



ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
UTI in patients with catheters  <a href="#">NICE NG113 UTI (catheter): antimicrobial prescribing</a>	<b>First choice non-pregnant women &amp; men if no upper UTI symptoms:</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol for pain and drinking enough fluids to avoid dehydration.</li> <li><b>Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter.</b></li> <li>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</li> <li><b>Offer an antibiotic for a symptomatic infection.</b> 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. Refer to <a href="#">NICE NG113 UTI (catheter): antimicrobial prescribing</a> for suitable antibiotic options &amp; for children's recommended antibiotic options.</li> <li>Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter or for catheter change unless there is a history of catheter-change-associated UTI or trauma.</li> <li><b>Non-pregnant women &amp; men with upper UTI symptoms:</b> Treat as per pyelonephritis.</li> <li><b>Pregnant women with upper UTI symptoms:</b> Refer to secondary care.</li> </ul>
	<i>If eGFR ≥45ml/min:</i> Nitrofurantoin  <b>OR</b>  <i>If low risk of resistance:</i> Trimethoprim  <b>OR</b>  <i>Only if culture results available and susceptible:</i> Amoxicillin	100mg m/r BD (BD dose preferred due to increased compliance) <b>OR</b> 50mg i/r QDS  200mg BD  500mg TDS	7 days  7 days  7 days	
	<b>Second choice non-pregnant women &amp; men if no upper UTI symptoms:</b>			
	Pivmecillinam	400mg STAT then 200mg TDS	7 days	
Acute prostatitis  <a href="#">NICE NG110 Prostatitis (acute): antimicrobial prescribing</a>	<b>Guided susceptibilities when available:</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable.</li> <li>Send MSU for culture and start antibiotics.</li> <li>Advise that duration of acute prostatitis may last several weeks.</li> <li>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).</li> <li>Quinolones achieve high prostate concentrations.</li> <li><b>NICE CKS: Consider prostatitis if patient has the following:</b> <ul style="list-style-type: none"> <li>perineal, penile or rectal pain</li> <li>acute urinary retention</li> <li>obstructive voiding symptoms</li> <li>low back pain</li> <li>pain on ejaculation</li> <li>tender, swollen, warm prostate</li> </ul> </li> </ul>
	1. Ciprofloxacin <b>OR</b>  Ofloxacin ( <a href="#">consider safety issues</a> ) <b>OR</b>  Trimethoprim ( <i>if unable to take quinolone</i> )	500mg BD  200mg BD  200mg BD	14 days then review	
	<b>After discussion with specialist:</b>			
	2. Levofloxacin ( <a href="#">consider safety issues</a> )  <b>OR</b>  Co-trimoxazole ( <a href="#">consider safety issues</a> )	500mg OD  960mg BD	14 days then review  14 days then review	
Acute pyelonephritis  <a href="#">NICE NG111 Pyelonephritis (acute): antimicrobial prescribing</a>	<b>Send MSU and start:</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12.</li> <li>Offer an antibiotic.</li> <li>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.</li> <li>If admission not needed, send MSU for culture and susceptibility testing, and start antibiotics.</li> <li>If no response within 24 hours, seek advice.</li> <li><b>If ESBL risk</b>, and on advice from a microbiologist, consider IV antibiotic via OPAT.</li> <li><b>CKS:</b> Although ciprofloxacin, and co-amoxiclav are associated with an increased risk of <i>Clostridium difficile</i>, MRSA, and other antibiotic-resistant infections, this has to be balanced against the risk of treatment failure and consequent serious complications with the use of narrow spectrum antibiotics.</li> <li><b>Refer pregnant women to secondary care.</b></li> <li><b>NICE CKS: Consider pyelonephritis if patient has the following:</b> <ul style="list-style-type: none"> <li>Kidney pain/tenderness in back under ribs</li> <li>New/different myalgia, flu-like illness</li> <li>Shaking chills (rigors) or temperature ≥37.9°C (or &lt;36°C in people aged over 65 years)</li> <li>Nausea/vomiting</li> </ul> </li> </ul>
	Ciprofloxacin ( <a href="#">consider safety issues</a> )  <b>OR</b>  Cefalexin	500mg BD  500mg BD/TDS up to 1g-1.5g TDS/QDS for severe infections	7 days  7-10 days	
	<i>Only if culture results available and susceptible:</i> Co-amoxiclav  <b>OR</b>  <i>Only if culture results available and susceptible:</i> Trimethoprim	500/125mg TDS  200mg BD	7-10 days  14 days	

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
UTI in Children  <a href="#">NICE NG109 UTI (lower): antimicrobial prescribing</a>  <a href="#">NICE CG54 UTI in under 16s</a>	<b>Lower UTI: Send MSU then start:</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol or ibuprofen for pain.</li> <li><b>Children:</b> immediate antibiotic</li> <li><b>Child &lt;3 months:</b> refer urgently for assessment.</li> <li><b>Child &gt;3 months:</b> use positive nitrite to guide antibiotic use; send pre-treatment MSU.</li> <li><b>Imaging:</b> refer if child &lt;6 months, or recurrent or atypical UTI.</li> <li><b>Upper UTI:</b> refer to paediatrics to: obtain a urine sample for culture; assess for signs of systemic infection; consider systemic antimicrobials.</li> <li>For alternative dosing see <a href="#">BNFC</a>.</li> </ul>
	<i>If low risk of resistance:</i> Trimethoprim  <b>OR</b>  <i>If eGFR ≥45ml/min:</i> Nitrofurantoin	6 months-11 years: ☺ 4mg/kg (max. 200mg) BD 12-15 years: 200mg BD	3 days	
		Immediate release: ☺ 3 months-11 years: 750micrograms/kg QDS 12-15 years: 50mg QDS	3 days	
		Modified release: ☺ 12-15 years: 100mg BD	3 days	
	<b>If culture results available and susceptible:</b>			
	Amoxicillin  <b>OR</b>  Cefalexin	3-11 months: 125mg TDS ☺ 1-4 years: 250mg TDS 5-15 years: 500mg TDS  3 months -11 years: ☺ 12.5mg/kg BD 12-15 years: 500mg BD	3 days  3 days	
Recurrent UTI (2 in 6 months or ≥3 in a year)  <a href="#">NICE NG112 UTI (recurrent): antimicrobial prescribing</a>  <a href="#">TARGET UTI</a>	<ul style="list-style-type: none"> <li>Give self-care advice – see comments section.</li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise simple measures, including hydration; ibuprofen for symptom relief.</li> <li>Non pregnant women may wish to try Cranberry or D-mannose products.</li> <li>Advise about behavioural and personal hygiene measures, and self-care to reduce the risk of UTI.</li> <li><b>Postmenopausal women:</b> if no improvement, consider vaginal oestrogen (review within 12 months).</li> <li><b>Non-pregnant women:</b> if no improvement, consider single-dose antibiotic prophylaxis for exposure to a trigger (review within 6 months).</li> <li><b>If no improvement or no identifiable trigger (or with specialist advice for pregnant women, men, children or young people):</b> consider a trial of daily antibiotic prophylaxis (review within 6 months).</li> <li>Refer if infection not resolving.</li> </ul>
	1. Investigate cause of recurrent UTI.			
	2. Antibiotic prophylaxis: Trimethoprim (avoid in pregnancy)  <b>OR</b>  Nitrofurantoin (avoid at term) – if eGFR ≥45ml/min	200mg STAT when exposed to a trigger (off label) <b>OR</b> 100mg NOCTE  100mg i/r STAT when exposed to a trigger (off label) <b>OR</b> 50-100mg i/r NOCTE	3-6 months then review recurrence rate and need	
	3. Amoxicillin (off label) <b>OR</b>  Cefalexin	500mg STAT when exposed to a trigger <b>OR</b> 250mg NOCTE  500mg STAT when exposed to a trigger (off label) <b>OR</b> 125mg NOCTE		
<b>MENINGITIS / SEPTICAEMIA</b>				
Suspected meningococcal disease  <a href="#">NICE Meningitis</a>	Benzylpenicillin IV or IM	<b>Child &lt;1yr:</b> 300mg ☺ <b>Child 1-9 years:</b> 600mg <b>Adults/child 10+ years:</b> 1.2g	<b>STAT dose; give IM if vein cannot be accessed</b>	<ul style="list-style-type: none"> <li><b>Transfer all patients to hospital immediately.</b></li> <li>If time before hospital admission, if suspected meningococcal septicaemia or non-blanching rash, give IV benzylpenicillin as soon as possible.</li> <li>Do not give IV antibiotics if there is a definite history of anaphylaxis; rash is not a contraindication.</li> <li><b>CKS:</b> Bacterial meningitis and meningococcal disease are notifiable diseases in England and Wales.</li> </ul>
Prevention of secondary case meningitis	<ul style="list-style-type: none"> <li>To notify a suspected case of meningococcal disease or discuss any queries regarding the management of contacts, please contact Public Health England (PHE) South London Health Protection Team (SL HPT) ☎ 0344 326 2052 (in &amp; out of hours) or ☎ 0344 326 7255.</li> <li>The South London Health Protection Team (SL HPT) will identify close contacts requiring prophylaxis &amp; any vaccination needs and will advise the GP accordingly.</li> </ul>			

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<b>GASTRO-INTESTINAL TRACT INFECTIONS</b>					
Oral Candidiasis <a href="#">CKS Candida</a>	Miconazole oral gel	<b>4 - 23 months:</b> 1.25ml of 20mg/g ☺ QDS (hold in mouth after food) <b>≥2 years:</b> 2.5ml of 20mg/g ☺ QDS (hold in mouth after food)	7 days; continue for 7 days after resolved	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Miconazole oral gel is available OTC (not licensed for use in children under 4 months of age or during first 5–6 months of life of an infant born pre-term, patients with liver dysfunction and patients taking warfarin or simvastatin). See <a href="#">SmPC</a>.</li> <li>Topical azoles are more effective than topical nystatin.</li> <li>Oral candidiasis is rare in immunocompetent adults; consider undiagnosed risk factors, including HIV.</li> <li><b>If extensive/severe candidiasis</b>, use 50mg fluconazole</li> <li><b>If HIV or immunocompromised</b>, use 100mg fluconazole.</li> </ul>	
	<i>If not tolerated:</i> Nystatin suspension	1ml; 100,000 units/mL ☺ QDS (half in each side)	7 days; continue for 2 days after resolved		
	Fluconazole capsules	50mg/100mg OD ☺	7-14 days		
Helicobacter pylori <a href="#">NICE GORD and dyspepsia</a> <a href="#">PHE H.pylori</a>	<b>Always use PPI. First line &amp; first relapse &amp; no penicillin allergy: PPI plus TWO antibiotics:</b>		7-14 days; MALToma 14 days	<ul style="list-style-type: none"> <li>Always test for <i>H.Pylori</i> before giving antibiotics.</li> <li>Treat all positives, if known DU, GU, or low grade MALToma. NNT in non-ulcer dyspepsia: 14.</li> <li>Do not offer eradication for GORD.</li> <li>Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection.</li> <li><b>Penicillin allergy and previous clarithromycin:</b> use PPI PLUS bismuth salt PLUS metronidazole PLUS tetracycline hydrochloride.</li> <li><b>Relapse and no penicillin allergy</b> use PPI PLUS amoxicillin PLUS clarithromycin or metronidazole (whichever was not used first line).</li> <li><b>Relapse and previous metronidazole and clarithromycin:</b> use PPI PLUS amoxicillin PLUS either tetracycline OR levofloxacin (if tetracycline not tolerated).</li> <li><b>Relapse and penicillin allergy (no exposure to quinolone):</b> use PPI PLUS metronidazole PLUS levofloxacin.</li> <li><b>Relapse and penicillin allergy (with exposure to quinolone):</b> use PPI PLUS bismuth salt PLUS metronidazole PLUS tetracycline.</li> <li><b>Retest for <i>H. pylori</i>:</b> post DU/GU, or relapse after second line therapy, using UBT or SAT, consider referral for endoscopy and culture.</li> <li><b>Third line:</b> seek gastroenterology advice.</li> <li>See <a href="#">BNF</a> and <a href="#">PHE H.Pylori quick reference guide</a> for alternative combinations.</li> </ul>	
	Omeprazole <b>OR</b> Lansoprazole <b>AND</b>	20mg BD ☺ 30mg BD ☺			7 days; MALToma 14 days
	Amoxicillin <b>AND</b>	1g BD ☺			
	Clarithromycin <b>OR</b> Metronidazole	500mg BD ☺ 400mg BD ☺			
	<b>Penicillin allergy:</b>		7 days; MALToma 14 days		
	PPI <b>AND</b> Clarithromycin <b>AND</b> Metronidazole	500mg BD ☺ 400mg BD ☺			
<b>For alternative regimens/doses see comments &amp; refer to <a href="#">PHE H.pylori</a></b>					
Infectious diarrhoea <a href="#">PHE Diarrhoea</a>	<ul style="list-style-type: none"> <li>Refer previously healthy children with acute painful or bloody diarrhoea to exclude E.coli 0157 infection.</li> <li><b>Antibiotics are usually not indicated unless systemically unwell.</b></li> <li>If systemically unwell and campylobacter suspected (e.g. undercooked meat and abdominal pain), consider clarithromycin 250-500mg BD for 5-7 days if treated early (within 3 days).</li> <li>If giardia is confirmed or suspected: tinidazole 2g STAT is the treatment of choice.</li> <li><b>Food poisoning is notifiable.</b> Notify and seek advice on exclusion from the South London Health Protection Unit, ☎ 0344 326 2052.</li> </ul>				
Clostridium difficile <a href="#">PHE Clostridium difficile</a>	<b>Review need for antibiotics, PPIs, and antiperistaltic agents and discontinue use where possible.</b>			<ul style="list-style-type: none"> <li><b>Mild cases (&lt;4 episodes of diarrhoea/day)</b> may respond without metronidazole; 70% respond to metronidazole in 5 days; 92% respond to metronidazole in 14 days.</li> <li><b>If severe; (T&gt;38.5, or WWC&gt;15, rising creatinine, or signs/symptoms of severe colitis):</b> treat with oral vancomycin, review progress closely, and consider hospital referral.</li> </ul>	
	1 <sup>st</sup> Episode (non-severe): Metronidazole	400mg TDS	10-14 days		
	<b>On microbiology advice only. Severe/type 027/recurrent:</b>				
	Vancomycin (oral)	125mg QDS	10-14 days then taper		
<b>On microbiology advice only. Recurrent or second line:</b>					
	Fidaxomicin	200mg BD	10 days		
Traveller's diarrhoea	<i>Stand-by:</i> Azithromycin ( <b>unlicensed</b> )	500mg OD	1-3 days	<ul style="list-style-type: none"> <li>Prophylaxis rarely, if ever, indicated.</li> <li><b>Prophylactic medication solely in anticipation of the onset of an ailment outside the UK should be given on a private prescription.</b></li> <li>Consider stand-by antimicrobial only for patients at high risk of severe illness, or visiting high risk areas.</li> <li>Refer to <a href="https://nathnac.net/">https://nathnac.net/</a>, <a href="#">CKS</a> or <a href="#">BNF</a>.</li> </ul>	
	<i>Prophylaxis/treatment:</i> Bismuth subsalicylate (Pepto-Bismol®)	2 tablets QDS	2 days		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS	
<p>Acute Diverticulitis</p> <p><a href="#">CKS Diverticular disease</a></p> <p><a href="#">Commissioning guide for colonic diverticular disease</a></p> <p><a href="#">BMJ Best Practice – Diverticular disease</a></p>	1. Co-amoxiclav	500/125mg TDS	At least 7 days	<ul style="list-style-type: none"> <li>• <b>Manage the person in primary care if there is suspected mild, uncomplicated diverticulitis, depending on clinical judgement.</b></li> <li>• Consider prescribing oral antibiotics if there is suspected infection.</li> <li>• Consider watchful waiting if the person is systemically well, has no co-morbidities, and there is no suspected infection.</li> <li>• Advise on the use of analgesia, such as paracetamol as-needed.</li> <li>• Advise the patient to avoid NSAIDs and opioid analgesia (such as codeine) if possible, due to the potential increased risk of diverticular perforation.</li> <li>• Recommend clear liquids only, with a gradual reintroduction of solid food if symptoms improve over the following 2–3 days.</li> <li>• Consider checking bloods for raised white cell count and CRP, which may suggest infection.</li> <li>• <b>If the person is managed in primary care, arrange a review within 48 hours</b>, or sooner if symptoms worsen.</li> <li>• Arrange urgent hospital admission if symptoms persist or deteriorate despite management in primary care.</li> <li>• <b>Consider arranging referral to a specialist in colorectal surgery</b> if a person is managed in primary care and has frequent or severe recurrent episodes of acute diverticulitis.</li> <li>• Note that the risk of anaphylaxis due to beta-lactam allergy outweighs the risks from quinolones.</li> <li>• <b>For less severe penicillin allergy:</b> a combination of cephalosporin and metronidazole may be considered.</li> </ul> <p>* <b>Local consultant microbiologist recommendation (Dr John Clark, EStH)</b></p>	
	<b>Alternate first line option*</b>				
	2. Amoxicillin <b>AND</b>	500mg TDS	7-10 days		
	Metronidazole	500mg TDS	7-10 days		
	<b>Penicillin allergy</b>				
Ciprofloxacin <b>AND</b>	500mg BD	7-10 days			
Metronidazole	500mg TDS	7-10 days			

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<b>GENITAL TRACT INFECTIONS</b>				
STI Screening	People with risk factors should be screened for chlamydia, gonorrhoea, HIV, and syphilis. Refer individual and partners to GUM. <b>Risk factors:</b> <25 years; no condom use; recent/frequent change of partner; symptomatic or infected partner; area of high HIV.			
Chlamydia trachomatis/ urethritis	1. Doxycycline	100mg BD	7 days	<ul style="list-style-type: none"> <li>Opportunistically screen all sexually active patients aged 15 to 24 years for chlamydia annually and on change of sexual partner.</li> <li>If positive, treat index case, refer to GUM and initiate partner notification, testing and treatment.</li> <li>As single dose azithromycin has led to increased resistance in GU infections, doxycycline should be used first line for chlamydia and urethritis.</li> <li>Advise patient 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 resolved if urethritis).</li> <li>If chlamydia, test for reinfection at 3 to 6 months following treatment if &lt;25 years or consider if &gt;25 years and high risk of reinfection.</li> <li><b>Second line, pregnant, breastfeeding, allergy, or intolerance:</b> azithromycin is most effective. As lower cure rate in pregnancy, test for cure at least 3 weeks after end of treatment.</li> <li>Consider referring all patients with symptomatic urethritis to GUM as testing should include <i>Mycoplasma genitalium</i> and <i>Gonorrhoea</i>.</li> <li>If <i>M. genitalium</i> is proven, use doxycycline followed by azithromycin using the same dosing regimen and advise to avoid sex for 14 days after start of treatment and until symptoms have resolved.</li> </ul>
	<b>Second line/pregnant/breastfeeding/allergy/intolerance:</b>			
	2. Azithromycin	1g STAT then 500mg OD	2 days (total 3 days)	
Epididymitis	Doxycycline <b>OR</b>	100mg BD	10-14 days	<ul style="list-style-type: none"> <li>Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI.</li> <li>If under 35 years or STI risk, refer to GUM.</li> </ul>
	Ofloxacin ( <a href="#">consider safety issues</a> ) <b>OR</b>	200mg BD	14 days	
	Ciprofloxacin ( <a href="#">consider safety issues</a> )	500mg BD	10 days	
Vaginal candidiasis  <a href="#">BASHH Vulvovaginal candidiasis</a>	Clotrimazole <b>OR</b>	500mg pessary	STAT	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Preparations for vaginal candidiasis are available OTC for adults.</li> <li>All topical and oral azoles give over 80% cure.</li> <li><b>Pregnancy:</b> avoid oral azoles, and use clotrimazole 100mg intravaginal treatment for 6 nights.</li> <li><b>Recurrent (&gt;4 episodes per year):</b> 150mg oral fluconazole every 72 hours for three doses induction, followed by one dose once a week for six months maintenance.</li> </ul>
	Clotrimazole <b>OR</b>	100mg pessary	6 nights	
	Fluconazole (oral)	150mg capsule	STAT	
	<i>Recurrent:</i> Fluconazole (induction/maintenance)	150mg every 72 hours <b>THEN</b> 150mg once a week	3 doses  6 months	
Bacterial vaginosis  <a href="#">BASHH Bacterial vaginosis</a>	Oral Metronidazole <b>OR</b>	400mg BD <b>OR</b> 2g	7 days STAT	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Preparations for bacterial vaginosis are available OTC that patients may find helpful.</li> <li>Oral metronidazole is as effective as topical treatment, and is cheaper.</li> <li>Seven days results in fewer relapses than 2g stat at four weeks.</li> <li><b>Pregnant/breastfeeding:</b> avoid 2g dose. Treating partners does not reduce relapse.</li> </ul>
	Metronidazole 0.75% vaginal gel <b>OR</b>	5g applicator at night	5 nights	
	Clindamycin 2% cream	5g applicator at night	7 nights	
Genital Herpes  <a href="#">BASHH Anogenital herpes</a>	Oral Aciclovir <b>OR</b>	400mg TDS 800mg TDS (if recurrent)	5 days 2 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise saline bathing, analgesia, or topical lidocaine for pain, and discuss transmission.</li> <li><b>First episode:</b> treat within five days if new lesions or systemic symptoms, and refer to GUM.</li> <li><b>Recurrent:</b> self-care if mild, or immediate short course antiviral treatment, or suppressive therapy if more than six episodes per year.</li> </ul>
	Valaciclovir <b>OR</b>	500mg BD	5 days	
	Famciclovir	250mg TDS 1g BD (if recurrent)	5 days 1 day	
Gonorrhoea	Ceftriaxone	1000mg IM	STAT	<ul style="list-style-type: none"> <li>Antibiotic resistance is now very high.</li> <li>Use IM ceftriaxone if susceptibility not known prior to treatment.</li> <li>Use Ciprofloxacin <b>only</b> if susceptibility is known prior to treatment and the isolate is sensitive to ciprofloxacin at all sites of infection.</li> <li>Refer to GUM.</li> <li>Test of cure is essential.</li> </ul>
	<b>OR</b> Ciprofloxacin (only if known to be sensitive & <a href="#">consider safety issues</a> )	500mg	STAT	

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<a href="#">Trichomoniasis</a> <a href="#">B A S H H</a> <a href="#">Trichomoniasis</a>	Metronidazole	400mg BD <b>OR</b> 2g (more adverse effects)	5-7 days STAT	<ul style="list-style-type: none"> <li>• Oral treatment needed as extravaginal infection common.</li> <li>• Treat partners, and refer to GUM for other STIs.</li> <li>• <b>Pregnant/breastfeeding:</b> avoid 2g single dose metronidazole; clotrimazole for symptom relief (not cure) if metronidazole declined.</li> </ul>
	<b>Pregnancy to treat symptoms:</b>			
	Clotrimazole	100mg pessary at night	6 nights	
<a href="#">Pelvic Inflammatory Disease</a> <a href="#">BASHH PID</a>	1. Ceftriaxone <b>PLUS</b>	1000mg IM STAT	Single dose	<ul style="list-style-type: none"> <li>• Refer women and sexual contacts to GUM.</li> <li>• Raised CRP supports diagnosis, absent pus cells in HVS smear good negative predictive value.</li> <li>• <b>Exclude:</b> ectopic pregnancy, appendicitis, endometriosis, UTI, irritable bowel, complicated ovarian cyst, functional pain.</li> <li>• Moxifloxacin has greater activity against likely pathogens, but always test for gonorrhoea, chlamydia and Mycoplasma genitalium.</li> <li>• <i>If M. genitalium</i> tests positive use moxifloxacin.</li> </ul>
	Metronidazole <b>PLUS</b>	400mg BD	14 days	
	Doxycycline	100mg BD	14 days	
	2. Metronidazole <b>PLUS</b>	400mg BD	14 days	
	Ofloxacin <a href="#">(consider safety issues)</a>	400mg BD	14 days	
	<b>OR</b>			
	Moxifloxacin <b>ALONE</b> (first line for <i>M.Genitalium</i> associated PID) <a href="#">(consider safety issues)</a>	400mg OD	14 days	

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<b>SKIN / SOFT TISSUE INFECTIONS</b> Refer to <a href="#">RCGP Skin Infections</a> online training. For MRSA, discuss therapy with microbiology.				
Impetigo	<b>Localised lesions only:</b>			<ul style="list-style-type: none"> <li>• <b>Localised lesions only:</b> topical antibiotics to reduce risk of resistance.</li> <li>• Only use mupirocin if caused by MRSA.</li> <li>• <b>Extensive, severe, or bullous:</b> oral antibiotics.</li> </ul>
	Topical Fusidic acid	Thinly TDS ☺	5 days	
	<b>If MRSA:</b>			
	Mupirocin	2% ointment TDS ☺	5 days	
	<b>Extensive, severe or bullous:</b>			
Flucloxacillin <b>OR</b> Clarithromycin	250-500mg QDS ☺ 250-500mg BD ☺	7 days 7 days		
Cold sores <a href="#">CKS Cold sores</a>	<b>If frequent, severe, and predictable triggers, consider oral prophylaxis:</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>• For infrequent cold sores, antiviral creams are available OTC (licensed for adults and children).</li> <li>• <b>Most resolve after 5 days without treatment.</b></li> <li>• Topical antivirals applied prodromally can reduce duration by 12-18 hours.</li> </ul>
	Aciclovir	400mg BD ☺	5-7 days	
PVL SA <a href="#">PHE PVL SA</a>	<ul style="list-style-type: none"> <li>• Panton-Valentine leukocidin (PVL) is a toxin produced by 20.8-46% of S. aureus from boils/abscesses.</li> <li>• PVL strains are rare in healthy people, but severe.</li> <li>• Suppression therapy should only be started after primary infection has resolved, as ineffective if lesions are still leaking.</li> <li>• 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).</li> <li>• Contact microbiologist for treatment advice if required. For contact details see 'Principles of Treatment' section at start of guidance.</li> </ul>			
Eczema	<ul style="list-style-type: none"> <li>• <b>No visible signs of infection:</b> antibiotic use (alone or with steroids) encourages resistance and does not improve healing.</li> <li>• <b>With visible signs of infection:</b> use oral flucloxacillin or clarithromycin, or topical treatment (as in impetigo).</li> </ul>			
Acne <a href="#">CKS Acne vulgaris</a>	1. Self-care: wash with mild soap; do not scrub; avoid make-up.			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>• Wash with mild soap; do not scrub; avoid make-up.</li> <li>• Benzoyl peroxide is available OTC.</li> <li>• <b>Mild (open and closed comedones) or moderate (inflammatory lesions):</b></li> <li>• <b>First-line:</b> self-care advice.</li> <li>• <b>Second-line:</b> benzoyl peroxide (available OTC) or adapalene (if comedonal element).</li> <li>• <b>Third-line:</b> add topical antibiotic, or consider addition of oral antibiotic. Combination topical treatments include: <ul style="list-style-type: none"> <li>➢ Benzoyl peroxide and clindamycin (Duac® gel)</li> <li>➢ Benzoyl peroxide and adapalene (Epiduo®)</li> <li>➢ Tretinoin and clindamycin (Treclin®)</li> </ul> </li> <li>• <b>CKS:</b> Consider an oral antibiotic combined with either a topical retinoid or benzoyl peroxide if there is acne on the back or shoulders that is particularly extensive or difficult to reach, or if there is a significant risk of scarring or substantial pigment change.</li> <li>• <b>Severe (nodules and cysts):</b> add oral antibiotic (for 3 months max) and refer if no improvement.</li> <li>• Stop topical antibiotics when starting oral antibiotics.</li> <li>• If inadequate response after 3 months with oral antibiotic <b>OR</b> if there are other reasons to take COCP such as contraception and menstrual control, consider adding COCP to treatment.</li> <li>• Provide patient with acne information leaflet from the <a href="#">British Association of Dermatologists</a>.</li> </ul>
	2. Benzoyl peroxide <b>OR</b> Adapalene	5% gel OD-BD ☺ 1% cream ON ☺	Assess after 3 months	
	3. Combination topical treatments (see comments section)			
	<b>If treatment failure/severe:</b>			
	4. Lymecycline <b>OR</b> Doxycycline ( <b>Not for use in children under 12 years</b> )	408mg OD ☺ 100mg OD ☺	Review at 6-8 weeks (8 weeks for lymecycline) Continue for 3 months max	
	<b>Pregnant women &amp; children under 12 years:</b>			
	Erythromycin (preferred if pregnant) <b>OR</b> Clarithromycin	500mg BD ☺ 250mg BD ☺	Review at 6-8 weeks. Continue for 3 months max	
Women with moderate to severe acne: Combined oral contraceptive pill, +/- topical treatment				
Leg ulcer <a href="#">PHE Venous leg ulcers</a>	Flucloxacillin <b>OR</b> Clarithromycin	500mg QDS ☺ 500mg BD ☺	7 days; if slow response continue for a further 7 days	<ul style="list-style-type: none"> <li>• Ulcers are always colonised.</li> <li>• Antibiotics do not improve healing unless active infection. <b>Only consider if:</b> <ul style="list-style-type: none"> <li>➢ purulent exudate/odour;</li> <li>➢ increased pain;</li> <li>➢ cellulitis;</li> <li>➢ pyrexia.</li> </ul> </li> </ul>
	<b>Non-healing ulcers:</b> antimicrobial-reactive oxygen gel may reduce bacterial load.			

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
Cellulitis & erysipelas  <a href="#">CREST Cellulitis</a>	Flucloxacillin	500mg QDS ☺	7 days; if slow response, continue for a further 7 days	<ul style="list-style-type: none"> <li>• <b>Class I:</b> patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.</li> <li>• <b>If river or sea water exposure:</b> seek advice.</li> <li>• <b>Class II:</b> patient febrile and ill, or comorbidity, admit for IV treatment, or use Outpatient Antimicrobial Therapy (OPAT).</li> <li>• <b>Class III:</b> if toxic appearance, admit.</li> <li>• Adding clindamycin does not improve outcomes.</li> <li>• <b>Erysipelas:</b> often facial and unilateral.</li> <li>• Use flucloxacillin for non-facial erysipelas.</li> </ul>
	<b>Penicillin allergy:</b>			
	Clarithromycin	500mg BD ☺		
	<b>Penicillin allergy and taking statins:</b>			
	Doxycycline	200mg STAT then 100mg OD ☺		
	<b>Facial (non-dental):</b>			
Co-amoxiclav	500/125mg TDS ☺			
Bites  <a href="#">CKS Bites</a>	<b>Prophylaxis and treatment all:</b>			<ul style="list-style-type: none"> <li>• <b>Human:</b> thorough irrigation is important. Antibiotic prophylaxis is advised.</li> <li>• <b>Cat:</b> Always give prophylaxis.</li> <li>• <b>Dog:</b> Give prophylaxis if: <ul style="list-style-type: none"> <li>➢ Puncture wound;</li> <li>➢ Bite to hand, foot, face, joint, tendon, or ligament;</li> <li>➢ Immunocompromised, cirrhotic, asplenic or presence of prosthetic valve/joint.</li> </ul> </li> <li>• Assess risk of tetanus, rabies, HIV, and hepatitis B and C as appropriate.</li> </ul>
	Co-amoxiclav	375-625mg TDS ☺	7 days	
	<b>Penicillin allergy:</b>			
	<b>Human:</b> Metronidazole <b>AND</b>	400mg TDS ☺	7 days & review all patients at 24 & 48 hours, as not all pathogens are covered	
	Clarithromycin	250-500mg BD ☺		
	<b>Animal:</b> Metronidazole <b>AND</b>	400mg TDS ☺		
Doxycycline	100mg BD ☺			
Dermatophyte infection: skin  <a href="#">PHE Fungal skin and nail infections</a>	Terbinafine <b>OR</b>	1% cream OD-BD ☺	1-4 weeks	<p><b>Self-care advice:</b></p> <ul style="list-style-type: none"> <li>• <b>Topical antifungals available OTC.</b> <ul style="list-style-type: none"> <li>➢ Terbinafine licensed in &gt;16 years</li> <li>➢ Miconazole/Clotrimazole licensed in children and adults</li> </ul> </li> <li>• <b>Most cases:</b> use terbinafine as fungicidal, treatment time shorter and more effective than with fungistatic imidazoles or undecenoates.</li> <li>• <b>If candida possible:</b> use imidazole.</li> <li>• <b>If intractable, or scalp:</b> send skin scrapings and if infection confirmed: use oral terbinafine or itraconazole.</li> <li>• <b>Scalp:</b> oral therapy, and discuss with specialist.</li> </ul>
	Clotrimazole <b>OR</b>	1% cream BD-TDS ☺	4 weeks (min)	
	Miconazole	2% cream BD ☺	2-6 weeks Continue for 1 week after healing	
	<b>Athlete's foot only:</b>			
	Undecenoate (topical) (e.g. Mycota®)	BD ☺	Continue for 1 week after healing	
Dermatophyte infection: nail  <a href="#">CKS Fungal nail infection</a>	<b>Take nail clippings; start therapy only if infection is confirmed.</b>			
	Terbinafine	250mg OD ☺	Fingers: 6 weeks Toes: 12 weeks	<ul style="list-style-type: none"> <li>• Prescribing of topical nail lacquer is not routinely recommended in SWL. See <a href="#">position statement</a>.</li> <li>• Oral terbinafine is more effective than oral azole.</li> <li>• Liver reactions 0.1 to 1% with oral antifungals.</li> <li>• If candida or non-dermatophyte infection is confirmed, use oral itraconazole.</li> <li>• <b>To prevent recurrence:</b> apply weekly 1% topical antifungal cream to entire toe area.</li> <li>• <b>Children:</b> seek specialist advice.</li> <li>• <b>Stop treatment when continual, new, healthy, proximal nail growth.</b></li> </ul>
	Itraconazole	200mg BD ☺	1 week a month: Fingers: 2 courses Toes: 3 courses	
Mastitis  <a href="#">CKS Mastitis and breast abscess</a>	Flucloxacillin	500mg QDS ☺	10-14 days	
	<b>Penicillin allergy:</b>			
	Erythromycin (preferred if pregnant) <b>OR</b> Clarithromycin	250-500mg QDS ☺  500mg BD ☺	10-14 days  10-14 days	



ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<a href="#">Varicella zoster/ chicken pox</a> <a href="#">PHE Varicella</a> <a href="#">Herpes zoster/ shingles</a> <a href="#">PCDS Herpes zoster</a>	1. Aciclovir	800mg five times a day ☺	7 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Advise paracetamol for pain relief.</li> <li><b>CKS:</b> Advise the following simple measures to help alleviate symptoms: <ul style="list-style-type: none"> <li>Encourage adequate fluid intake to avoid dehydration.</li> <li>Dress appropriately to avoid overheating or shivering.</li> <li>Wear smooth, cotton fabrics.</li> <li>Keep nails short to minimize damage from scratching.</li> </ul> </li> <li><b>Pregnant/immunocompromised/neonate:</b> seek urgent specialist advice.</li> <li><b>Chickenpox:</b> consider aciclovir if: onset of rash &lt;24 hours, and one of the following: <ul style="list-style-type: none"> <li>&gt;14 years of age;</li> <li>severe pain;</li> <li>dense/oral rash;</li> <li>taking steroids;</li> <li>smoker.</li> </ul> </li> <li><b>Shingles:</b> treat if &gt;50 years (PHN rare if &lt;50 years) and within 72 hours of rash, or if one of the following: <ul style="list-style-type: none"> <li>active ophthalmic;</li> <li>Ramsey Hunt;</li> <li>eczema;</li> <li>non-truncal involvement;</li> <li>moderate or severe pain;</li> <li>moderate or severe rash.</li> </ul> </li> <li><b>Shingles treatment if not within 72 hours:</b> consider starting antiviral drug up to one week after rash onset, if high risk of severe shingles or continued vesicle formation; older age; immunocompromised; or severe pain.</li> </ul>
	2. <i>For shingles if poor compliance:</i> Valaciclovir  <b>OR</b> Famciclovir (not for children)	1g TDS ☺  250-500mg TDS <b>OR</b> 750mg BD	7 days  7 days	
<a href="#">Conjunctivitis</a> <a href="#">AAO conjunctivitis</a>	1. Give self-care advice – Bathe/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting.			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Chloramphenicol available OTC for those &gt;2 years.</li> <li><b>Treat only if severe</b>, as most cases are viral or self-limiting.</li> <li><b>Bacterial conjunctivitis:</b> 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.</li> <li><b>Third line:</b> fusidic acid as it has less gram-negative activity.</li> </ul>
	2. Chloramphenicol	0.5% eye drops ☺ 2 hourly for 2 days then reduce frequency to TDS-QDS  <b>OR</b> 1% eye ointment TDS – QDS <b>OR</b> NOCTE if using antibiotic eye drops during the day	Continue for 48 hours after resolution	
	3. Fusidic acid	1% gel BD ☺	Continue for 48 hours after resolution	
<a href="#">Blepharitis</a> <a href="#">CKS Blepharitis</a>	<ul style="list-style-type: none"> <li>Give self-care advice – see comments section.</li> </ul>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Lid hygiene for symptom control, including: warm compresses; lid massage, wipes and scrubs; gentle washing; avoiding cosmetics.</li> <li>Lid hygiene products are available OTC.</li> <li><b>Second line:</b> topical antibiotics if hygiene measures are ineffective after 2 weeks.</li> <li>Signs of Meibomian gland dysfunction, or acne rosacea: consider oral antibiotics.</li> </ul>
	1. Chloramphenicol	1% eye ointment BD ☺	6 week trial	
	2. Oxytetracycline <b>OR</b>  Doxycycline	500mg BD ☺ 250mg BD  100mg OD ☺ 50mg OD	4 weeks (initial) 8 weeks (maintenance)  4 weeks (initial) 8 weeks (maintenance)	

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<b>PARASITIC INFECTIONS</b>				
Threadworm <a href="#">CKS Threadworm</a>	<i>Patients &gt;6 months: Mebendazole (&lt;2 years off label)</i>	100mg ☺	STAT dose; repeat after 2 weeks if persistent	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Mebendazole is available OTC for those &gt;2 years (not licensed in pregnancy or breast-feeding)</li> <li>See hygiene measures below.</li> <li><b>Treat household contacts at the same time AND advise hygiene measures (as below) for 2 weeks.</b></li> </ul>
	<i>Children &lt; 6 months and pregnant or breastfeeding women:</i>	<ul style="list-style-type: none"> <li>Hygiene measures alone for <b>6 weeks:</b> <ul style="list-style-type: none"> <li>Thorough hand hygiene</li> <li>Wear close fitting pants at night and change in the morning.</li> <li>Morning bath or shower, including perianal area.</li> <li>Wash sleepwear, bed linen, dust and vacuum.</li> <li>Cut fingernails regularly, avoid biting nails and scratching around the anus.</li> <li>Do not shake out items as this may distribute eggs around the room.</li> <li>Washing/drying in a hot cycle will kill threadworm eggs.</li> <li>Thoroughly dust and vacuum (including vacuuming mattresses) and clean the bathroom by 'damp-dusting' surfaces.</li> <li>Child &lt;6 months, add perianal wet wiping or washes 3 hourly.</li> </ul> </li> <li>For more details, contact the <a href="#">UK Teratology Information Service (UKTIS)</a> on 0844 892 0909.</li> </ul>		
Scabies <a href="#">NHS Scabies</a>	Permethrin	5% cream ☺	2 applications, 1 week apart	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Permethrin &amp; malathion available OTC.</li> <li><b>First choice permethrin:</b> Treat <b>whole</b> body from ear/chin downwards, and under nails.</li> <li>If using permethrin &amp; patient is under 2 years, elderly, immunosuppressed, <b>OR</b> if treating with malathion: also treat face &amp; scalp.</li> <li><b>Home/sexual contacts:</b> treat within 24 hours.</li> </ul>
	<i>Permethrin allergy: Malathion</i>	0.5% aqueous liquid ☺	2 applications, 1 week apart	
Tick bites (Lyme disease) <a href="#">NICE Antimicrobial prescribing</a>	<b>Prophylaxis:</b> Doxycycline	200mg ☺	STAT	<b>Prophylaxis:</b> <ul style="list-style-type: none"> <li>Prophylaxis is not routinely recommended in Europe.</li> <li><b>In pregnancy,</b> consider amoxicillin.</li> <li>If immunocompromised, consider prophylactic doxycycline.</li> <li>Risk increased if high prevalence area and the longer tick is attached to the skin.</li> <li>Only give prophylaxis within 72 hours of tick removal.</li> <li>Give safety net advice about erythema migrans and other possible symptoms that may occur within 1 month of tick removal.</li> </ul>
	<b>Treatment:</b> Doxycycline	100mg BD ☺	21 days	<b>Treatment:</b> <ul style="list-style-type: none"> <li>Treat erythema migrans empirically; serology is often negative early in infection.</li> <li>For other suspected Lyme disease such as neuroborreliosis (CN palsy, radiculopathy) seek advice.</li> </ul>
	<b>First alternative:</b> Amoxicillin	1g TDS ☺	21 days	

ILLNESS	DRUG	DOSE	DURATION	COMMENTS
<b>DENTAL INFECTIONS</b>				
<p><b>For suspected dental infections outside a dental setting. Derived from the Scottish Dental Clinical Effectiveness Programme 2011 <a href="#">SDCEP Guidelines</a>.</b>  <b>This guidance is not designed to be a definitive guide to oral conditions, as GPs should not be involved in dental treatment. This guidance may be followed if treatment is deemed necessary and the clinician feels competent to do so however patients presenting to non-dental primary care services with dental problems, in the first instance, should be directed to their regular dentist, or if this is not possible, to the NHS 111 service, who will be able to provide details of how to access emergency dental care.</b></p>				
<b>Note: Antibiotics do not cure toothache. First line treatment is with paracetamol and/or ibuprofen; codeine is not effective for toothache.</b>				
Mucosal ulceration and inflammation (simple gingivitis)  <a href="#">SDCEP Dental problems</a>	Simple saline mouthwash	½ tsp salt warm water ☺	Always spit out after use	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Simple saline mouthwash can be prepared at home.</li> <li>Mouthwashes are available OTC.</li> <li>Temporary pain and swelling relief can be attained with saline mouthwash.</li> <li>Use antiseptic mouthwash if more severe, and if pain limits oral hygiene to treat or prevent secondary infection.</li> <li>The primary cause for mucosal ulceration or inflammation (aphthous ulcers; oral lichen planus; herpes simplex infection; oral cancer) needs to be evaluated and treated.</li> </ul>
	Chlorhexidine (Do not use within 30 mins of toothpaste)	0.2% mouthwash 1 minute BD with 10 mL ☺		
	Hydrogen peroxide (spit out after use)	6% mouthwash 2-3 mins BD-TDS with 15ml in ½ glass warm water ☺		
Acute necrotising ulcerative gingivitis	Chlorhexidine (Do not use within 30 mins of toothpaste) <b>OR</b>	0.2% mouthwash 1 minute BD with 10 mL ☺	Until pain allows for oral hygiene	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Mouthwashes are available OTC.</li> <li>Refer to dentist for scaling and hygiene advice.</li> <li>Antiseptic mouthwash if pain limits oral hygiene.</li> <li>Commence metronidazole in the presence of systemic signs and symptoms.</li> </ul>
	Hydrogen peroxide (spit out after use)	6% mouthwash 2-3 mins BD-TDS with 15ml in ½ glass warm water ☺		
	If systemic signs and symptoms: Metronidazole	400mg TDS ☺	3 days	
Pericoronitis  <a href="#">SDCEP Dental problems</a>	Metronidazole <b>OR</b>	400mg TDS ☺	3 days	<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Use antiseptic mouthwash if pain and trismus limit oral hygiene.</li> <li>Mouthwashes are available OTC.</li> <li>Refer to dentist for irrigation and debridement.</li> <li>If persistent swelling or systemic symptoms, use metronidazole or amoxicillin.</li> </ul>
	Amoxicillin	500mg TDS ☺	3 days	
	Chlorhexidine (Do not use within 30 mins of toothpaste) <b>OR</b>	0.2% mouthwash 1 minute BD with 10 mL ☺	Until pain allows for oral hygiene	
	Hydrogen peroxide (spit out after use)	6% mouthwash 2-3 mins BD-TDS with 15ml in ½ glass warm water ☺		
Dental abscess  <a href="#">SCDEP Dental problems</a>	<b>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.</b>			<b>Self-care advice:</b> <ul style="list-style-type: none"> <li>Analgesia available OTC.</li> <li>Repeated antibiotics alone, without drainage, are ineffective in preventing the spread of infection.</li> <li><b>Antibiotics are only recommended if there are signs of severe infection, systemic symptoms, or a high risk of complications.</b></li> <li>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.</li> <li>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.</li> <li><b>If pus is present</b>, refer for drainage, tooth extraction, or root canal.</li> <li>Send pus for investigation.</li> <li><b>If spreading infection</b> (lymph node involvement or systemic signs, i.e. fever or malaise) <b>ADD</b> metronidazole.</li> <li>Use clarithromycin in true penicillin allergy and, <b>if severe, refer to hospital.</b></li> </ul>
	Amoxicillin <b>OR</b>	500mg-1g TDS ☺	Up to 5 days; review at 3 days	
	Penicillin V	500mg-1g QDS ☺		
	Metronidazole	400mg TDS ☺		
Penicillin allergy: Clarithromycin	500 mg BD ☺			

## **SOURCE DOCUMENTS**

This guidance is based on:

1. Managing common infections: guidance for consultation and local adaptation. Public Health England (latest review September 2017)  
<https://www.gov.uk/government/publications/managing-common-infections-guidance-for-primary-care>
2. BNF. September 2017. <https://bnf.nice.org.uk/>
3. BNF for Children September 2017-18. <https://bnfc.nice.org.uk/>
4. SIGN guidance ([www.sign.ac.uk](http://www.sign.ac.uk))
5. Clinical Knowledge Summaries (<http://cks.nice.org.uk/#?char=A>)
6. Guidelines for the Management of Acne (from 12 Years of Age). St Georges Hospital. October 2017
7. Advice from Microbiologists (Epsom and St Helier University Hospitals and St George's Hospital) and South London Health Protection Team