





# Management of infection in primary care

## Principles of Treatment

1. This guidance is based on the best available evidence but use professional judgement and involve patients in management decisions.
2. In severe infection, or immunocompromised, it is important to initiate antibiotics as soon as possible, particularly if [sepsis](#) is suspected. If patient is not at moderate to high risk for sepsis, give information about symptom monitoring, and how to access medical care if they are concerned.
3. Where an empirical therapy has failed or special circumstances exist, microbiological advice can be obtained from 📞 01206 747374 (out of hours via 01206 747474).
4. Prescribe an antibiotic only when there is likely to be clear clinical benefit, giving alternative, non-antibiotic self-care advice, where appropriate.
5. Consider a 'No' or 'Back-up/Delayed', antibiotic strategy for acute self-limiting upper respiratory tract infections, and mild UTI symptoms.
6. Limit prescribing over the telephone to exceptional cases.
7. Use simple, generic antibiotics if possible. Avoid broad spectrum antibiotics (eg. co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase the risk of [Clostridium difficile](#), [MRSA](#) and resistant [UTIs](#).
8. Always check for antibiotic allergies. A dose and duration of treatment for adults is usually suggested, but may need modification for age, weight, renal function, or if immunocompromised. In severe or recurrent cases, consider a larger dose or longer course.
9. Child doses are indicated where appropriate by the 😊 symbol and should be checked with the childrens version of the BNF - [cBNF](#).
10. Refer to [BNF](#) for further dosing and interaction information (e.g. the interaction between macrolides and statins) and check for hypersensitivity.
11. Have a lower threshold for antibiotics in immunocompromised or in those with multiple morbidities; consider culture and seek advice.
12. Avoid widespread use of topical antibiotics (especially those agents also available as systemic preparations, e.g. fusidic acid).
13. 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 the 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.

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.

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <small>Check cBNF ☺</small> for child doses	DURATION OF TREATMENT												
<b>UPPER RESPIRATORY TRACT INFECTIONS</b>																
Influenza	<a href="#">PHE Influenza</a>  <b>For prophylaxis:</b> <a href="#">NICE Influenza</a>	<b>Annual vaccination is essential for all those “at risk” of influenza.</b> Antivirals are not recommended for healthy adults. <b>Treat “at risk” patients</b> with five days oseltamivir 75mg BD, when influenza is circulating in the community, and ideally within 48 hours of onset (36 hours for zanamivir treatment in children), or in a care home where influenza is likely. <b>At risk:</b> <a href="#">pregnant</a> (including up to two weeks post-partum); children under six months; adults 65 years or older; chronic respiratory disease (including COPD and asthma); significant cardiovascular disease (not hypertension); severe immunosuppression; diabetes mellitus; chronic neurological, renal or liver disease; morbid obesity (BMI>40). See the <a href="#">PHE Influenza</a> guidance for the treatment of patients under 13 years of age. In severe immunosuppression, or oseltamivir resistance, use zanamivir 10mg BD (two inhalations by diskhaler for up to 10 days) and seek advice.														
Acute sore throat	<p><b>Avoid antibiotics</b> as 82% of cases resolve in 7 days, and pain is only reduced by 16 hours. Use <a href="#">FeverPAIN Score</a>: <b>Fever</b> in last 24 hours; <b>Purulence</b>; <b>Attend rapidly</b> under three days; <b>severely Inflamed tonsils</b>; <b>No cough or coryza</b>. <b>Score 0-1:</b> 13-18% streptococci - no antibiotic. <b>Score 2-3:</b> 34-40% streptococci - 3-day delayed antibiotic. <b>Score 4-5:</b> 62-65% streptococci - if severe, immediate antibiotic, or 48-hour delayed antibiotic.</p> <p><b>Advise paracetamol, self-care, and safety net.</b> Complications are rare: antibiotics to prevent quinsy NNT&gt;4000; otitis media NNT200. 10 days penicillin has lower relapse than 5 days in patients under 18 years of age</p>															
	<a href="#">NICE RTIs</a>  <a href="#">FeverPAIN</a>	<p><b>Consider: No script or delayed prescription</b></p> <table border="0" data-bbox="624 909 2152 1423"> <tr> <td data-bbox="624 909 1133 981">Fever pain 0-1: self-care</td> <td data-bbox="1135 909 1733 981"></td> <td data-bbox="1736 909 2152 981"></td> </tr> <tr> <td data-bbox="624 983 1133 1054">Fever pain 2-3: delayed prescription of phenoxymethylpenicillin</td> <td data-bbox="1135 983 1733 1054">500mg QDS or 1G BD (if mild). If severe 500mg QDS. Click ☺ for child doses.</td> <td data-bbox="1736 983 2152 1054" rowspan="2">} 5-10 days</td> </tr> <tr> <td data-bbox="624 1056 1133 1128"><b>Penicillin allergy:</b> Clarithromycin</td> <td data-bbox="1135 1056 1733 1128">250mg BD. If severe 500mg BD Click ☺ for child doses.</td> <td data-bbox="1736 1056 2152 1128">5 days</td> </tr> <tr> <td data-bbox="624 1129 1133 1423"><b>Penicillin allergy in pregnancy:</b> erythromycin</td> <td data-bbox="1135 1129 1733 1423">250-500mg QDS click ☺ for child doses.</td> <td data-bbox="1736 1129 2152 1423">5 days</td> </tr> </table>			Fever pain 0-1: self-care			Fever pain 2-3: delayed prescription of phenoxymethylpenicillin	500mg QDS or 1G BD (if mild). If severe 500mg QDS. Click ☺ for child doses.	} 5-10 days	<b>Penicillin allergy:</b> Clarithromycin	250mg BD. If severe 500mg BD Click ☺ for child doses.	5 days	<b>Penicillin allergy in pregnancy:</b> erythromycin	250-500mg QDS click ☺ for child doses.	5 days
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<b>Scarlet fever (GAS)</b>	<a href="#">PHE Scarlet fever</a>	<b>First line (mild):</b> analgesia		Prompt treatment with appropriate antibiotics significantly reduces the risk of complications. Observe immunocompromised individuals (diabetes; women in the puerperal period; chickenpox) as they are at increased risk of developing invasive infection.
		Phenoxyethylpenicillin  Penicillin allergy: clarithromycin	500mg QDS  for child doses  250-500mg BD  for child doses	10 days  5 days
<b>Acute Otitis Media (Childrens doses)</b>	NICE RTIs	<b>Optimise analgesia and target antibiotics.</b> AOM resolves in 60% of cases in 24 hours without antibiotics. Antibiotics reduce pain only at two days (NNT15), and do not prevent deafness. <b>Consider 2 or 3-day delayed, or immediate antibiotics for pain relief if:</b> <2 years AND bilateral AOM (NNT4), bulging membrane, or symptom score >8 for: fever; tugging ears; crying; irritability; difficulty sleeping; less playful; eating less (0 = no symptoms; 1 = a little; 2 = a lot). All ages with otorrhoea NNT3. Antibiotics to prevent mastoiditis NNT>4000.		
		<b>Consider: No script or delayed prescription</b>  Amoxicillin  <b>Penicillin Allergy:</b> Erythromycin  OR  Clarithromycin	<b>Child doses</b> 1 - 11 months: 125mg TDS, 1-4 years: 250mg TDS, >5 years: 500mg TDS  <2 years 125mg QDS, 2-7 years 250mg QDS, >8 years 250-500mg QDS  1 month-11 years: 7.5mg/kg to 250mg BD (weight dosing) 12-18 years: 250mg BD	} 5 days  } 5 days  } 5 days

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <small>Check cBNF ☺ for child doses</small>	DURATION OF TREATMENT
<b>Acute Otitis Externa</b>	<b>First line:</b> analgesia for pain relief, and apply localised heat (e.g. a warm flannel). <b>Second line:</b> topical acetic acid or topical antibiotic +/- steroid: similar cure at 7 days. <b>If cellulitis or disease extends outside ear canal,</b> or systemic signs of infection, start oral flucloxacillin and refer to exclude malignant otitis externa.			
	<a href="#">CKS Otitis Externa</a>	<b>First Line:</b> analgesia for pain relief <b>Second line:</b> Topical acetic acid 2% OR Topical neomycin sulphate with corticosteroid  <b>If cellulitis:</b> flucloxacillin	1 spray TDS <small>click ☺ for child doses</small> 3 drops TDS <small>click ☺ for child doses</small>  250mg QDS <small>click ☺ for child doses</small> If severe 500mg QDS	7 days 7 days (min) to 14 days (max)  7 days 7 days
<b>Sinusitis (acute)</b>	<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). <b>Symptoms &gt;10 days:</b> no antibiotic, or <b>back-up antibiotic</b> if several of: purulent nasal discharge; severe localised unilateral pain; fever; marked deterioration after initial milder phase. <b>Systemically very unwell, or more serious signs and symptoms:</b> immediate antibiotic. <b>Suspected complications:</b> e.g. sepsis, intraorbital or intracranial, refer to secondary care. <b>Self-care:</b> paracetamol/ibuprofen for pain/fever. Consider high-dose nasal steroid if >12 years. Nasal decongestants or saline may help some.			
	<a href="#">This guidance summarises both NICE Sinusitis (acute) (July 2017) and NICE RTIs (July 2008)</a>	No antibiotics: self-care <b>First line for delayed:</b> phenoxymethylpenicillin  <b>Penicillin allergy or intolerance:</b> doxycycline OR clarithromycin  <b>Very unwell or worsening:</b> co-amoxiclav  Mometasone	500mg QDS <small>click ☺ for child doses</small>  200mg stat then 100mg OD 500mg BD <small>click ☺ for child doses</small>  625mg TDS <small>click ☺ for child doses</small>  200mcg BD	} 5 days   5 days  14 days

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <small>Check cBNF ☺</small> for child doses	DURATION OF TREATMENT
<b>LOWER RESPIRATORY TRACT INFECTIONS</b>				
Note: Low doses of penicillins are more likely to select for resistance, we recommend amoxicillin 500mg. Do <b>not</b> use quinolones (ciprofloxacin, ofloxacin) first line as there is poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.				
<b>Acute cough &amp; bronchitis</b>	<p><b>Antibiotics have little benefit if no co-morbidity.</b></p> <p><b>Second line:</b> 7-day delayed antibiotic, safety net, and advise that symptoms can last 3 weeks.</p> <p><b>Consider immediate antibiotics</b> if &gt;80 years of age and one of: hospitalisation in past year; taking oral steroids; insulin-dependent diabetic; congestive heart failure; serious neurological disorder/stroke, or &gt;65 years with two of the above.</p> <p><b>Consider CRP</b> if antibiotic is being considered. No antibiotics if CRP&lt;20mg/L and symptoms for &gt;24 hours; delayed antibiotics if 20-100mg/L; immediate antibiotics if &gt;100mg/L.</p>			
	<b>NICE RTIs</b>	<p><b>First line:</b> self-care and safety netting advice</p> <p><b>Second line:</b> Amoxicillin</p> <p><b>Penicillin allergy:</b> doxycycline</p>	<p>500mg TDS <small>click ☺ for child doses</small></p> <p>200mg stat then 100mg OD</p>	<p>5 days</p> <p>5 days</p>
<b>Acute exacerbation of COPD</b>	Treat exacerbations promptly with antibiotics if purulent sputum <b>and</b> increased shortness of breath <b>and/or</b> increased sputum volume. Risk factors for antibiotic resistance include: severe COPD (MRC>3), co-morbidity, frequent exacerbations, antibiotics in last 3 months.			
	<p><b>NICE COPD</b></p> <p><b>GOLD COPD</b></p>	<p>Amoxicillin or doxycycline or clarithromycin</p> <p><b>If resistance:</b> co-amoxiclav</p>	<p>500mg TDS <small>click ☺ for child doses</small> 200mg stat then 100mg OD</p> <p>500mg BD <small>click ☺ for child doses</small></p> <p>625mg TDS <small>click ☺ for child doses</small></p>	<p>} 5 days</p> <p>5 days</p>

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <span style="color: red;">Check cBNF ☺</span> for child doses	DURATION OF TREATMENT
<b>Community acquired pneumonia</b>	<p>Use CRB65 score to guide mortality risk, place of care &amp; antibiotics. Each CRB65 parameter scores 1: <b>Confusion</b> (AMT&lt;8); <b>Respiratory rate</b> &gt;30/min; <b>BP</b> systolic &lt;90 or diastolic ≤60; age ≥65. <b>Score 0</b> low risk: consider home based care. <b>Score 1-2</b> intermediate risk consider hospital assessment. <b>Score 3-4 urgent hospital admission.</b></p> <p><b>Always give safety-net advice</b> and likely duration of different symptoms, e.g. cough 6 weeks. Mycoplasma infection is rare in &gt;65s.</p>			
		<p><b>NICE pneumonia</b></p>	<p><b>IF CRB65=0:</b> amoxicillin or clarithromycin or doxycycline</p> <p><b>If CRB65=1,2 and at home:</b> (clinically assess need for dual therapy for atypicals): amoxicillin AND clarithromycin or doxycycline alone</p>	<p>500mg TDS <span style="color: blue;">click ☺</span> for child doses 500mg BD <span style="color: blue;">click ☺</span> for child doses 200mg stat then 100mg OD</p> <p>500mg TDS <span style="color: blue;">click ☺</span> for child doses 500mg BD <span style="color: blue;">click ☺</span> for child doses 200mg stat then 100mg OD</p>

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<b>URINARY TRACT INFECTIONS</b> 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 <b>TARGET UTI</b> leaflet, and refer to the <b>PHE UTI</b> guidance for diagnostic information				
<b>UTI in adults (lower)</b>	<b>All patients first line antibiotic:</b> nitrofurantoin if GFR >45mls/min. If GFR 30-45, only use if no alternative. <b>Treat women</b> with severe/≥3 symptoms. <b>Women &lt;65 years (mild/≤2 symptoms):</b> pain relief and consider delayed 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. <b>Men &lt;65 years:</b> consider prostatitis and send MSU or if symptoms mild or non-specific, use negative dipstick to exclude UTI. <b>&gt;65 years:</b> treat if fever ≥38°C, or 1.5°C above base twice in 12 hours, and >1 other symptom. <b>If treatment failure:</b> always perform culture.			
	<b>PHE UTI Diagnosis</b> <b>TARGET UTI</b> <b>RCGP UTI</b> <b>SIGN UTI</b> <b>NHS Scotland UTI</b>	<b>First line:</b> nitrofurantoin  <b>If low risk of resistance:</b> trimethoprim  <b>If first line unsuitable or GFR &lt;45ml/min:</b> pivmecillinam  <b>If organism susceptible:</b> amoxicillin <b>If high resistance risk:</b> fosfomycin	100mg m/r BD, OR 50mg i/r QDS (BD dose increases compliance)  200mg BD  400mg stat then 200mg TDS (400mg if high resistance risk) 500mg TDS Women and men: 3g stat Men: a second 3g stat 3 days later (unlicensed)	} Women 3 days Men 7 days
<b>Low risk of resistance:</b> younger women with acute UTI and no risk. <b>Risk factors for increased resistance include:</b> care-home resident; recurrent UTI; hospitalisation for >7 days in the last 6 months; unresolving urinary symptoms; recent travel to a country with increased resistance; previous UTI resistant to trimethoprim, cephalosporins, or quinolones. <b>If risk of resistance:</b> send urine for culture and susceptibilities; safety net.				
<b>UTI in patients with catheters: antibiotics will not eradicate asymptomatic bacteriuria;</b> only treat if systemically unwell or pyelonephritis likely. Do not use prophylactic antibiotics for catheter change unless there is a history of catheter-change-associated UTI or trauma. Take sample if new onset of delirium, or one or more symptoms of UTI.				

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<b>Acute prostatitis</b>	Send MSU for culture and start antibiotics. 4 week course may prevent chronic prostatitis. Quinolones achieve higher prostate concentrations.			
	Ciprofloxacin <i>or</i> ofloxacin <b>Second line:</b> trimethoprim	500mg BD 200mg BD 200mg BD		28 days 28 days 28 days
<b>UTI in pregnancy</b>	Send MSU for culture and start antibiotics in all with significant positive culture, even if asymptomatic. <b>First line:</b> nitrofurantoin, unless at term. <b>Second line:</b> trimethoprim; avoid if low folate status, or on folate antagonist. <b>Third line:</b> cephalosporins, as risk of <i>C. difficile</i> .			
	<b>SIGN UTI</b>	<b>First line:</b> nitrofurantoin (avoid at term)  <b>Second line:</b> trimethoprim <i>Give folate if 1st trimester</i> <b>Third line:</b> cefalexin	100mg m/r BD OR 50mg i/r QDS  200mg BD (off-label)  500mg BD	} All for 7 days
<b>UTI in Children</b>	<b>Child &lt;3 months:</b> refer urgently for assessment. <b>Child ≥ 3 months:</b> use positive nitrite to guide antibiotic use, <u>also</u> send pre-treatment MSU. <b>Imaging:</b> refer if child <6 months, or recurrent or atypical UTI.			
	<b>NICE UTI in under 16s</b>	<b>Lower UTI:</b> nitrofurantoin click  for child doses <i>or</i> trimethoprim click  for child doses <b>Second line:</b> cefalexin click  for child doses <b>IF susceptible</b> amoxicillin click  for child doses <b>Upper UTI:</b> refer to paediatrics to: obtain a urine sample for culture; assess for signs of systemic infection; consider systemic antimicrobials.		} Lower UTI 3 days



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<b>Acute pyelonephritis</b>	If admission not needed, send MSU for culture & susceptibility testing and start antibiotics. If no response within 24 hours seek advice. <b>If ESBL risk</b> and with microbiology advice consider IV antibiotic via outpatients (OPAT).			
	Ciprofloxacin		500 BD <span style="margin-left: 20px;">click ☺ for child doses</span>	7 days
	or co-amoxiclav		500/125mg TDS <span style="margin-left: 20px;">click ☺ for child doses</span>	7 days
<b>Recurrent UTI in non-pregnant women (2 in 6 months or ≥ 3 in a year)</b>	<b>First line:</b> advise simple measures, including hydration; ibuprofen for symptom relief. Cranberry products (self-care) work for some women. <b>Second line:</b> stand-by or post-coital antibiotics. <b>Third line:</b> antibiotic prophylaxis. Consider methenamine if no renal/hepatic impairment.			
	<b>TARGET UTI</b>	<b>Antibiotic prophylaxis:</b> <b>First line:</b> nitrofurantoin <b>Second line:</b> ciprofloxacin <b>If recent culture sensitive:</b> trimethoprim Methenamine hippurate	100mg m/r } 500mg } <i>At night or</i> 100mg } <i>post coital stat</i> 1g BD } <i>(off- label)</i>	3-6 months, then review recurrence rate and need.  6 months
<b>MENINGITIS</b>				
<b>Suspected meningococcal disease</b>	<b>Transfer all patients to hospital immediately.</b>  If time before hospital admission, and non-blanching rash, give IV benzylpenicillin or IV cefotaxime. Do not give IV antibiotics if there is a definite history of anaphylaxis; rash is not a contraindication.			
	<b>NICE Meningitis</b>	IV or IM benzylpenicillin <b>OR</b>  IV or IM cefotaxime	Child <1 year: 300mg Child 1-9 years: 600mg Adult/child 10+ years: 1.2g Child <12 years: 50mg/kg Adult/child 12+ years: 1g	} Stat dose. Give IM if vein cannot be accessed






Prevention of secondary case of meningitis: Only prescribe following advice from Public Health Doctor: 9 am – 5 pm: ☎ 0300 303 8537 Out of hours:  
Contact on-call doctor ☎ 01245 444417

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<b>GASTRO INTESTINAL TRACT INFECTIONS</b>				
<b>Oral candidiasis</b>	<b>Topical azoles</b> more effective than topical nystatin. Oral candidiasis rare in immunocompetent adults; consider undiagnosed risk factors including HIV. Use fluconazole 50mg if extensive/severe candidiasis; use 100mg if HIV or immunocompromised.			
	<b>CKS candida</b>	Miconazole oral gel  <b>If miconazole not tolerated</b> nystatin suspension  Fluconazole capsules	20mg/mL QDS (hold in mouth after food) <small>click ☺ for child doses</small>  4ml; 100,000 units/mL QDS (half in each side) <small>click ☺ for child doses</small>  50mg <i>OR</i> 100mg OD <small>click ☺ for child doses</small>	7 days; further 2 days after symptoms resolve  7-14 days
<b>Helicobacter pylori</b>	Treat all positives, if known DU, GU or low grade MALToma. NNT in non-ulcer dyspepsia: 14. Do not offer eradication for GORD. Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection. <b>Penicillin allergy:</b> use PPI PLUS clarithromycin PLUS metronidazole. If previous clarithromycin, use PPI PLUS bismuth salt PLUS metronidazole PLUS tetracycline hydrochloride. <b>Relapse and previous metronidazole and clarithromycin:</b> use PPI PLUS amoxicillin PLUS either tetracycline OR levofloxacin. <b>Retest for H. pylori:</b> post DU/GU, or relapse after 2nd line therapy, using UBT/SAT test consider referral for endoscopy & culture.			
	<b>NICE GORD and dyspepsia</b>  <b>PHE H.pylori</b>	<b>Always use PPI.</b> PPI PLUS amoxicillin PLUS clarithromycin OR metronidazole <b>Penicillin allergy:</b> PPI PLUS bismuth subsalicylate PLUS metronidazole PLUS tetracycline hydrochloride <b>Relapse:</b> PPI PLUS amoxicillin PLUS tetracycline hydrochloride OR levofloxacin	1g BD <small>click ☺ for child doses</small> 500mg BD <small>click ☺ for child doses</small> 400mg BD <small>click ☺ for child doses</small>  525mg BD <small>click ☺ for child doses</small> 400mg BD <small>click ☺ for child doses</small> 500mg QDS  1g BD <small>click ☺ for child doses</small> 500mg QDS 250mg BD	7 -14 days  MALToma 14 days  <b>Third line on microbiology advice:</b> 14 days PPI PLUS bismuth salt PLUS two antibiotics not previously used, or rifabutin 150mg BD or furazolidone 200mg BD

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<b>Infectious diarrhoea</b> PHE diarrhoea	Refer previously healthy children with acute painful or bloody diarrhoea to exclude <i>E. coli</i> 0157 infection. <b>Antibiotic therapy is not usually indicated unless patient is systemically unwell.</b> 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).			
<b>Clostridium difficile</b>	Stop unnecessary antibiotics, PPIs and antiperistaltic agents. Mild cases (<4 episodes of diarrhoea/day) may respond without metronidazole; 70% respond to metronidazole in 5 days; 92% respond to metronidazole in 14 days. <b>If severe (T&gt;38.5, or WCC&gt;15, rising creatinine, or signs/symptoms of severe colitis):</b> treat with oral vancomycin, review progress closely and consider hospital referral.			
PHE Clostridium difficile		<b>1<sup>st</sup> episode:</b> metronidazole <b>Severe/type 027/recurrent:</b> oral vancomycin <b>Recurrent disease or second line:</b> fidaxomicin	400mg or 500mg TDS click ☺ for child doses  125mg QDS click ☺ for child doses  200mg BD	10-14 days  10-14 days then taper  10 days
<b>Traveller's diarrhoea</b>	-----	Stand-by: azithromycin Prophylaxis/treatment: bismuth subsalicylate	500mg OD 2 tablets QDS	1-3 days 2 days
<b>Threadworm</b>	Treat all household contacts at the same time. Advise hygiene measures for two weeks (hand hygiene, pants at night, morning shower (include perianal area). Wash sleepwear, bed linen, and dust, AND vacuum. Child <6 months add perianal wet wiping or washes three hourly.			
CKS threadworm		<b>Child over 6 months:</b> mebendazole (off-label if <2yrs)  Child under 6 months - hygiene measures alone for 6 weeks	100mg stat	Stat dose, but repeat in 2 weeks if persistent

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<b>GENITAL TRACT INFECTIONS</b> Contact UKTIS for information on foetal risks if patient is pregnant.				
<b>STI screening</b>	People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. <b>Risk factors:</b> <25years, no condom use, recent/frequent change of partner, symptomatic partner, area of high HIV.			
<b>Chlamydia trachomatis/ urethritis</b>	Opportunistically screen all patients aged 16-24 years. Treat partners and refer to GUM service. Repeat test for cure in all at three months. <b>Pregnancy/breastfeeding:</b> azithromycin is most effective. As lower cure rate in pregnancy, test for cure at least three weeks after end of treatment.			
	<b>SIGN Chlamydia</b>	<b>First line:</b> azithromycin <i>or</i> doxycycline <b>Pregnant or breastfeeding:</b> azithromycin <i>or</i> erythromycin <i>or</i> amoxicillin	1g 100mg BD  1g 500mg BD 500mg TDS	Stat 7 days  Stat 10-14 days 7 days
<b>Epididymitis</b>	Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI. If under 35 years or STI risk, refer to GUM.			
	-----	doxycycline <i>or</i> ofloxacin <i>or</i> ciprofloxacin	100mg BD 200mg BD 500mg BD	10-14 days 14 days 10 days
<b>Vaginal Candidiasis</b>	All topical and oral azoles give over 70% cure. <b>Pregnancy:</b> avoid oral azoles, and use intravaginal treatment for 7 days. <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.			
	<b>BASHH Vulvovaginal candidiasis</b>	Clotrimazole <i>or</i>  Miconazole <i>or</i> oral fluconazole Recurrent: fluconazole (induction/maintenance)	500mg pess <i>or</i> 10% cream 100mg pessary 150mg 150mg every 72 hours THEN 150mg once a week	Stat 14 nights Stat 3 doses 6 months

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <small>Check cBNF ☺ for child doses</small>	DURATION OF TREATMENT
<b>Bacterial vaginosis</b>	Oral <b>metronidazole</b> is as effective as topical treatment and is cheaper. Seven days results in fewer relapses than 2g stat at four weeks. <b>Pregnant/breastfeeding:</b> avoid 2g dose. Treating partners does not reduce relapse.			
	<b>BASHH Bacterial vaginosis</b>	Oral metronidazole  or metronidazole 0.75% vaginal gel  or clindamycin 2% cream	400mg BD or 2g stat 5g applicator at night  5g applicator at night	7 days Stat 5 nights  7 nights
<b>Genital herpes</b>	<b>Advise:</b> saline bathing, analgesia, or topical lidocaine for pain, and discuss transmission. <b>First episode:</b> treat within five days if new lesions or systemic symptoms, and refer to GUM. <b>Recurrent:</b> self-care if mild, or immediate <u>short</u> course antiviral treatment, or suppressive therapy if more than six episodes per year.			
	<b>BASHH Anogenital herpes</b>	<b>First line:</b> oral aciclovir  OR valaciclovir OR famciclovir	400mg TDS 800mg TDS (if recurrent) 500mg BD  250mg TDS 1g BD (if recurrent)	5 days 2 days 5 days  5 days 1 day
<b>Gonorrhoea</b>	Antibiotic resistance is now very high. Use IM ceftriaxone and oral azithromycin and refer to GUM. Test of cure is essential.			
	-----	Ceftriaxone PLUS azithromycin (oral)	500mg IM 1g	Stat Stat
<b>Trichomoniasis</b>	Oral treatment needed as extravaginal infection common. Treat partners, and refer to GUM for other STIs. <b>Pregnancy/breastfeeding:</b> avoid 2g single dose <b>metronidazole</b> ; clotrimazole for symptom relief (not cure) if metronidazole declined.			
	<b>BASHH trichomoniasis</b>	Metronidazole  Pregnancy – for symptoms: clotrimazole	400mg BD or 2g (more adverse effects)  100mg pessary at night	5-7 days Stat  6 nights

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE Check cBNF  for child doses	DURATION OF TREATMENT
Pelvic Inflammatory Disease	Refer woman and sexual contacts to GUM service. Always culture for gonorrhoea and chlamydia. If gonorrhoea likely (partner has it, sex abroad, severe symptoms), use regimen with ceftriaxone, as resistance to quinolones is high.			
	BASHH PID	Metronidazole PLUS ofloxacin <b>GC:</b> metronidazole PLUS doxycycline PLUS ceftriaxone	400mg BD 400mg BD 400mg BD 100mg BD 500mg IM	} 14 days Stat
<b>SKIN INFECTIONS</b> – Note: Refer to <a href="#">RCGP Skin Infections online training</a> . For MRSA, discuss therapy with microbiologist.				
Impetigo	<b>Localised lesions only:</b> topical antibiotics to reduce risk of resistance. Only use mupirocin if caused by MRSA. <b>Extensive, severe, or bullous:</b> oral antibiotics.			
	PHE Impetigo	Topical fusidic acid <b>MRSA:</b> topical mupirocin Oral flucloxacillin Oral clarithromycin	Thinly TDS  for child doses 2% ointment TDS  for child doses 250-500mg QDS  for child doses 250 -500mg BD  for child doses	5 days 5 days 7 days 7 days
Cold sores	CKS cold sores	<b>Most resolve</b> after 5 days without treatment. Topical antivirals applied prodromally can reduce duration by 12-18 hours. <b>If frequent, severe, and predictable triggers:</b> consider oral prophylaxis: aciclovir 400mg, twice daily, for 5-7 days.		
PVL-SA	PHE PVL-SA	Panton-Valentine leukocidin (PVL) is a toxin produced by 20.8-46% of <i>S. aureus</i> from boils/abscesses. PVL strains are rare in healthy people, but severe. <b>Suppression therapy</b> should only be started after primary infection has resolved, as ineffective if lesions are still leaking. <b>Risk factors for PVL:</b> recurrent skin infections; invasive infections; MSM if there is more than one case in a home or close community (school children; military personel; nursing home residents; household contacts).		
Eczema	NICE Eczema	<b>No visible signs of infection:</b> antibiotic use (alone or with steroids) encourages resistance and does not improve healing. <b>With visible signs of infection:</b> use oral flucloxacillin or clarithromycin, or topical treatment (as in impetigo).		

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE Check cBNF ☺ for child doses	DURATION OF TREATMENT	
Acne	<p><b>Mild (open and closed comedones) or moderate (inflammatory lesions):</b>  <b>First-line:</b> self-care (wash with mild soap; do not scrub; avoid make-up).  <b>Second-line:</b> topical retinoid or benzoyl peroxide.  <b>Third-line:</b> add topical antibiotic, or consider addition of oral antibiotic. <b>Severe (nodules and cysts):</b> add oral antibiotic (for 3 months max) and refer.</p>				
	CKS Acne vulgaris	<p><b>First-line:</b> self-care  <b>Second-line:</b>                      topical retinoid OR                      benzoyl peroxide  <b>Third-line:</b> topical clindamycin</p> <p><b>If treatment failure/severe:</b>                      oral tetracycline OR                      oral doxycycline.</p>	<p>Thinly OD                      click ☺ for child doses                      5% cream OD-BD            click ☺ for child doses                      1% cream, thinly BD      click ☺ for child doses</p> <p>500mg BD                      click ☺ for child doses                      100mg OD                      click ☺ for child doses</p>	<p>6-8 weeks                      6-8 weeks                      12 weeks</p> <p>6-12 weeks                      6-12 weeks</p>	
Cellulitis and erysipelas	<p><b>Class I:</b> patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.  <b>If river or sea water exposure:</b> seek advice.  <b>Class II</b> patient febrile &amp; ill, <b>or</b> comorbidity, admit for intravenous treatment, or use OPAT. <b>Class III</b> if toxic appearance: admit.  <b>Erysipelas:</b> often facial and unilateral. Use flucloxacillin for non-facial erysipelas.</p>				
	<p>CREST Cellulitis                      BLS Cellulitis</p>	<p>Flucloxacillin  <b>If penicillin allergic:</b> Clarithromycin  <b>Penicillin allergy &amp; taking statins:</b>                      doxycycline  <b>If unresolving:</b> clindamycin  <i>If facial (non dental):</i> co-amoxiclav</p>	<p>500mg QDS                      click ☺ for child doses                      500mg BD                        click ☺ for child doses</p> <p>200mg stat then 100mg OD                      300 QDS                         click ☺ for child doses                      500/125mg TDS                click ☺ for child doses</p>	<p>} All for 7 days.                      If slow response                      continue for a                      further 7 days</p>	
Leg ulcer	<p>Ulcers always colonised. Antibiotics do not improve healing unless active infection (purulent, exudate/odour, increased pain, cellulitis, pyrexia).</p>				
	PHE venous leg ulcers	<p>Active infection if purulent, exudate/odour, increased pain, cellulitis, pyrexia.</p>		<p>500mg QDS                      click ☺ for child doses                      500mg BD                        click ☺ for child doses</p>	<p>} As for cellulitis</p>
	<p><i>If active infection:</i>                      flucloxacillin                      or clarithromycin</p>	<p><b>Non-healing:</b> antimicrobial reactive oxygen gel may reduce bacterial load.</p>			

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE <small>Check cBNF ☺ for child doses</small>	DURATION OF TREATMENT
<b>Bites</b>	<p><b>Human:</b> Thorough irrigation is important. Antibiotic prophylaxis is advised. Assess risk of tetanus, rabies, HIV, hepatitis B/C.  <b>Cat:</b> always give prophylaxis.  <b>Dog:</b> Give prophylaxis if puncture wound, bite to hand, foot, face, joint, tendon or ligament; immunocompromised, asplenic, cirrhotic, presence of prosthetic valve/joint.  <b>Penicillin allergy:</b> Review all at 24 and 48 hours, as not all pathogens are covered</p>			
	<p><b>CKS bites</b></p>	<p><b>Prophylaxis or treatment:</b>  co-amoxiclav  <b>If penicillin allergic:</b>  <b>Human :</b>  metronidazole AND clarithromycin  <b>Animal:</b>  metronidazole AND doxycycline</p>	<p>375-625mg TDS <small>click ☺ for child doses</small>    400mg TDS <small>click ☺ for child doses</small>  250-500mg BD <small>click ☺ for child doses</small>    400mg TDS <small>click ☺ for child doses</small>  100mg BD <small>click ☺ for child doses</small></p>	<p>} All for 7 days</p>
<b>Scabies</b>	<p>Treat whole body from ear/chin downwards and under nails.  <b>If under 2 years/elderly:</b> also treat face/scalp.  <b>Home/sexual contacts:</b> treat within 24 hours.</p>			
	<p><b>NHS scabies</b></p>	<p>Permethrin  <b>If permethrin allergy:</b>  malathion</p>	<p>5% cream <small>click ☺ for child doses</small>    0.5% aqueous liquid <small>click ☺ for child doses</small></p>	<p>} 2 applications  1 week apart</p>
<b>Mastitis</b>	<p><b>CKS Mastitis and breast abscess</b>  <i>S.aureus</i> is the most common infecting pathogen. Suspect if woman has: a painful breast; fever and/or general malaise; a tender, red breast.  <b>Breastfeeding:</b> oral antibiotics are appropriate, where indicated. Women should continue feeding, including from the affected breast.</p>			
		<p>Flucloxacillin  <b>Penicillin allergy:</b> erythromycin OR clarithromycin</p>	<p>500mg QDS  250-500mg QDS  500mg BD</p>	<p>} 10-14 days</p>



ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE Check cBNF ☺ for child doses	DURATION OF TREATMENT
<b>Dermatophyte infection - skin</b>	<p><b>Most cases:</b> terbinafine is fungicidal: treatment time shorter than with fungistatic imidazoles. If candida possible, use imidazole.  <b>If intractable, or scalp</b> send skin scrapings. <b>If infection confirmed</b>, use oral terbinafine or itraconazole.  <b>Scalp:</b> oral therapy and discuss with a specialist.</p>			
	<p>PHE fungal skin and nail infections</p>	<p>Topical terbinafine or topical imidazole  <b>For athlete's foot:</b>                      topical undecanoates: e.g. Mycota</p>	<p>1% OD-BD click ☺ for child doses                      1% OD-BD click ☺ for child doses                      OD-BD click ☺ for child doses</p>	<p>1-4 weeks                      }                      4-6 weeks</p>
<b>Dermatophyte infection - nail</b>	<p>Take nail clippings: start therapy only if infection is confirmed by laboratory. Oral terbinafine is more effective than oral azole. Liver reactions 0.1 – 1% with oral antifungals. If candida or non-dermatophyte infection is confirmed, use oral itraconazole. Topical nail lacquer is not as effective. <b>To prevent recurrence:</b> apply weekly 1% topical antifungal cream to entire toe area.  <b>Children:</b> seek specialist advice.</p>			
	<p>CKS Fungal nail infection</p>	<p><b>First line:</b> terbinafine  <b>Second line:</b> itraconazole</p>	<p>250mg OD click ☺ for child doses                      200mg BD click ☺ for child doses</p>	<p>fingers 6 weeks                      toes 12 weeks                      1 week a month                      fingers 2 courses                      toes 3 courses</p>
<p><b>Varicella zoster/chicken pox</b>   <b>Herpes zoster / shingles</b></p>	<p><b>Pregnant/immunocompromised/neonate:</b> seek urgent specialist advice.  <b>Chicken pox:</b> consider aciclovir if onset of rash &lt;24 hours and one of the following: &gt;14 years of age; severe pain; dense/oral rash; taking steroids; smoker.  <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: active ophthalmic; Ramsey Hunt; eczema; non-truncal involvement; moderate or severe pain; moderate or severe rash.  <b>Treatment not within 72 hours:</b> consider starting antiviral drug up to one week after rash onset, if high risk of severe shingles or complications (continued vesicle formation; older age; immunocompromised; severe pain).</p>			
	<p>PHE Varicella                       PCDS Herpes zoster</p>	<p>Aciclovir  <b>Second line for shingles if poor compliance as high cost</b>                      valaciclovir                      or famciclovir</p>	<p>800mg five times a day click ☺ for child doses                       1g TDS click ☺ for child doses                      250-500mg TDS or 750mg BD</p>	<p>}                      7 days</p>

ILLNESS	USEFUL LINKS	DRUG	ADULT DOSE Check cBNF ☺ for child doses	DURATION OF TREATMENT
<b>EYE INFECTIONS</b>				
<b>Conjunctivitis</b>	<p><b>First line:</b> bath/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting.  <b>Treat only if severe</b>, as most cases are viral or self-limiting.  <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. <b>Second line:</b> fusidic acid as it has less gram-negative activity.</p>			
	AAO conjunctivitis	<p><b>First line: self-care</b>  <b>Second line:</b>  chloramphenicol 0.5% eye drop or 1% ointment</p> <p><b>Third line:</b>  fusidic acid 1% gel</p>	<p>2 hourly for 2 days then reduce frequency to 3-4 times daily, or just at night if using eye drops. click ☺ for child doses</p> <p>BD click ☺ for child doses</p>	<p>All for 48 hours after resolution</p>
<b>Blepharitis</b>	<p><b>First line:</b> lid hygiene for symptom control including: warm compresses; lid massage and scrubs; gentle washing; avoiding cosmetics.  <b>Second line:</b> topical antibiotics if hygiene measures are ineffective after 2 weeks.  <b>Signs of Meibomian gland dysfunction, or acne rosacea:</b> consider oral antibiotics.</p>			
	CKS Blepharitis	<p><b>First line: self-care</b>  <b>Second line:</b>  chloramphenicol</p> <p><b>Third line:</b>  oral oxytetracycline</p> <p>OR  oral doxycycline</p>	<p>1% ointment BD click ☺ for child doses</p> <p>500mg BD click ☺ for child dose</p> <p>250mg BD click ☺ for child doses</p> <p>100mg OD click ☺ for child doses</p> <p>50mg OD click ☺ for child doses</p>	<p>6 week trial</p> <p>4 weeks (initial) 8 weeks (maint)</p> <p>4 weeks (initial) 8 weeks (maint)</p>

**Summary table – suspected dental infections treated in primary care (outside dental setting)**

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, who will be able to provide details of how to access emergency dental care.				
ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE Check cBNF ☺ for child doses	DURATION OF TREATMENT
<b>Note: Antibiotics do not cure toothache. First line treatment is with paracetamol and/or ibuprofen; codeine is not effective for toothache.</b>				
<b>Mucosal ulceration and inflammation</b> (simple gingivitis)  SDCEP Dental problems	Temporary pain and swelling relief can be attained with saline mouthwash. Use antiseptic mouthwash if more severe and if pain limits oral hygiene to treat or prevent secondary infection. The primary cause for mucosal ulceration or inflammation (aphthous ulcers, oral lichen planus, herpes simplex infection, oral cancer) needs to be evaluated and treated.	<u>Self care</u> with saline mouthwash  <u>Self care</u> with chlorhexidine 0.12-0.2% ( <i>do not use within 30 minutes of toothpaste</i> )  <u>Self care</u> with hydrogen peroxide 6% ( <i>spit out after use</i> )	½ tsp salt in warm water click ☺ for child doses  1 minute BD with 10 ml. click ☺ for child doses  2-3 minutes BD-TDS with 15ml diluted in ½ glass warm water click ☺ for child doses	Always spit out after use.  Use until lesions resolve or less pain allows oral hygiene
<b>Acute necrotising ulcerative gingivitis</b>	Refer to dentist for scaling and hygiene advice. Antiseptic mouthwash if pain limits oral hygiene. Commence metronidazole in the presence of systemic signs and symptoms.	<u>Self care</u> with chlorhexidine 0.12 – 0.2% or hydrogen peroxide 6%  metronidazole	} See above dosing in mucosal ulceration  400mg TDS click ☺ for child doses	Until pain allows for oral hygiene  3 days

ILLNESS	COMMENTS	DRUG	ADULT DOSE Check cBNF ☺ for child doses	DURATION OF TREATMENT
<p><b>Pericoronitis</b></p> <p>SDCEP Dental problems</p>	<p>Refer to dentist for irrigation &amp; debridement.</p> <p>If persistent swelling or systemic symptoms use metronidazole or amoxicillin.</p> <p>Use antiseptic mouthwash if pain and trismus limit oral hygiene.</p>	<p>Metronidazole or amoxicillin</p> <p><u>self care</u> with chlorhexidine 0.2% or hydrogen peroxide 6%</p>	<p>400mg TDS click ☺ for child doses</p> <p>500mg TDS click ☺ for child doses</p> <p>See above dosing for mucosal ulceration</p>	<p>3 days</p> <p>3 days</p> <p>Until pain allows for oral hygiene</p>
<p><b>Dental abscess</b></p> <p>SDCEP Dental problems</p>	<p>Regular analgesia should be the first option until a dentist can be seen for urgent drainage, as repeated courses of antibiotics for abscess are not appropriate. Repeated antibiotics alone, without drainage are ineffective in preventing spread of infection. Antibiotics are only recommended if there are signs of severe infection, systemic symptoms or high risk of complications. Patients with severe odontogenic infections (cellulitis plus signs of sepsis, difficulty in swallowing, impending airway obstruction) should be referred urgently for hospital admission to protect airway, for surgical drainage and for IV antibiotics. The empirical use of cephalosporins, co-amoxiclav, clarithromycin, and clindamycin do not offer any advantage for most dental patients, and should only be used if there is no response to first line drugs.</p> <p>If pus is present, refer for drainage, tooth extraction, or root canal. Send pus for investigation. If spreading infection (lymph node involvement or systemic signs, i.e. fever or malaise) ADD metronidazole. Use clarithromycin in true penicillin allergy and, if severe, refer to hospital.</p>	<p>Amoxicillin or phenoxymethylpenicillin</p> <p>metronidazole</p> <p><i>Penicillin allergy:</i> clarithromycin</p>	<p>500mg – 1g TDS click ☺ for child doses</p> <p>500mg – 1g QDS click ☺ for child doses</p> <p>400mg TDS click ☺ for child doses</p> <p>500mg BD click ☺ for child doses</p>	<p>Up to 5 days <u>review</u> at 3 days</p>

**Reference:**

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/643046/Management\\_and\\_treatment\\_of\\_common\\_infections.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/643046/Management_and_treatment_of_common_infections.pdf)

## Abbreviations

**AMT** = Abbreviated mental test  
**AOM** = Acute otitis media  
**BD** = Twice daily  
**BMI** = Body mass index  
**BP** = Blood pressure  
***C. difficile*** = *Clostridium difficile*  
**COPD** = Chronic obstructive pulmonary disease  
**CRB65** = Confusion; Respiratory rate; BP systolic; Age >65  
**CRP** = C-reactive protein  
**DU** = Duodenal ulcer  
***E. coli*** = *Escherichia coli*  
**ESBL** = Extended-spectrum beta-lactamase  
**FeverPAIN** = Fever; Purulence; Attend rapidly; Inflamed tonsils; No cough or coryza  
**g** = Gram(s)  
**GAS** = Group A Streptococci  
**GC** = Gonorrhoea  
**GFR** = Glomerular filtration rate  
**GORD** = Gastro-oesophageal reflux disease  
**GPs** = General practitioners  
**GU** = Gastric ulcer  
**GUM** = Genitourinary medicine  
**HIV** = Human immunodeficiency virus  
***H. pylori*** = *Helicobacter pylori*  
**IM** = Intramuscular  
**i/r** = Immediate release  
**IV** = Intravenous  
**l** = Litre(s)  
**MALToma** = Mucosa-associated lymphoid tissue lymphoma  
**mg** = Milligram(s)  
**Min** = Minute  
**ml** = Millilitre(s)

**m/r** = Modified release  
**MRC** = Medical Research Council dyspnoea (breathlessness) scale  
**MRSA** = Methicillin-resistant *Staphylococcus aureus*  
**MSM** = Men who have sex with men  
**MSU** = Midstream urine  
**NNT** = Number needed to treat  
**NPV** = Negative predictive value  
**OD** = Once daily  
**OPAT** = Outpatient parenteral antibiotic therapy  
**PHN** = Post-herpetic neuralgia  
**PID** = Pelvic inflammatory disease  
**PPI** = Proton pump inhibitor  
**PPV** = Positive predictive value  
**PVL** = Panton-Valentine Leukocidin  
**PVL-SA** = Panton-Valentine Leukocidin *Staphylococcus aureus*  
**QDS** = Four times daily  
**SAT** = Stool antigen test  
***S. aureus*** = *Staphylococcus aureus*  
**STI** = Sexually transmitted infection  
**T** = Temperature  
**TDS** = Three times daily  
**tsp** = Teaspoon  
**UBT** = Urea breath test  
**UTI(s)** = Urinary tract infection(s)  
**WCC** = White cell count

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