

# BNF CHAPTER 5: INFECTIONS

December 2012. South East Essex PCT Drug and Therapeutics Committee

## Aims

- to provide a simple, safe, effective, economical and empirical approach to the treatment of common infections
- to minimise the emergence of bacterial resistance in the community

## Principles of Treatment

1. This guidance is based on the best available evidence but professional judgment should be used and patients should be involved in the decision.
2. It is important to initiate antibiotics as soon as possible for severe infection.
3. A dose and duration of treatment for adults is usually suggested, but may need modification for age, weight and renal function. In severe or recurrent cases consider a larger dose or longer course.
4. Lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture and seek advice.
5. Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
6. Consider a no, or delayed, antibiotic strategy for acute self-limiting upper respiratory tract infections
7. Limit prescribing over the telephone to exceptional cases.
8. 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 risk of *Clostridium difficile*, MRSA and resistant UTIs.
9. Avoid widespread use of topical antibiotics (especially those agents also available as systemic preparations, e.g. fusidic acid).
10. In PREGNANCY, take specimens to inform treatment; where possible AVOID tetracyclines, aminoglycosides, quinolones, *high dose* metronidazole (2 g). Short-term use of nitrofurantoin (at term, theoretical risk of neonatal haemolysis) is unlikely to cause problems to the foetus. Trimethoprim is also unlikely to cause problems unless poor dietary folate intake or taking another folate antagonist eg antiepileptic.
11. **We recommend clarithromycin as it has less side-effects than erythromycin, greater compliance as twice rather than four times daily & generic tablets are similar cost. If liquid formulation is needed, erythromycin may be preferable as clarithromycin syrup is twice the cost.**

Ref: [http://www.hpa.org.uk/web/HPAwebFile/HPAweb\\_C/1194947333801](http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947333801)

| Infection  | First Choice | BNF Adult Dosage / Length of Treatment                     | Second Choice  | BNF Adult Dosage/ Length of Treatment                     | Comments   |
|--|--------------|--|--|---|--|
| <b>UPPER RESPIRATORY TRACT INFECTIONS: CONSIDER DELAYED ANTIBIOTIC PRESCRIPTIONS</b> |              |  |  |   |  |
| <b>Pharyngitis/Throat Infections/tonsillitis</b>                                     | Penicillin V | 1gr BD for 10 days.<br>500mg QDS for 10 days (when severe) | Clarithromycin (If Penicillin allergic)                                    | 250-500mg BD for 5 days                                   | Majority of sore throats are viral and antibiotics are not indicated.<br>Evidence suggests that antibiotics are clinically useful in less than 1% of cases.<br>Note that all patients taking simvastatin should be advised to stop taking whilst receiving a course of clarithromycin.   |
| <b>Acute Otitis Media (AOM) in CHILDREN</b>  | Amoxicillin  | 40mg/kg/day in 3 doses (max 3gr daily) for 5 days          | Erythromycin (if penicillin allergic).<br><2years<br>2-8years<br>8-18years | For 5 days<br><br>125mg QDS<br>250mg QDS<br>250-500mg QDS | <b>Optimise analgesia</b><br><b>Avoid antibiotics</b> as 60% are better in 24 hours without: they only reduce pain at 2 days <b>and do not prevent deafness</b><br>Consider 2 or 3-day delayed or immediate antibiotics for pain relief if:<br><ul style="list-style-type: none"> <li>• &lt; 2yrs with bilateral AOM</li> <li>• All ages with otorrhoea</li> </ul> |
| <b>Acute Otitis Media</b>  | Amoxicillin  | 250mg-500mg TDS for 5 days                                 | Clarithromycin (If Penicillin allergic)                                    | 250-500mg BD for 5 days                                   | Evidence suggests that antibiotics are unlikely to be beneficial unless patient has systemic symptoms. E.g. fever, vomiting.   |

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| <b>Acute Otitis Externa</b>  | <b>Locorten-Vioform</b><br>(Clioquinol 1% / flumetasone pivalate 0.02%) | 2-3 drops BD for 7-10 days                                      | <b>Otosporine</b><br>(polymyxin B sulph. 10,000units / neomycin sulph. 3,400 units / hydrocortisone 1%) | 3 drops TDS for 7 days or insert soaked wick for 24-48 hours and keep wet with soln. | <b>EarCalm</b> (acetic acid 2%) can be bought OTC<br><b>Cure rates similar at 7 days for topical acetic acid (EarCalm) or antibiotic +/- steroid</b><br>If cellulitis or disease extending outside ear canal, start oral antibiotics and refer.  |
| <b>Acute Rhinosinusitis</b>  | Amoxicillin<br><br>For persistent symptoms: Co-amoxiclav                | 500mg TDS, 1gr if severe for 7 days<br><br>625mg TDS for 7 days | Doxycycline   | 200mg stat / 100mg OD for 7 days   | Avoid doxycycline in children under 12 and pregnant women<br><b>Avoid antibiotics</b> as 80% resolve in 14 days without, and they only offer marginal benefit after 7 days<br><b>Use adequate analgesia</b><br>Consider 7-day delayed or immediate antibiotic when purulent nasal discharge<br>In persistent infection use an agent with anti-anaerobic activity eg. co-amoxiclav  |
| <b>Influenza</b><br><br>For prophylaxis, see NICE. ( <a href="#">NICE Influenza</a> ).<br>Patients under 13 years see <a href="#">HPA Influenza link</a> . | Oseltamivir unless <u>pregnant</u>                                      | 75mg BD for 5 days  | Zanamivir (if there is resistance to oseltamivir)   | 10mg BD (2 inhalations by diskhaler) for 5 days                                      | <b>Annual vaccination is essential for all those at risk of influenza.</b> For otherwise healthy adults antivirals not recommended. <b>Treat ‘at risk’ patients, ONLY</b> within 48 hours of onset & when influenza is circulating in the community or in a care home where influenza is likely.<br><b>At risk:</b> pregnant (including up to two weeks post-partum), 65 years or over, chronic respiratory disease (including COPD and asthma) significant cardiovascular disease (not hypertension), immunocompromised, diabetes mellitus, chronic neurological, renal or liver disease. |

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| <p><b>LOWER RESPIRATORY TRACT INFECTIONS</b></p> <p><i>Note: Low doses of penicillins are more likely to select out resistance. Do <b>not</b> use quinolone (ciprofloxacin, ofloxacin) first line due to poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.</i></p> |   |   |  |  |   |
| <b>Acute cough, bronchitis</b>   | Amoxicillin   | 500mg TDS for 5 days  | Doxycycline                              | 200mg stat / 100mg OD for 5 days                       | Avoid doxycycline in children under 12 and pregnant women<br>Antibiotic little benefit if no co-morbidity<br>Symptom resolution can take 3 weeks.<br>Consider 7-14 day delayed antibiotic with symptomatic advice   |
| <b>Acute Exacerbation of COPD</b>  | <p>Doxycycline</p> <p><i>If resistance risk factors:</i><br/>Co-amoxiclav</p> | <p>200mg stat / 100mg OD for 5 days</p> <p>625mg TDS for 5 days</p> | <p>Amoxicillin</p> <p>Clarithromycin</p> | <p>500mg TDS for 5 days</p> <p>500mg BD for 5 days</p> | <p>Avoid doxycycline in children under 12 and pregnant women</p> <p>Treat exacerbations promptly with antibiotics if purulent sputum <b>and</b> increased shortness of breath <b>and/or</b> increased sputum volume.</p> <p><i>Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months</i></p> |

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| <b>Community Acquired Pneumonia – treatment in the community</b>   | <p>If CBR65=0<br/>Amoxicillin</p> <p>If CBR65=1 &amp; AT HOME<br/>Doxycycline alone</p> | <p>500mg-1g TDS for 7 days</p> <p>200 stat / 100mg OD for 7-10 days</p>   | <p>Doxycycline</p> <p>Clarithromycin</p> <p>If CBR65=1 &amp; AT HOME<br/>Amoxicillin AND Clarithromycin</p> | <p>200mg stat / 100mg OD for 7 days<br/>500mg BD for 7days</p> <p>500mg TDS for 7-10 days<br/>500mg BD for 7-10 days</p>   | <p><b>NB. In severe cases patients must be referred</b></p> <p>Use CRB65 score to help guide and review:<br/>Each scores 1:<br/>- Confusion (AMT&lt;8);<br/>- Respiratory rate &gt;30/min;<br/>- BP systolic &lt;90 or diastolic ≤ 60;<br/>Score 0: suitable for home treatment;<br/>Score 1-2: hospital assessment or admission<br/><b>Score 3-4: urgent hospital admission</b><br/>Give immediate IM benzylpenicillin or amoxicillin 1G po if delayed admission/life threatening<br/>Mycoplasma infection is rare in over 65s</p> |
| <p><b>Meningitis -Treatment</b><br/><a href="#">HPA</a></p> <p><b>-Prophylaxis</b><br/><a href="http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947389261">http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947389261</a></p> <p><b>See BNF for children for dosage</b></p> | <p>Benzylpenicillin</p> <p>Ciprofloxacin</p>  | <p>By IV or IM (if vein cannot be found) injection:<br/>Adult 1.2g;<br/>Infant 300mg;<br/>Child 1-9 years 600mg,<br/>10 years and over as for adult.<br/>500mg stat</p> | <p>Cefotaxime</p> <p>Rifampicin</p>   | <p>By IV or IM (if vein cannot be found) injection:<br/>1g for adults and children over 12,<br/>for children under 12:<br/>50mg/kg</p> <p>600mg 12 hourly for 2 days</p> | <p><b>Transfer all patients to hospital immediately.</b><br/>Prophylaxis is recommended for household and kissing contacts of Meningococcal and Haemophilus infection.</p>  |

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| <p><b>URINARY TRACT INFECTIONS. Refer to <a href="#">HPA UTI guidance for diagnosis information</a></b><br/> <i>People &gt; 65 years: do not treat asymptomatic bacteriuria; it is common but is not associated with increased morbidity</i><br/> <i>Catheter in situ: antibiotics will not eradicate asymptomatic bacteriuria; only treat if systemically unwell or pyelonephritis likely</i><br/> <i>Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI</i></p> |  |   |   |   |   |
| <p><b>Simple UTI in men and women (no fever or flank pain)</b></p>   | <p>Trimethoprim</p>  | <p>200mg BD for 3 days in women; for 7 days in men</p>  | <p>Perform culture in all treatment failures.<br/><br/>Nitrofurantoin (Avoid in Renal impairment)</p> | <p>50mg QDS for 3 days for women; for 7 days in men</p> | <p>See UTI on pregnancy below.<br/> <b>Women</b> with severe/≥ 3 symptoms: treat<br/> <b>Women</b> with mild/ ≤ 2 symptoms: use dipstick to guide treatment. Nitrite &amp; blood/leucocytes has 92% positive predictive value ; -ve nitrite, leucocytes, and blood has a 76% NPV (Negative Predicted Value)<br/> <b>Men:</b> Consider prostatitis &amp; send pre-treatment MSU OR if symptoms mild/non-specific, use –ve nitrite and leucocytes to exclude UTI.</p> |
| <p><b>Recurrent UTI in non-pregnant women</b><br/>           ≥3 UTIs / year<br/>           Advise to use cranberry products.</p>   | <p>Nitrofurantoin<br/> <i>or</i><br/>           Trimethoprim</p> | <p>50–100 mg<br/><br/>100 mg<br/><br/>For both drugs,<br/> <i>Post coital stat (off-label)</i><br/> <i>Prophylaxis</i><br/>           OD at night</p> |   |   | <p>Either drug can be given,<br/>           Post-coital prophylaxis or standby antibiotic<br/>           or<br/>           Nightly: reduces UTIs but adverse effects.</p>   |

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| <b>UTI in pregnancy</b>  | <p><i>Lower UTI(Cystitis):</i><br/>Amoxicillin if susceptible.</p> <p>Nitrofurantoin if susceptible,<br/><b>(Do not use in the last trimester)</b></p> <p><i>Upper UTI(Pyelonephitis):</i><br/>Cefalexin</p> | <p>500 mg TDS for 7 days</p> <p>50mg QDS for 7 days</p> <p>1g bd for 14 days</p> | Cefalexin  | 500 mg BD for 7 days   | <p>Send MSU for culture &amp; sensitivity and start empirical antibiotics<br/>Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus</p> <p>Second line agents should be dependant upon cultures and sensitivities.</p> |
| <p><b>UTI in children</b></p> <p>See BNF for children for dosage</p> | <p><i>Lower UTI (Cystitis):</i><br/>Trimethoprim<br/>or<br/>Nitrofurantoin if susceptible,<br/>or<br/>amoxicillin</p> <p><i>Upper UTI (Pyelonephitis):</i><br/>Co-amoxiclav</p>                              | <p><i>Lower UTI</i></p> <p>3 days</p> <p><i>Upper UTI</i></p> <p>7-10 days</p>   | <p><i>Lower UTI:</i><br/>Cefalexin</p> <p><i>Upper UTI:</i><br/>Cefixime</p> | <p><i>Lower UTI</i></p> <p>3 days</p> <p><i>Upper UTI</i></p> <p>7-10 days</p> | <p>Child &lt;3 mths: refer urgently for assessment<br/>Child ≥ 3 months: use positive nitrite to start antibiotics.<br/><b>Send pre-treatment MSU for all.</b><br/>Imaging: only refer if child &lt;6 months or atypical UTI</p>                           |

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| <b>Acute pyelonephritis</b>                      | Ciprofloxacin, if no risk of C.diff   | 500 mg BD for 7 days  | Co-amoxiclav  | 500/125 mg TDS for 14 days            | If admission not needed, send MSU for culture & sensitivities and start antibiotics<br>If no response within 24 hours, admit<br><br>Second line agents should be dependant upon cultures and sensitivities.  |
| <b>Acute Prostatitis</b>                         | Ciprofloxacin   | 500mg BD for 28 days  | Trimethoprim  | 200mg BD for 28 days                  | Send MSU for culture and start antibiotics<br><br>4-wk course may prevent chronic prostatitis<br>Quinolones achieve higher prostate levels   |
| <b>GASTRO-INTESTINAL TRACT INFECTIONS</b>        |   |   |               |                                       |  |
| <b>Eradication of <i>Helicobacter pylori</i></b> | PPI (use cheapest)<br>PLUS<br>Clarithromycin (C)<br>AND<br>Metronidazole (MTZ)<br>or amoxicillin (AM) | BD<br><br>250 mg BD with MTZ<br>500mg BD with AM<br>400 mg BD<br><br>1g BD<br>Treatment for 7 days. |               |                                       | Eradication is beneficial in known DU, GU or low grade MALToMa<br><br>Consider test and treat in persistent uninvestigated dyspepsia<br>Do not offer eradication for GORD<br><br>Do not use clarithromycin or metronidazole if used in the past year for any infection<br><br>DU/GU relapse: retest for <i>H. pylori</i> using breath or stool test OR consider endoscopy for culture & susceptibility<br>NUD: Do not retest, offer PPI or H <sub>2</sub> RA |
| <b>Symptomatic relapse</b>                       |   |   |               |                                       |  |



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| <b>Infectious diarrhoea</b>  | Refer previously healthy children with acute painful or bloody diarrhoea to exclude <i>E. coli</i> infection.<br><b>Antibiotic therapy not indicated unless systemically unwell.</b> If systemically unwell and campylobacter suspected (e.g. undercooked meat and abdominal pain), consider clarithromycin 250–500 mg BD for 5–7 days if treated early.                                    |   |               |                                       |  |
| <i>Clostridium difficile</i> | 1 <sup>st</sup> /2 <sup>nd</sup> episodes<br>metronidazole (MTZ)<br>3 <sup>rd</sup> episode/severe  | 400 or 500 mg TDS for 10-14 days  |               |                                       | Stop unnecessary antibiotics and/or PPIs<br>70% respond to MTZ in 5days; 92% in 14days<br><br>Admit if severe: T >38.5; WCC >15, rising creatinine or signs/symptoms of severe colitis               |
| <b>Traveller's diarrhoea</b> | <b>Only consider standby antibiotics for</b> remote areas or people at high-risk of severe illness with travellers' diarrhoea<br>If standby treatment appropriate give: ciprofloxacin 500 mg twice a day for 3 days ( <b>private Rx</b> ). If quinolone resistance high (eg south Asia): consider bismuth subsalicylate (Pepto Bismol) 2 tablets QDS as prophylaxis or for 2 days treatment |   |               |                                       |  |
| <b>Threadworms</b>           | >6 months:<br>Mebendazole (off-label if <2yrs)<br><br>3-6 mths:<br>Piperazine+sena<br><br>< 3mths: 6 wks hygiene  | 100 mg stat repeat after 2 weeks<br><br>2.5ml spoonful stat, repeat after 2 weeks |               |                                       | Treat all household contacts at the same time<br>PLUS advise hygiene measures for 2 weeks (hand hygiene, pants at night, morning shower) PLUS wash sleepwear, bed linen, dust, and vacuum on day one |

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| <p><b>GENITAL TRACT INFECTIONS</b><br/>           People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. Risk factors: &lt; 25y, no condom use, recent (&lt;12mth)/frequent change of partner, symptomatic partner<br/>           Contact <a href="#">UKTIS</a> (teratology information service) for information on foetal risks if patient is pregnant.</p> |  |   |                                       |  |   |
| <p><b>Chlamydia trachomatis / urethritis</b></p> <p><i>Pregnant or breastfeeding:</i><br/>azithromycin</p> <p>or erythromycin</p> <p>or amoxicillin</p> <p><b>For suspected epididymitis in men</b></p>   | <p>Doxycycline Hyclate</p> <p>or Doxycycline</p> | <p>100mg BD for 7 days</p> <p>1g (off-label use), stat</p> <p>500 mg QDS, 7 days</p> <p>500 mg TDS, 7 days</p> <p>100mg BD for 14days</p> | <p>Azithromycin</p> <p>Ofloxacin</p>  | <p>1g as a single dose</p> <p>400mg BD for 14 days</p> | <p>Opportunistically screen all aged 15-25yrs</p> <p>Treat partners and refer to GUM service</p> <p><b>Pregnancy or breastfeeding:</b> azithromycin is the most effective option</p> <p>Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment</p> <p>Avoid Doxycycline in Pregnancy</p> <p>Sexual partner will require concurrent treatment.</p> |
| <b>Vaginal Candidiasis</b>  | Clotrimazole                                     | 500mg pessary stat or 10% cream stat or 100mg pessary for 6 days  | Fluconazole (in resistant cases only) | 150mg oral capsule stat                                | <p>All topical and oral azoles give 75% cure</p> <p><b>Pregnancy:</b> avoid oral azole, use intravaginal for 6 days</p>   |
| <b>Bacterial Vaginosis</b>  | Metronidazole                                    | 400mg BD for 7 days or 2g as a single dose.   | Metronidazole 0.75% vaginal gel       | One 5g applicatorful at night for 5 nights             | <p>If pregnant, treat with metronidazole early in 2<sup>nd</sup> trimester and avoid 2g dose.</p> <p>Oral metronidazole (MTZ) is as effective as topical treatment but is cheaper.</p> <p>Less relapse with 7 day than 2g stat at 4 wks</p> <p><b>Pregnant / breastfeeding:</b> avoid 2g stat.</p> <p>Treating partners does not reduce relapse.</p>                  |

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| <b>Trichomoniasis</b>   | Metronidazole  | 2g as a single dose or 400mg BD for 5 days             | —   | —   | Avoid metronidazole in first trimester of pregnancy. Also avoid 2g dose in pregnancy. Sexual partner will require concurrent treatment.  |
| <b>Pelvic Inflammatory Disease</b>  | Ceftriaxone +<br><br>Doxycycline + Metronidazole   | 250mg IM stat +<br>100mg BD +<br>400mg BD for 14days   | Ofloxacin + Metronidazole   | 400mg BD +<br>400mg BD for 14 days                                  | Refer woman & contacts to GUM service<br>Always culture for gonorrhoea & chlamydia<br>28% of gonorrhoea isolates now resistant to quinolones If gonorrhoea likely (partner has it, severe symptoms, sex abroad) avoid ofloxacin regimen.                                   |
| <b>SKIN &amp; SOFT TISSUE INFECTIONS</b>                                      |  |  |   |   |  |
| <b>Impetigo</b><br><br><br><br><br><br><b>See BNF for children for dosage</b> | Flucloxacillin   | 500mg QDS for 7 days                                   | Clarithromycin (If Penicillin allergic)<br>Topical fusidic acid.<br><br><b>MRSA only</b><br>mupirocin | 250-500mg BD for 7 days<br><br>TDS for 5 days<br><br>TDS for 5 days | <b>For extensive, severe, or bullous impetigo, use oral antibiotics</b><br><br>Reserve topical antibiotics for very localised lesions to reduce the risk of resistance<br><br>Reserve mupirocin for MRSA   |
| <b>Eczema</b>   | If no visible signs of infection use of antibiotics (alone or with steroids) encourages resistance and does not improve healing. In eczema with visible signs of infection, use treatment as in impetigo |  |   |   |  |
| <b>Cellulitis</b><br><br><i>Facial</i>  | Flucloxacillin<br><br>Co-amoxiclav   | 500mg QDS for 7 days.<br><br>500/125mg TDS for 7 days. | Clarithromycin (If Penicillin allergic)   | 500mg BD for 7 days   | If patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.<br>If river or sea water exposure, discuss with microbiologist.<br>If febrile and ill, admit for IV treatment.<br>For all treatments, if slow response continue for a further 7 days |

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| <b>Leg ulcers</b><br><u>HPA</u>  | If active infection:<br>flucloxacillin   | 500mg QDS for 7 days.<br>If slow response continue for a further 7 days | Clarithromycin<br>(If Penicillin allergic)   | 500mg BD for 7 days.<br>If slow response continue for a further 7 days                    | <b>Ulcers are always colonized. Antibiotics do not improve healing unless active infection.</b><br>If active infection, send pre-treatment swab.<br>Review antibiotics after culture results<br><br>Active infection if cellulitis/increased pain/pyrexia/purulent exudate/odour   |
| <b>MRSA</b><br>If active infection, MRSA <i>confirmed</i> by lab results, infection not severe and admission not required: | Doxycycline alone.   | 100 mg BD for 7 days  | Clindamycin alone.   | 300–450 mg QDS for 7 days   | <b>For active MRSA infection:</b><br>Use antibiotic sensitivities to guide treatment.<br>If severe infection or no response to monotherapy after 24-48 hours, seek advice from microbiologist on combination therapy.  |
| <b>PVL <i>S. aureus</i></b><br><u>HPA QRG</u>  | Panton-Valentine Leukocidin (PVL) is a toxin produced by 2% of <i>S. aureus</i> . Can rarely cause severe invasive infections in healthy people. Send swabs if recurrent boils/abscesses. At risk: close contact in communities or sport; poor hygiene |   |  |   |  |
| <b>Human/Animal Bites</b>  | Co-amoxiclav   | 375mg-625mg TDS for 7 days  | Metronidazole PLUS doxycycline (cat/dog)<br>or<br>Metronidazole PLUS clarithromycin (human bite)<br>AND review at 24&48hrs | 200-400 mg TDS<br>100 mg BD<br><br>200-400 mg TDS<br>250-500 mg BD.<br><br>All for 7 days | Human: Thorough irrigation is important<br>Assess risk of tetanus, HIV, hepatitis B&C<br>Antibiotic prophylaxis is advised<br><br>Cat or dog: Assess risk of tetanus and rabies<br>Give prophylaxis if cat bite/puncture wound; bite to hand, foot, face, joint, tendon, ligament; immunocompromised/diabetic/asplenic/cirrhotic |
| <b>Scabies</b>   | Permethrin   | 5% cream, 2 applications<br>1 week apart                                | <i>If allergy:</i><br>Malathion  | 0.5% aqueous liquid. 2 applications<br>1 week apart                                       | Treat all home & sexual contacts within 24h<br>Treat whole body from ear/chin downwards and under nails. If under 2/elderly, also face/scalp   |

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|--|--|---|---|--|---|
| <b>Fungal infection – skin</b>   | Topical terbinafine  | BD, 1-2 weeks   | Topical imidazole or ( <i>athlete's foot only</i> ): topical undecanoates (Mycota®) | BD for 1-2 weeks after healing (i.e. 4-6wks)                       | Terbinafine is fungicidal , so treatment time shorter than with fungistatic imidazoles<br>If candida possible, use imidazole<br>If intractable: send skin scrapings. If infection confirmed, use <u>oral</u> terbinafine/itraconazole<br><br>Scalp: discuss with specialist                             |
| <b>Fungal infection –fingernail or toenail</b><br>HPA and the Association of Medical Microbiologists. Fungal skin & nail infections: diagnosis & laboratory investigation. Quick reference guide for primary care<br><a href="http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1240294785726">http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1240294785726</a> | <i>Superficial only</i><br>Amorolfine 5% nail lacquer<br><br>Terbinafine | 1-2x/weekly<br>fingers: 6 months<br>toes: 12 months<br><br>250 mg OD<br>fingers: 6 – 12 weeks<br>toes: 3 – 6 months | Itraconazole  | 200 mg BD, 7 days monthly<br>fingers: 2 courses<br>toes: 3 courses | Take nail clippings: <b>start therapy only if infection is confirmed by laboratory</b><br>Terbinafine is more effective than azoles<br>Liver reactions rare with oral antifungals<br>If candida or non-dermatophyte infection confirmed, use oral itraconazole<br>For children, seek specialist advice. |
| <b>Varicella zoster/ chicken pox</b><br>IF started <24h of rash & >14y or severe pain or dense/oral rash or 2° household case or steroids or smoker consider acyclovir.  | Aciclovir  | 800mg<br>5 times daily for 7 days   | —   | —  | Pregnant/immunocompromised/neonate: seek urgent specialist advice<br><b>Note: for patients with severe renal impairment (CKD 4-5) dose of aciclovir must be reduced</b>   |
| <b>Herpes zoster/ Shingles</b><br>Treat if >50 yrs and within 72 hrs of rash (PHN rare if <50yrs); or if active ophthalmic or Ramsey Hunt or eczema.   | Aciclovir  | 800mg<br>5 times daily for 7 days   | —   | —  | <b>Note: for patients with severe renal impairment (CKD 4-5) dose of aciclovir must be reduced</b>  |

| Infection   | First Choice   | BNF Adult Dosage / Length of Treatment   | Second Choice        | BNF Adult Dosage/ Length of Treatment                               | Comments  |
|---|--|--|----------------------|---|---|
| <b>Cold sores</b>   | Cold sores resolve after 7–10 days without treatment. Topical antivirals applied prodromally reduce duration by 12-24hrs |  |                      |   |   |
| <b>EYE INFECTIONS</b>   |  |  |                      |   |   |
| <b>Conjunctivitis</b>   | Chloramphenicol 0.5% drop<br><br>or 1% ointment  | 2 hourly for 2 days then 4 hourly (whilst awake) at night for 48 hours after resolution                        | fusidic acid 1% gel  | BD for 48 hours after resolution                                    | <b>Most bacterial conjunctivitis is self-limiting.</b> 65% resolve on placebo by day five<br>Red eye with mucopurulent, not watery discharge. Usually unilateral but may spread<br><br>Fusidic acid has less Gram-negative activity   |
| <b>DENTAL INFECTIONS – derived from the Scottish Dental Clinical Effectiveness Programme 2011 <u>SDCEP Guidelines</u></b>   |  |  |                      |   |   |
| This guidance is not designed to be a definitive guide to oral conditions. It is for GPs for the management of acute oral conditions pending being seen by a dentist or dental specialist. GPs should not routinely be involved in dental treatment and <b>patients should be advised to consult their dentist.</b> |  |  |                      |   |   |
| <b>Mucosal ulceration and inflammation</b> (simple gingivitis)  | Simple saline mouthwash<br><br>Chlorhexidine 0.12-0.2% ( <i>Do not use within 30 mins of toothpaste</i> )                | ½ tsp salt dissolved in glass warm water.<br>Rinse mouth for 1 minute BD with 5 ml diluted with 5-10 ml water. | Hydrogen peroxide 6% | Rinse mouth for 2 mins TDS with 15ml diluted in ½ glass warm water. | Always spit out after use.<br>Use until lesions resolve or less pain allows oral hygiene.<br><br>Temporary pain and swelling relief can be attained with saline mouthwash<br><b>Use antiseptic mouthwash:</b><br>If more severe & pain limits oral hygiene to treat or prevent secondary infection.<br>The primary cause for mucosal ulceration or inflammation (aphthous ulcers, oral lichen planus, herpes simplex infection, oral cancer) needs to be evaluated and treated. |

| Infection   | First Choice  | BNF Adult Dosage / Length of Treatment                                       | Second Choice   | BNF Adult Dosage/ Length of Treatment                                      | Comments<br><b>NB. In severe cases patients must be referred</b>   |
|---|---|--|---|--|--|
| <b>Acute necrotising ulcerative gingivitis</b>  | Metronidazole   | 400 mg TDS for 3 days  | —   | —  | Commence metronidazole and refer to dentist for scaling and oral hygiene advice. Use in combination with antiseptic mouthwash (Chlorhexidine or hydrogen peroxide) if pain limits oral hygiene.  |
| <b>Pericoronitis</b>  | Amoxicillin   | 500 mg TDS for 3 days  | Metronidazole   | 400 mg TDS for 3 days  | Refer to dentist for irrigation & debridement. If persistent swelling or systemic symptoms use metronidazole. Use in combination with antiseptic mouthwash (chlorhexidine or hydrogen peroxide) if pain limits oral hygiene.   |
| <p><b>Dental abscess</b><br/>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 no response to first line drugs when referral is the preferred option.</p> <p><b>If spreading infection</b> (lymph node involvement, or systemic signs ie fever or malaise) <b>ADD metronidazole</b></p> | <p>Amoxicillin</p> <p><i>Severe infection add</i><br/>Metronidazole</p> | <p>500 mg TDS for up to 5 days review at 3d</p> <p>400 mg TDS for 5 days</p> | <p><i>True penicillin allergy:</i><br/>Clarithromycin</p> <p><i>or if</i><br/>Metronidazol<br/><i>allergy</i><br/>Clindamycin</p> | <p>500 mg BD for up to 5 days review at 3d</p> <p>300mg QDS for 5 days</p> | <p>Regular analgesia should be 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.</p> <p>Antibiotics are recommended if there are signs of severe infection, systemic symptoms or high risk of complications.</p> <p>Severe odontogenic infections; defined as cellulitis plus signs of sepsis, difficulty in swallowing, impending airway obstruction, Ludwigs angina. Refer urgently for admission to protect airway, achieve surgical drainage and IV antibiotics.</p> |
| <b>PROPHYLAXIS FOR DENTAL TREATMENT</b>   |   |  |   |  |  |
| Note: NICE guidelines 2008 - Antibacterial prophylaxis is not recommended for the prevention of endocarditis in patients undergoing dental procedures.  |   |  |   |  |  |