### Principles of Treatment

1. This guidance is based on the best available evidence but use professional judgement and involve patients in management decisions.
2. It is important to initiate antibiotics as soon as possible in severe infection.
3. Where an empirical therapy has failed or special circumstances exist, microbiological advice can be obtained from ** or **.
4. Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
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 risk of *Clostridium difficile*, MRSA and resistant UTIs.
8. A dose and duration of treatment for adults is usually suggested, but may need modification for age, weight and renal function.
9. In severe or recurrent cases consider a larger dose or longer course.
10. Please refer to BNF for further dosing and interaction information (e.g. interaction between macrolides and statins) if needed and please check for hypersensitivity.
11. Lower threshold for antibiotics in immunocompromised or 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, use this guidance alternative or seek expert advice. *Penicillins, cephalosporins and erythromycin* are not associated with increased risks. If possible, avoid tetracyclines, quinolones, aminoglycosides, azithromycin, clarithromycin, high dose metronidazole (2g stat) unless the benefits outweigh the risks. 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.
14. This guidance should not be used in isolation; it should be supported with patient information about back-up/delayed antibiotics, infection severity and usual duration, clinical staff education, and audits. Materials are available on the RCGP TARGET website.
15. This guidance is developed alongside the NHS England Antibiotic Quality Premium. In 2017/19 QP expects: at least a 10% reduction in the number of *E. coli* blood stream infections across the whole health economy; at least a 10% reduction in trimethoprim:nitrofurantoin prescribing ratio for UTI in primary care, and at least a 10% reduction in trimethoprim items in patients ≥ 70 years, based on CCG baseline data from 2015/16; and sustained reduction in antimicrobial items per STAR-PU equal to or below England 2013/14 mean value.

### Summary tables: infections in primary care

<table>
<thead>
<tr>
<th>ILLNESS</th>
<th>GOOD PRACTICE POINTS</th>
<th>DRUG</th>
<th>ADULT DOSE</th>
<th>DURATION OF TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UPPER RESPIRATORY TRACT INFECTIONS</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Influenza</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>treatment</td>
<td>PHE Influenza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For prophylaxis</td>
<td>see: NICE Influenza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual vaccination is essential for all those at risk of influenza. For otherwise healthy adults antivirals not recommended. Treat ‘at risk’ patients, when influenza is circulating in the community and ideally within 48 hours of onset (do not wait for lab report) or in a care home where influenza is likely. <strong>At risk:</strong> 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 neurologica, renal or liver disease, morbid obesity (BMI&gt;40). Use 5 days treatment with oseltamivir 75mg bd. If resistance to oseltamivir or severe immunosuppression, use zanamivir 10mg BD (2 inhalations by dishasher for up to 10 days) and seek advice. See PHE Influenza guidance for treatment of patients under 13 years or in severe immunosuppression (and seek advice),</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute sore throat</strong></td>
<td>CKS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FeverPAIN</td>
<td>Avoid antibiotics as 90% resolve in 7 days** when using, and pain only reduced by 16 hours. Use FeverPAIN Score: Fever in last 24h, Purulence, Attend rapidly under 3d, severely Inflamed tonsils, No cough or Coryza,<strong>. 8d-4d, Score 0-1: 13-18% streptococci, use NO antibiotic strategy; 2-3: 34-40% streptococci, use 3 day back-up antibiotic; 4 or more: 62-65% streptococci, use immediate antibiotic if severe, or 48hr short back-up prescription.</strong> Always share self-care advice &amp; safety net. Antibiotics to prevent Quinsy NNT 4000, Antibiotics to prevent Otitis media NNT 200, Antibiotics to prevent acute bronchitis NNT 2000.</td>
<td>Phenoxymethylpenicillin&lt;sup&gt;5B&lt;/sup&gt;</td>
<td>500mg QDS or 1G BD&lt;sup&gt;4A&lt;/sup&gt; (500mg QDS when severe)**</td>
<td>10 days **</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Penicillin Allergy:</td>
<td>clarithromycin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pregnant &amp; penicillin allergy:</td>
<td>Erythromycin&lt;sup&gt;5B&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>500mg QDS&lt;sup&gt;10A+&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>250-500mg BD</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 days **</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute Otitis Media</strong> (child doses)</td>
<td>CKS OM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICE feverish children</td>
<td>Optimise analgesia and target antibiotics&lt;sup&gt;2B&lt;/sup&gt;. AOM resolves in 60% in 24hrs without antibiotics, which only reduce pain at 2 days (NNT15) and does not prevent deafness.&lt;sup&gt;4A+&lt;/sup&gt; Consider 2 or 3-day delayed&lt;sup&gt;1A+&lt;/sup&gt; or immediate antibiotics for pain relief if: &lt;2 years AND bilateral AOM (NNT4) or bulging membrane and ≥ 4 marked symptoms.&lt;sup&gt;3A+&lt;/sup&gt; All ages with otorrhoea NNT 100. Abs to prevent Mastoiditis NNT &gt;4000.</td>
<td>Amoxicillin&lt;sup&gt;10A+&lt;/sup&gt;</td>
<td>Child doses</td>
<td>5 days&lt;sup&gt;13A+&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Neonate: 7-28 days 30mg/kg TDS</td>
<td>5-18 years: 500mg TDS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 month-1 yr: 125mg TDS 1-5 years: 250mg TDS</td>
<td>2-4 years: 250mg QDS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5-18 years: 500mg TDS</td>
<td>8-18 years: 250-500mg QDS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute Otitis Externa</strong></td>
<td>CKS OE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First use analgesia. Cure rates similar at 7 days for topical acetic acid or antibiotic +/- steroid.&lt;sup&gt;1A+&lt;/sup&gt; If cellulitis/disease extending outside ear canal, start oral antibiotics &amp; refer to exclude malignant OE.&lt;sup&gt;1A+&lt;/sup&gt;</td>
<td>First Line:</td>
<td>acetic acid 2%</td>
<td>1 spray TDS</td>
<td>7 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Second Line: neomycin sulphate with corticosteroid&lt;sup&gt;1A+&lt;/sup&gt;</td>
<td>3 drops TDS</td>
<td>7 days min to 14 days **</td>
</tr>
</tbody>
</table>
Acute Rhinosinusitis

CKS

Avoid antibiotics as 80% resolve in 14 days without; they only offer marginal benefit after 7 days NNT15. Use adequate analgesia. Consider 7-day delayed or immediate antibiotic when purulent nasal discharge NNT15. In persistent infection use an agent with anti-anerobic activity eg. co-amoxiclav.

Acute cough bronchitis

CKS

NICE 69

Antibiotic little benefit if no co-morbidity, consider 7d delayed antibiotic with advice. Consider immediate antibiotics if > 80yr or one of: hospitalisation in past year, oral steroids, diabetic, congestive heart failure OR > 65ysr with 2 of above. Consider CRP test if antibiotic being considered. If CRP>20mg/L no antibiotics, 20-100mg/L delayed, CRP >100mg immediate antibiotics.

Acute exacerbation of COPD

NICE 12

GOLD

Treat exacerbations promptly with antibiotics if purulent sputum and increased shortness of breath and/or increased sputum volume. Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months.

Community acquired pneumonia—treatment in the community

BTS 2009

NICE 191

Use CRB65 score to guide mortality risk, place of care & antibiotics. Each CRB65 parameter scores: Confusion (AMT>8); Respiratory rate >30/min; BP systolic <90 or diastolic <60; Age ≥65; Score 3-4 urgent hospital admission; Score 1-2 intermediate risk consider hospital assessment; Score 0 low risk: consider home based care.

Always give safety-net advice and likely duration of symptoms. Mycoplasma infection is rare in >65s.

UTI in adults (lower)

PHE URINE

SIGN

CKS women

CKS men

RCGP UTI clinical module

SAPG UTI

Treat women with severe or ≥3 symptoms.

All patients first line antibiotic:
nitrofurantoin if GFR >55mL/min; if GFR30-<55mL/min; GFR<30mL/min; or if urine not cloudy, 97% NPV of UTI.

Women (mild/≤2 symptoms): Pain relief, consider back up delayed antibiotic.

If urine cloudy, use dipstick to guide treatment:
nitrite, leucocytes, blood all negative 76% NPV; nitrite plus blood or leucocytes 100% NPV of UTI.

Men: Consider prostatitis and send MSU.

OR if symptoms mild/non-specific, use negative dipstick to exclude UTI.

>65 years: treat if fever ≥38°C or 1.5°C above base twice in 12h AND dysuria or ≥2 other symptoms.

If treatment failure: always perform culture.

UTI in pregnancy

PHE URINE

BSHH, CKS

Send MSU for culture and start antibiotics. 4 week course may prevent chronic prostatitis. Quinolones achieve higher prostate levels.

Acute prostatitis

UTI in Children

PHE URINE

CKS NICE

Lower UTI: trimethoprim or nitrofurantoin if susceptible, amoxicillin if resistant. Serum creatinine ≥130μmol/L (2.8mg/dL).
**MENINGITIS**

**NICE fever guidelines**

<table>
<thead>
<tr>
<th>ILLNESS</th>
<th>GOOD PRACTICE POINTS</th>
<th>DRUG</th>
<th>ADULT DOSE</th>
<th>DURATION OF TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspected meningococcal disease</td>
<td>Transfer all patients to hospital immediately.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHE Meningo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GASTRO INTESTINAL TRACT INFECTIONS**

| Oral candidiasis | Topical azoles more effective than topical nystatin. | Miconazole oral gel | 20mg/mL QDS | 7 days 1A+ or until symptoms resolve, whichever is shorter |
| CKS | Oral candidiasis rare in immunocompetent adults; consider undiagnosed risk factors including HIV. | Fluconazole if extensive/severe candidiasis; if HIV or immunosuppression use 100mg. |  |  |
| NICE dyspepsia | Do not offer eradication for GORD. |  |  |  |
| NICE *H*. pylori | Use PPI + clarithromycin or metronidazole | Always use PPI for PPI failure: | TWICE DAILY | All for 7 days 1A+ |
| PHE *H*. pylori | Penicillin/ampicillin | Penicillin or metronidazole | 400mg BD | 10 days 1B+ |
| CKS | Penicillin allergy & previous treatment failure | | 600mg BD | 10 days 1B+ |
| Revert for *H*. pylori in post-DUGU or relapse after second line therapy: use breath or stool test or consider endoscopy for culture & susceptibility. |  |  |  |  |
| Infectious diarrhoea | Refer previously healthy children with acute painful or bloody diarrhoea to exclude *E. coli* 0157 infection. |  |  |  |
| CKS | Antibiotic therapy usually not indicated unless systematically unwell. |  |  |  |
| Clostridium difficile | Stop unnecessary antibiotics and/or PPIs. |  |  |  |
| DH | 70% respond to MTZ in 5 days, 92% in 14 days. |  |  |  |
| PHE | If severe symptoms or signs (below) should treat with oral vancomycin, review progress closely and/or consider hospital referral. |  |  |  |
| Definition of severe: Temperature >38.5°C, or WCC >15, or rising creatinine or signs/symptoms of severe colitis. |  |  |  |  |
| Traveller’s diarrhoea | Oral consideration of standby antibiotics for remote areas or people high-risk of severe illness with travellers’ diarrhoea. |  |  |  |
| CKS | If standby treatment appropriate give ciprofloxacin 500mg twice a day for 3 days (private Rx). |  |  |  |
| | If quinolone resistance high (eg south Asia): consider bismuth subsalicylate (Pepto Bismol) tablets QDS as prophylaxis or for 2 days treatment. |  |  |  |
| Threadworm | Treat all household contacts at the same time PLUS advise hygiene measures for 2 weeks (hand hygiene, pants at night, morning shower (include perianal area) PLUS wash sleepwear, bed linen, and dust, vacuum on day one). | All patients over 6 months: mebendazole (off-label if <2yrs) | 100mg QDS | Stat dose, but repeat in 2 weeks if infection persists |
| CKS threadworm |  | mebendazole (off-label if <2yrs) | 100mg QDS | 7 days 1A+ |

**GENITAL TRACT INFECTIONS**

Contact UKTIS for information on foetal risks if patient is pregnant.

**STI screening**

People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. Risk factors: <25yr, no condom use, recent (<12mth) frequent change of partner, symptomatic partner, area of high HIV 1.2

**Chlamydia trachomatis/urethritis**

Opportunistically screen all aged 15-25 years. | Azithromycin or doxycycline | 1g | 7 days 2A |
| Treat partners and refer to GUM service. | Pregnancy or breastfeeding: azithromycin is the most effective option. | 1g | 7 days 2A |
| SIGN, BASHH | Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment. | 1g (off-label use) | 7 days 2A |
| PHE, CKS |  | 500mg QDS | 7 days 2A |
| Epididymitis | For suspected epididymitis in men over 35 years with low risk of STI (High risk, refer GUM). | Ofloxacin or doxycycline | 200mg BD | 14 days 2A |

**Acute pyelonephritis**

If admission not needed, send MSU for culture & susceptibility testing, and start antibiotics. | Co-amoxiclav or ciprofloxacin | 500/125mg TDS | 7 days 3A+ |
| If no response within 24 hours, seek advice. | if lab report shows sensitive: trimethoprim | 500mg BD | 7 days 3A+ |
| If ESBL risk and microbiology advice consider IV antibiotic via outpatients (OPAT). | 200mg BD | 7 days 3A+ |

**Recurrent UTI in non-pregnant women: 2 in 60ths or ≥ 3 UTIs/year**

First line: Advise simple measures, incl. hydration & analgesia. | Nitrofurantoin | 100mg | 3-6 months; then review recurrence rate and need for antibiotic. |
| Cranberry products work for some women, but good evidence is lacking. | Nitrofurantoin | 200mg |  |
| Second line: Standby or post-coital antibiotics. | Methenamine hippurate 1g BD |  |
| Recent clinical recurrence: trimethoprim | 6 months 3A+ |  |  |
### ILLNESS | GOOD PRACTICE POINTS | DRUG | ADULT DOSE | DURATION OF TREATMENT
--- | --- | --- | --- | ---
**Vaginal Candidiasis**  
BASHH  
PHE, CKS | All topical and oral azoles give 75% cure.  
In pregnancy avoid oral azoles  
and use intravaginal treatment for 7 days.  
| *Clotrimazole*  
*or oral fluconazole*  
*Pregnancy: clotrimazole*  
*miconazole 2% cream* | 500mg pess or 10% cream  
150mg orally  
100mg pessary at night  
5g intravaginally BD | Stat  
Stat  
Stat  
7 days  
| **Bacterial vaginosis**  
BASHH  
PHE  
CKS | Oral metronidazole (MTZ) is as effective as topical treatment  
but is cheaper.  
Less relapse with 7 day than 2g stat at 4 weeks  
Pregnancy  
Avoid 2g stat  
Treating partners does not reduce relapse.  
| *Oral metronidazole*  
*or MTZ 0.75% vag gel*  
*or clindamycin 2% cream* | 400mg BD  
or 2g stat  
5g applicator at night  
5g applicator at night | 7 days  
Stat  
Stat  
7 nights  
| **Gonorrhoea**  
BASHH  
PHE  
CKS | Antibiotic resistance is now very high.  
Use IM ceftriaxone plus azithromycin and refer to GUM service  
In pregnancy or breastfeeding avoid 2g single dose MTZ.  
Consider clotrimazole for symptom relief (not cure) if MTZ declined.  
| *Ceftriaxone* PLUS  
*azithromycin*  
| 500mg IM  
1g | Stat  
Stat  
| **Trichomoniasis**  
BASHH  
PHE  
CKS | Treat partners and refer to GUM service  
In pregnancy or breastfeeding avoid 2g single dose MTZ.  
Consider clotrimazole for symptom relief (not cure) if MTZ declined.  
| *Metronidazole (MTZ)*  
*Clotrimazole* | 400mg BD  
400mg BD  
100mg BD | 14 days  
14 days  
| **Pelvic Inflammatory Disease**  
BASHH  
PHE  
CKS | Refer woman and contacts to GUM service.  
Always culture for gonorrhoea and chlamydia.  
If gonorrhoea likely (partner has it, sex abroad,  
severe symptoms), resistance to quinolones is  
high, use ceftriaxone regimen.  
Refer woman if MTZ declined.  
| *Metronidazole PLUS*  
*ofloxacin 1.2, 4.8h*  
*or doxycycline 1.2, 4.8h*  
*If high risk of gonorrhoea*  
*ADD ceftriaxone 3.5h* | 400mg BD  
400mg BD  
100mg BD | 14 days  
14 days  
| **SKIN INFECTIONS** – For MRSA infection see  
PHE Quick Reference Guide

**Impetigo**  
PHE  
CKS | Treatment:  
For extensive, severe, or bullous impetigo, use oral antibiotics.  
Reserve topical antibiotics for very localised lesions to reduce the risk of resistance.  
| *Oral flucloxacillin*  
*If penicillin allergic: oral clarithromycin*  
*Topical fusidic acid*  
*MRSA only: mupirocin* | 500mg QDS  
250-500mg BD | 7 days  
7 days  
5 days  
5 days  
| **Cellulitis**  
BASHH  
PHE  
CKS | Class I: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.  
Class II febrile or ill, or comorbidity, admit for intravenous treatment, or use OPAT (if available).  
Class III toxic appearance: admit.  
If river or sea water exposure, discuss with specialist.  
| *Fluclaxocillin*  
*penicillin allergic: clarithromycin*  
*If on statins: doxycycline*  
*If unreacting: clindamycin*  
| 500mg QDS  
500mg BD  
200mg stat then 100mg OD  
300-450mg QDS  
500/125mg TDS | All for 7 days.  
If slow response continue for a further 7 days  
| **Leg ulcer**  
PHE  
CKS | Ulcers always colonised. Antibiotics do not improve healing unless active infection.  
| *Active infection if cellulitis/increased pain/pyrexia/purulent exudate/odour.*  
\[ \]  
| 500mg QDS  
500mg BD | All for 7 days  
| **PVL**  
PHE | Panton-Valentine Leucocidin (PVL) is a toxin produced by 4.9% of  
Staphylococcus aureus  
| |  |  
| **Bites Human:**  
BASHH  
PHE  
CKS | Thorough irrigation is important.  
Assess risk of tetanus, rabies, HIV, hepatitis B/C.  
Antibiotic prophylaxis is advised.  
| *Prophylaxis or treatment: co-amoxiclav*  
*If penicillin allergic: metronidazole PLUS doxycycline (cat/dog/man)*  
*or metronidazole PLUS clarithromycin (human bite)*  
\[ \]AND review at 24&48hsc | 375-625mg TDS  
400mg TDS  
100mg BD  
200-400mg TDS  
250-500mg BD | All for 7 days  
| **Scabies**  
PHE  
CKS | Treat whole body from ear/chin downwards and under nails.  
If under 2/elderly, also face/scalp.  
| *Permethrin*  
*If allergy: malathion* | 5% cream  
0.5% aqueous liquid | 2 applications  
1 week apart  
| **Dermatophyte infection - skin**  
BASHH  
PHE  
CKS  
CKS foot  
CKS scalp | Terbinafine is fungicidal:  
treatment time shorter than with fungistatic imidazoles.  
If candida possible, use imidazole.  
If intractable, send skin scrapings, and if infection confirmed, use oral terbinafine/itraconazole.  
Scalp: discuss, oral therapy indicated.  
| *Topical terbinafine*  
*or topical imidazole*  
\[ \]  
*or athlete’s foot only:*  
topical undecenoates: Mycolet | BD  
BD  
BD | 1-2 weeks  
for 2-4 wks after healing (i.e. 4-6wks)  
| **Dermatophyte infection - nail**  
BASHH  
PHE  
CKS | Take nail clippings: start therapy only if infection is confirmed by laboratory.  
| *First line: terbinafine*  
*Second line: itraconazole*  
*Third line for very superficial as limited evidence of effectiveness: amorolfine 5% nail lacquer* | 250mg OD  
200mg BD  
1-2x/weekly | 6 – 12 weeks  
3 – 6 months  
7 days monthly  
2 courses  
3 courses  
6 months  
12 months  
| **Varicella zoster/chicken pox**  
PHE  
CKS | Pregnant/inmunocompromised/neonate: seek urgent specialist advice.  
| *Chicken pox:* label  
| *If indicated: aciclovir*  
| 800mg five times a day | 7 days  
| **Herpes zoster / shingles**  
PHE  
CKS | Chicken pox: label  
Shingles: treat if >50 years  
and within 72 hrs of rash  
PHN rare if <50 years;  
or if active ophthalmic  
or Ramsey Hunt  
| *Valaciclovir*  
*famiclovir* | 1g TDS  
500mg TDS or 750mg BD | 7 days  
7 days  
7 days  
7 days  
| **Cold sores** | Cold sores resolve after 7–10d without treatment. Topical antivirals applied prudently reduce duration by 12–24hrs.  
| *If indicated: aciclovir*  
| 800mg five times a day | 7 days  
| **Good Practice Points**  
**Skin Infections** – For MRSA infection see PHE Quick Reference Guide

**Skin Infections**

- **Impetigo**
  - For extensive, severe, or bullous impetigo, use oral antibiotics.
  - Reserve topical antibiotics for very localised lesions to reduce the risk of resistance.

- **Cellulitis**
  - Class I: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.
  - Class II: febrile or ill, or comorbidity, admit for intravenous treatment, or use OPAT (if available).
  - Class III: toxic appearance: admit.

- **Leg Ulcer**
  - Ulcers always colonised. Antibiotics do not improve healing unless active infection.
  - If active infection, send pre-treatment swab.

- **PVL**
  - Panton-Valentine Leucocidin (PVL) is a toxin produced by 4.9% of *Staphylococcus aureus*.

- **Bites Human**
  - Thorough irrigation is important.
  - Assess risk of tetanus, rabies, HIV, hepatitis B/C.
  - Antibiotic prophylaxis is advised.

- **Scabies**
  - Treat whole body from ear/chin downwards and under nails.
  - If under 2/elderly, also face/scalp.

- **Dermatophyte Infection - Skin**
  - Terbinafine is fungicidal: treatment time shorter than with fungistatic imidazoles.
  - If candida possible, use imidazole.
  - If intractable, send skin scrapings, and if infection confirmed, use oral terbinafine/itraconazole.

- **Dermatophyte Infection - Nail**
  - Take nail clippings: start therapy only if infection is confirmed by laboratory.

- **Varicella Zoster/Chicken Pox**
  - Pregnant/inmunocompromised/neonate: seek urgent specialist advice.

- **Herpes Zoster / Shingles**
  - Chicken pox: label.
  - Shingles: treat if >50 years and within 72 hrs of rash; PHN rare if <50 years; or if active ophthalmic or Ramsey Hunt.
<table>
<thead>
<tr>
<th>ILLNESS</th>
<th>GOOD PRACTICE POINTS</th>
<th>DRUG</th>
<th>ADULT DOSE</th>
<th>DURATION OF TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conjunctivitis</td>
<td>Treat if severe, as most viral or self-limiting. Bacterial conjunctivitis is usually unilateral and also self-limiting; it is characterised by red eye with mucopurulent, not watery, discharge; 65% resolve on placebo by day five. Fusidic acid has less Gram-negative activity.</td>
<td>Chloramphenicol 0.5% drop and 1% ointment</td>
<td>2 hourly for 2 days then 4 hourly ( whilst awake) at night Two times a day</td>
<td>All for 48 hours after resolution</td>
</tr>
<tr>
<td><strong>EYE INFECTIONS</strong></td>
<td></td>
<td>Fusidic acid 1% gel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CKS</td>
<td>If severe: Second line:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary table – dental infections treated in primary care outside dental setting

<table>
<thead>
<tr>
<th>ILLNESS</th>
<th>COMMENTS</th>
<th>DRUG</th>
<th>ADULT DOSE</th>
<th>DURATION OF TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mucosal ulceration and inflammation (simple gingivitis)</td>
<td>Temporary pain and swelling relief can be attained with saline mouthwash. Use antiseptic mouthwash if more severe and 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.</td>
<td>Simple saline mouthwash. Chlorhexidine 0.12-0.2%. Hydrogen peroxide 6%. (do not use within 30 mins of toothpaste)</td>
<td>½ tsp salt dissolved in glass warm water Rinse mouth for 1 minute BD with 5 ml diluted with 5-10 ml water.</td>
<td>Always spit out after use. Use until lesions resolve or less pain allows oral hygiene</td>
</tr>
<tr>
<td>Acute necrotising ulcerative gingivitis</td>
<td>Commence metronidazole and refer to dentist for scaling and oral hygiene advice. Use in combination with antiseptic mouthwash if pain limits oral hygiene.</td>
<td>Metronidazole 400mg TDS Chlorhexidine or hydrogen peroxide</td>
<td>See above dosing in mucosal ulceration</td>
<td>3 days Until oral hygiene possible</td>
</tr>
<tr>
<td>Pericoronitis</td>
<td>Refer to dentist for irrigation &amp; debridement. If persistent swelling or systemic symptoms use metronidazole. Use antiseptic mouthwash if pain and trismus limit oral hygiene.</td>
<td>Amoxicillin 500mg TDS Metronidazole 400mg TDS Chlorhexidine or hydrogen peroxide</td>
<td>See above dosing in mucosal ulceration</td>
<td>3 days Until oral hygiene possible</td>
</tr>
<tr>
<td>Dental abscess</td>
<td>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. Antibiotics are only recommended if there are signs of severe infection, systemic symptoms or high risk of complications. 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. 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.</td>
<td>Amoxicillin 500mg TDS Phenoxymethylpenicillin 500mg – 1g QDS</td>
<td>Up to 5 days review at 3 days</td>
<td></td>
</tr>
</tbody>
</table>

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, if possible, advice should be sought from the patient’s dentist, who should have an answer-phone message with details of how to access treatment out-of-hours, or telephone 111 (NHS 111 service in England).
GRADING OF GUIDANCE RECOMMENDATIONS

The strength of each recommendation is qualified by a letter in parenthesis. This is an altered version of the grading recommendation system used by SIGN.

<table>
<thead>
<tr>
<th>STUDY DESIGN</th>
<th>RECOMMENDATION GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good recent systematic review and meta-analysis of studies</td>
<td>A+</td>
</tr>
<tr>
<td>One or more rigorous studies; randomised controlled trials</td>
<td>A-</td>
</tr>
<tr>
<td>One or more prospective studies</td>
<td>B+</td>
</tr>
<tr>
<td>One or more retrospective studies</td>
<td>B-</td>
</tr>
<tr>
<td>Non-analytic studies, eg case reports or case series</td>
<td>C</td>
</tr>
<tr>
<td>Formal combination of expert opinion</td>
<td>D</td>
</tr>
</tbody>
</table>

This guidance was initially developed in 1999 by practitioners in South Devon, as part of the S&W Devon Joint Formulary Initiative, and Cheltenham & Tewkesbury Prescribing Group and modified by the PHLS South West Antibiotic Guidelines Project Team, PHLS Primary Care Co-ordinators and members of the Clinical Prescribing Sub-group of the Standing Medical Advisory Committee on Antibiotic Resistance. It was further modified following comments from Internet users. If you would like to receive a copy of this guidance with the most recent changes highlighted please email the author cliodna.mcnulty@phe.gov.uk

The guidance has been updated regularly as significant research papers, systematic reviews and guidance have been published. Public Health England (previously Health Protection Agency) works closely with the authors of the Clinical Knowledge Summaries.

This guidance should not be used in isolation, it should be supported with patient information about back-up / delayed antibiotics, infection severity and usual duration, clinical staff education, and audits. Materials are available on the RCGP TARGET website.