

Management and treatment of common infections

Antibiotic guidance for primary care

Aims

- To provide a simple, empirical approach to the treatment of common infections.
- To promote the safe, effective and economic use of antibiotics.
- To minimise the emergence of bacterial resistance in the community.
- To ensure consistent antibiotic prescribing across all Herefordshire health care providers in and out of hours.

Principles of Treatment

- This guidance is based on the best available evidence, but use professional judgement and involve patients in management decisions.
- 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.
- Prescribe an antibiotic only when there is likely to be a clear clinical benefit, giving alternative, non-antibiotic self-care advice, where appropriate.
- Consider a 'no', or delayed/backup antibiotic strategy for acute self-limiting upper respiratory tract infections, and mild UTI symptoms.
- 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.
- Where an empirical therapy has failed or special circumstances exist, microbiological advice can be obtained from the Department of Microbiology and Immunology, Hereford County Hospital ☎ 01432 277117 or out of hours: ☎ 01432 355444. If in doubt Microbiologists are happy to discuss.
Email: consmicro.advice@nhs.net.
- Limit prescribing over the telephone to exceptional cases.
- 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.
- 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.
- Child doses are provided when appropriate, and can be accessed through the © symbol. Suspensions for children can be comparatively expensive and contain sugar so consider whether capsules can be used – see cost charts.
- Refer to the **BNF** for further dosing and interaction information (eg the interaction between macrolides and statins), and check for hypersensitivity.
- Have a lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture/specimens, and seek advice.
- Avoid widespread use of topical antibiotics, especially in those agents also available systemically e.g. fusidic acid; in most cases, topical use should be limited.
- 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 eg antiepileptic.
- This guidance is developed alongside the **NHS England Antibiotic Quality Premium**. The required performance in 2017/19 is: a 10% reduction (or greater) in the number of *E. coli* blood stream infections across the whole health economy; a 10% reduction (or greater) in the trimethoprim:nitrofurantoin prescribing ratio for UTI in primary care, and a 10% reduction (or greater) in the number of trimethoprim items prescribed to patients aged 70 years or greater; sustained reduction of inappropriate prescribing in primary care.
- Fidaxomicin and fosfomicin may be prescribed on FP10 on the advice of a microbiologist and supplies obtained at the hospital pharmacy NB hand-signed FP10 required, do not use EPS or dispensing token.
- Cost charts are for provided for information only ; clinical and patient factors may outweigh costs.
- These guidelines are based on Public Health England guidance November 2017:
<https://www.gov.uk/government/publications/managing-common-infections-guidance-for-primary-care>

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE <small>Click on © for child doses</small>	DURATION OF TREATMENT
UPPER RESPIRATORY TRACT INFECTIONS¹				
Influenza treatment PHE Influenza For prophylaxis see: NICE Influenza	Annual vaccination is essential for all those “at risk” of influenza.^{1D,2A+} Antivirals are not recommended for healthy adults.^{1D,2A+} Treat “at risk” patients with five days oseltamivir 75mg BD,^{1D} when influenza is circulating in the community, and ideally within 48 hours of onset (36 hours for zanamivir treatment in children),^{1D,3D} or in a care home where influenza is likely.^{1D,2A+} At risk: pregnant (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).^{4D} See the PHE Influenza guidance for the treatment of patients under 13 years of age.^{4D} In severe immunosuppression, or oseltamivir resistance, use zanamivir 10mg BD^{5A+,6A+} (two inhalations by diskhaler for up to 10 days) and seek advice.^{4D}			

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE Click on ☺ for child doses	DURATION OF TREATMENT
Acute sore throat NICE RTIs FeverPAIN	Avoid antibiotics ^{1B-,2D} as 82% of cases resolve in 7 days, and pain is only reduced by 16 hours. ^{3A+} Use FeverPAIN Score: ^{4B+,5A-} Fever in last 24 hours; Purulence ; Attend rapidly under three days; severely Inflamed tonsils; No cough or coryza. Score 0-1: 13-18% streptococci - no antibiotic. 2-3: 34-40% streptococci - 3 day delayed antibiotic. 4-5: 62-65% streptococci - if severe, immediate antibiotic, or 48-hour delayed antibiotic. ^{4B+,5A-,6D} Advise paracetamol, self-care, and safety net. ^{6D} Complications are rare: antibiotics to prevent quinsy NNT>4000; ^{7B-} otitis media NNT200. ^{7B-} 10 days penicillin has lower relapse than five days in patients under 18 years of age. ^{8D,9A+}	Fever pain 0-1: self-care ^{6D} Fever pain 2-3: delayed prescription ^{4B+,5A-,6D} of phenoxymethylpenicillin ^{9A+} Penicillin allergy: clarithromycin ^{9A+,10B-} Penicillin allergy in pregnancy: erythromycin ^{9A+,10B-,11D,12C}	500mg QDS ^{13A+} OR ☺ 1g BD (if mild) ^{13A+} If severe: 500mg QDS ^{13A+} 250mg BD ^{9A+} ☺ If severe: 500mg BD 250-500mg QDS ^{9A+} ☺	} 5-10 days 8D,9A+,14A-,15B+ 5 days ^{9A+} 5 days ^{9A+} 5 days ^{9A+}
Scarlet fever (GAS) PHE Scarlet fever	Prompt treatment with appropriate antibiotics significantly reduces the risk of complications. ^{1D} Observe immunocompromised individuals (diabetes; women in the puerperal period; chickenpox) as they are at increased risk of developing invasive infection. ^{1D}	First line (mild): analgesia ^{2D} Phenoxymethylpenicillin ^{2D} Penicillin allergy: clarithromycin ^{1D}	500mg QDS ^{1D} ☺ 250-500mg BD ^{1D} ☺	10 days ^{3A+,4A+,5A+} 5 days ^{1D,5A+}
Acute otitis media (child doses) NICE RTIs	Optimise analgesia and target antibiotics. ^{1A-,2A+} AOM resolves in 60% of cases in 24 hours without antibiotics. ^{3A+} Antibiotics reduce pain only at two days (NNT15), and do not prevent deafness. ^{3A+} Consider 2 or 3 day delayed, ^{4D,5A+} or immediate antibiotics for pain relief if: <2 years AND bilateral AOM (NNT4), ^{6A+,7A+} 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). ^{8A-} All ages with otorrhoea NNT3. ^{7A+} Antibiotics to prevent mastoiditis NNT>4000. ^{9B-,10C}	Amoxicillin ^{11A+,12A+} Penicillin allergy: erythromycin ^{12A+,13D} OR clarithromycin ^{13D}	Neonate: 30mg/kg TDS ^{14A+} 1-11 months: 125mg TDS ^{14A+} 1-4 years: 250mg TDS ^{14A+} >5 years: 500mg TDS ^{14A+} <2 years: 125mg QDS ^{13D} 2-7 years: 250mg QDS ^{13D} >8 years: 250-500mg QDS ^{13D} 1 month-11 years: 7.5mg/kg-250mg BD (weight dosing) ^{13D} 12-18 years: 250mg BD ^{13D}	} 5 days ^{15A+} } 5 days ^{15A+} } 5 days ^{13D,15A+}
Acute otitis externa CKS Otitis externa	First line: analgesia for pain relief, ^{1D,2D} and apply localised heat (eg a warm flannel). ^{2D} Second line: topical acetic acid or topical antibiotic +/- steroid: similar cure at 7 days. ^{2D,3A+,4B-} If cellulitis or disease extends outside ear canal, or systemic signs of infection, start oral flucloxacillin and refer to exclude malignant otitis externa. ^{1D}	Second line: topical acetic acid 2% ^{2D,4B-} Topical neomycin sulphate with corticosteroid ^{2D,5A-} If cellulitis: flucloxacillin ^{6B+}	1 spray TDS ^{5A-} ☺ 3 drops TDS ^{5A-} ☺ 250mg QDS ^{2D} ☺ If severe: 500mg QDS ^{2D}	7 days ^{5A-} 7 days (min) to 14 days (max) ^{3A+} 7 days ^{2D} 7 days ^{2D}
Sinusitis (acute) This guidance summarises the NICE Sinusitis (acute) guidance published in July 2017, and the NICE RTIs guidance published in July 2008	Symptoms <10 days: ^{1A+} do not offer antibiotics as most resolve in 14 days without, ^{2A+} and antibiotics only offer marginal benefit after 7 days (NNT15). ^{3A+} Symptoms >10 days: ^{1A+} no antibiotic, or back-up antibiotic ^{4D} if several of: purulent nasal discharge; ^{1A+} severe localised unilateral pain; fever; marked deterioration after initial milder phase. ^{1A+} Systemically very unwell, or more serious signs and symptoms: ^{1A+} immediate antibiotic. ^{1A+,5A-} Suspected complications: eg sepsis, intraorbital or intracranial, refer to secondary care. ^{1A+} Self-care: paracetamol/ibuprofen for pain/fever. ^{6D} Consider high-dose nasal steroid if >12 years. ^{1A+} Nasal decongestants or saline may help some. ^{1A+}	No antibiotics: self-care ^{6D} First line for delayed: phenoxymethylpenicillin ^{5A-} Penicillin allergy or intolerance: doxycycline ^{1A+,6D} OR clarithromycin ^{1A+} Very unwell or worsening: co-amoxiclav ^{1A+,6D} Mometasone ^{1A+}	500mg QDS ^{5A-,6D} ☺ 200mg stat then 100mg OD ^{6D} 500mg BD ^{6D} ☺ 500/125mg TDS ^{6D} ☺ 200mcg BD ^{1A+}	} 5 days ^{1A+} 5 days ^{1A+} 14 days ^{1A+}
LOWER RESPIRATORY TRACT INFECTIONS				
<i>Note: Low doses of penicillins are more likely to select for resistance.^{1D} Do not use quinolones (ciprofloxacin, ofloxacin) first line as there is poor pneumococcal activity.^{2B-} Reserve all quinolones (including levofloxacin) for proven resistant organisms.^{1D}</i>				
Acute cough & bronchitis NICE RTIs	Antibiotics have little benefit if no co-morbidity. ^{1A+,2A-} Second line: 7 day delayed antibiotic, ^{3D} safety net, and advise that symptoms can last 3 weeks. ^{3D} Consider immediate antibiotics if >80 years of age and one of: hospitalisation in past year; taking oral steroids; insulin-dependent diabetic; congestive heart failure; serious neurological disorder/stroke, ^{3D} or >65 years with two of the above. ^{3D} Consider CRP if antibiotic is being considered. ^{4A-} No antibiotics if CRP<20mg/L and symptoms for >24 hours; delayed antibiotics if 20-100mg/L; immediate antibiotics if >100mg/L. ^{5D}	First line: self-care ^{1A+} and safety netting advice ^{3D} Second line: amoxicillin ^{3D,5D} Penicillin allergy: doxycycline ^{3D}	500mg TDS ^{3D,5D} ☺ 200mg stat then 100mg OD ^{3D}	5 days ^{3D,5D} 5 days ^{3D}

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Acute exacerbation of COPD NICE COPD GOLD COPD	Treat with antibiotics ^{1A+,2A+} if purulent sputum and increased shortness of breath and/or increased sputum volume. ^{1A+,3D,4D} Risk factors for antibiotic resistance: ^{5A+} severe COPD (MRC>3); ^{6B+} co-morbidity; frequent exacerbations; ^{3D} antibiotics in the last 3 months. ^{4D}	Amoxicillin ^{4D} OR doxycycline ^{4D} OR clarithromycin ^{7A+} <i>If at risk of resistance:</i> co-amoxiclav ^{4D}	500mg TDS ^{8A-} ☺ 200mg stat then 100mg OD ^{8A-} ☺ 500mg BD ^{7A+} ☺ 500/125mg TDS ^{4D} ☺	5 days ^{7A+} 5 days ^{7A+}
Community-acquired pneumonia NICE Pneumonia	Use CRB65 score to guide mortality risk, place of care, and antibiotics. ^{1D} Each CRB65 parameter scores one: Confusion (AMT≤8 or new disorientation in person, place or time); Respiratory rate ≥30/min; BP systolic <90, or diastolic ≤60; age ≥65. Score 0: low risk, consider home-based care; 1-2: intermediate risk, consider hospital assessment; 3-4: urgent hospital admission. ^{1D} Give safety-net advice^{1D} and likely duration of different symptoms, eg cough 6 weeks. ^{1D} Mycoplasma infection is rare in over 65s. ^{2A+,3C}	CRB65=0: amoxicillin ^{1D,4D} OR clarithromycin ^{2A+,4D,5A+} OR doxycycline ^{2A+,4D} CRB65=1-2 and at home (clinically assess need for dual therapy for atypicals): amoxicillin ^{1D,4D} AND clarithromycin ^{2A+,4D,5A+} OR doxycycline alone ^{4D}	500mg TDS ^{5A+} ☺ 500mg BD ^{5A+} ☺ 200mg stat then 100mg OD ^{6A-} ☺ 500mg TDS ^{5A+} ☺ 500mg BD ^{5A+} ☺ 200mg stat then 100mg OD ^{6A-} ☺	5 days; review at 3 days; ^{1D} 7-10 if poor response ^{1D} 7-10 days ^{1D}
Bronchiectasis CF or non CF (Non CF BTS)	Send sputum and start empiric antibiotics Use ciprofloxacin first line if previous sputum tests show regular pseudomonas. If fails to respond, review with sputum culture results and if necessary contact microbiology/chest dept for advice Specialist initiation only: prophylaxis in recurrent infections	No previous bacteriology 1st amoxicillin 2nd clarithromycin where penicillin allergic Previous bacteriology If regular isolation of Pseudomonas aeruginosa Ciprofloxacin azithromycin	500 mg TDS 500 mg BD 500-750mg BD 250-500mg three times weekly usually Mon, Wed and Fri	14 days 14 days 14 days on going

URINARY TRACT INFECTIONS

Note: As antibiotic resistance and Escherichia coli bacteraemia in the community is increasing, use nitrofurantoin first line,^{1D} always give safety net and self-care advice, and consider risks for resistance.^{2D} Give **TARGET UTI** leaflet,^{3D} and refer to the **PHE UTI** guidance for diagnostic information.^{1D}

UTI in adults (lower) PHE UTI Diagnosis TARGET UTI RCGP UTI SIGN UTI NHS Scotland UTI	All patients first line antibiotic: nitrofurantoin if GFR >45mls/min. ^{1A+,2A+} If GFR 30-45, only use if no alternative. ^{2A+,3D} Treat women with severe/≥3 symptoms.^{4D,5B-} Women <65 years (mild/≤2 symptoms):^{4D} <ul style="list-style-type: none"> consider pain relief,^{6A-,7A-,8B-} and consider delayed antibiotic.^{9B-,10A+} If urine NOT cloudy, 97% negative predictive value of no UTI.^{11A-} do not treat unless other risk factors for infection. If urine cloudy, use dipstick to guide treatment:^{4D,11A-} <ul style="list-style-type: none"> All negative ie nitrite, leukocytes, blood has 76% negative predictive value,^{11A-} Positive nitrite plus blood or leukocytes 92% Positive Predicted Value UTI.^{11A-} Men <65 years: consider prostatitis and send MSU, ^{4D,12D} or if symptoms mild or non-specific, use negative dipstick to exclude UTI. ^{12D} >65 years:^{13A-} treat if fever ≥38°C, or 1.5°C above base twice in 12 hours, and >1 other symptom. ^{14B-} If treatment failure: always perform culture. ^{4D}	1st line: nitrofurantoin^{15A-} (if fever, use alternative) ^{15A-} <i>If low risk of resistance:^{16B+}</i> trimethoprim ^{17D,18A+} If first line unsuitable or eGFR<45ml/min.^{2A+} pivmecillinam^{19B+,20D,21A+} <i>If organism susceptible:</i> amoxicillin ^{22A+,23A+} <i>If high resistance risk:</i> fosfomycin ^{16B+,24A+,25B-,26B-}	100mg m/r BD, OR 50mg i/r QDS ^{27A-} (BD dose increases compliance) ^{28D} 200mg BD ^{23A+} 400mg stat then 200mg TDS ^{29B+,30B+} (400mg if high resistance risk) ^{29B+} 500mg TDS ^{23A+} Women and men: 3g stat ^{26B-} Men: a second 3g stat on day 3 (unlicensed) ^{26B-}	Women: 3 days ^{23A+,31B-,32B-,33B+,34B+,35A-,36A+} Men: 7 days ^{37B+,38A-}
UTI in patients with catheters: antibiotics will not eradicate asymptomatic bacteriuria, ^{1D,2D,3A-} only treat if systemically unwell or pyelonephritis likely. ^{2D} Do not use prophylactic antibiotics for catheter change unless there is a history of catheter-change-associated UTI or trauma. ^{4D,5A+} Take sample if new onset of delirium, or one or more symptoms of UTI. ^{3A-,6B-,7D}				
UTI in pregnancy SIGN UTI	Send MSU for culture; ^{1D} start antibiotics in all with significant positive culture, even if asymptomatic. ^{1D} First line: nitrofurantoin, unless at term, ^{2A-,3D} Second line: trimethoprim; avoid if low folate status, ^{2A-,4D,5D} or on folate antagonist. ^{4D,5D} Third line: cephalosporins, as risk of <i>C. difficile</i> . ^{6C}	First line: nitrofurantoin (avoid at term) ^{2A-,3D,7A+} Second line: trimethoprim ^{2A-,4D,7A+} (give folate if first trimester) ^{5D} Third line: cefalexin ^{4D,8D}	100mg m/r BD ^{2A-,9C} OR 50mg i/r QDS ^{2A-,9C} 200mg BD (off-label) ^{7A+} 500mg BD ^{9C}	7 days ^{10D}
Acute prostatitis	Send MSU for culture and start antibiotics. ^{1D} 4 week course may prevent chronic prostatitis. ^{1D,2D} Quinolones achieve high prostate concentrations. ^{2D}	Ciprofloxacin ^{1D,3D} OR ofloxacin ^{1D,3D} Second line: trimethoprim ^{1D}	500mg BD ^{1D} 200mg BD ^{1D} 200mg BD ^{1D}	28 days ^{1D,2D}

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE Click on ☺ for child doses	DURATION OF TREATMENT
UTI in children NICE UTI in under 16s	Child <3 months: refer urgently for assessment. ^{1D} Child ≥3 months: use positive nitrite to guide antibiotic use; ^{1A-} Start antibiotics send pre-treatment MSU. ^{1D} Imaging: refer if child <6 months, or recurrent or atypical UTI. ^{1D}	Lower UTI: nitrofurantoin ^{1A-} OR trimethoprim ^{1A-} ☺☺ <i>Second line:</i> cefalexin ^{1D} ☺ <i>If organism susceptible:</i> amoxicillin ^{1A-} ☺	3 days ^{1A+}	Upper UTI: refer to paediatrics to: obtain a urine sample for culture; ^{1D} assess for signs of systemic infection; ^{1D} consider systemic antimicrobials. ^{1D}
		Upper UTI: refer to paediatrics to: obtain a urine sample for culture; ^{1D} assess for signs of systemic infection; ^{1D} consider systemic antimicrobials. ^{1D}		
Acute pyelonephritis CKS	If admission not needed, send MSU for culture and susceptibility testing; ^{1D} and start antibiotics. ^{1D} If no response within 24 hours, seek advice. ^{1D,2D} If Extended Spectrum Beta-lactamase (ESBL) risk,^{3A+} and on advice from a microbiologist, consider IV antibiotic via Out Patient Antibiotic Treatment (OPAT). ^{4D}	Ciprofloxacin ^{2D,5A-,6D} OR co-amoxiclav ^{2D,5A-} <i>If organism sensitive:</i> trimethoprim ^{5A-,7A+}	500mg BD ^{2D,5A-,6D} 500/125mg TDS ^{2D} 200mg BD ^{5A-,7A+}	7 days ^{2D,5A-,7A+} 7 days ^{5A-,7A+} 14 days ^{7A+}
Recurrent UTI in non-pregnant women (2 in 6 months or ≥3 in a year) TARGET UTI	First line: advise simple measures, ^{1D} including hydration; ^{1D,2D,3D} ibuprofen for symptom relief. ^{4A-,5A-} Cranberry products work for some women. ^{6D,7A+,8A+} Second line: stand-by ^{1D} or post-coital antibiotics. ^{9A+} Third line: antibiotic prophylaxis. ^{1D,9A+,10D} Consider methenamine if no renal/hepatic impairment. ^{11A+}	Antibiotic prophylaxis: <i>First line:</i> nitrofurantoin ^{9A+} <i>Second line:</i> ciprofloxacin ^{9A+} <i>If recent culture sensitive:</i> trimethoprim ^{9A+} Methenamine hippurate ^{11A+}	100mg m/ ^{9A+} 500mg ^{9A+} 100mg ^{9A+} 1g BD ^{11A+}	At night or post-coital stat (off-label) ^{1D,9A+,10D} 3-6 months, ^{1D} then review recurrence rate and need ^{1D,9A+} 6 months ^{1D,11A+}
MENINGITIS (NICE fever guidelines)				
Suspected meningococcal disease NICE Meningitis	Transfer all patients to hospital immediately.^{1D} If time before hospital admission, ^{2D,3A+} and non-blanching rash, ^{2D,4D} give IV benzylpenicillin ^{1D,2D,4D} or IV cefotaxime. ^{2D} Do not give IV antibiotics if there is a definite history of anaphylaxis; ^{1D} rash is not a contraindication. ^{1D}	IV or IM benzylpenicillin ^{1D,2D} OR IV or IM cefotaxime ^{2D}	Child <1 year: 300mg ^{5D} Child 1-9 years: 600mg ^{5D} Adult/child 10+ years: 1.2g ^{5D} Child <12 years: 50mg/kg ^{5D} Adult/child 12+ years: 1g ^{5D}	Stat dose; ^{1D} give IM, if vein cannot be accessed ^{1D}
Prevention of secondary case of meningitis: Only prescribe following advice from Public Health Doctor: 9 am – 5 pm: ☎ 0344 225 3560 option 2, option 3 Out of Hours: Contact on call public health doctor via WMAS triage ☎ 01384 679031				
GASTRO-INTESTINAL TRACT INFECTIONS				
Oral candidiasis CKS Candida	Topical azoles are more effective than topical nystatin. ^{1A+} Oral candidiasis is rare in immunocompetent adults; ^{2D} consider undiagnosed risk factors, including HIV. ^{2D} Use 50mg fluconazole if extensive/severe candidiasis; ^{3D,4D} if HIV or immunocompromised, use 100mg fluconazole. ^{3D,4D}	Miconazole oral gel ^{1A+,4D,5A-} <i>If not tolerated:</i> nystatin suspension ^{2D,6D,7A-} Fluconazole capsules ^{6D,7A-}	2.5ml QDS 20mg/g (hold in mouth after food) ^{4D} ☺ 1ml; 100,000 units/mL QDS (half in each side) ^{2D,4D,7A-} ☺ 50mg/100mg OD ^{3D,6D,8A-} ☺	7 days; ^{4D,6D} further 2 days nystatin/ 7 days miconazole after symptoms resolve ^{4D} 7-14 days ^{6D,7A-,8A-}
Helicobacter pylori NICE GORD and dyspepsia PHE H. pylori	Treat all positives, if known DU, GU, ^{1A+} or low grade MALToma. ^{2D,3D} NNT in non-ulcer dyspepsia: 14. ^{4A+} Do not offer eradication for GORD. ^{3D} Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection. ^{5A+,6B+,7A+} Penicillin allergy: use PPI PLUS clarithromycin PLUS metronidazole. ^{2D} If previous clarithromycin, use PPI PLUS bismuth salt PLUS metronidazole PLUS tetracycline hydrochloride. ^{2D,8A-,9D} Relapse and previous metronidazole and clarithromycin: use PPI PLUS amoxicillin PLUS either tetracycline OR levofloxacin. ^{2D,7A+} Retest for H. pylori: post DU/GU, or relapse after second line therapy, ^{1A+} using UBT or SAT, ^{10A+,11A+} consider referral for endoscopy and culture. ^{2D}	Always use PPI^{2D,3D,5A+,12A+} PLUS amoxicillin PLUS clarithromycin OR metronidazole ^{2D,6B+} Penicillin allergy: PPI PLUS bismuth subsalicylate ^{13A+} PLUS metronidazole PLUS tetracycline hydrochloride ^{2D} Relapse: PPI PLUS amoxicillin PLUS tetracycline hydrochloride OR levofloxacin ^{2D,7A+} Third line on advice: 14 days PPI PLUS bismuth salt PLUS two antibiotics not previously used, or rifabutin 150mg BD. ^{14A+} or furazolidone 200mg BD. ^{17A+}	1g BD ^{14A+} ☺ 500mg BD ^{8A-} ☺ 400mg BD ^{2D} ☺ 525mg QDS ^{15D} ☺ 400mg BD ^{2D} ☺ 500mg QDS ^{15D} ☺ 1g BD ^{14A+} ☺ 500mg QDS ^{15D} ☺ 250mg BD ^{7A+} ☺	7-14 days; ^{14A+} MALToma 14 days ^{7A+,16A+}
Infectious diarrhoea PHE Diarrhoea	Refer previously healthy children with acute painful or bloody diarrhoea, to exclude E. coli 0157 infection. ^{1D} Antibiotic therapy is not usually indicated unless patient is systemically unwell. ^{2D} If systemically unwell and campylobacter suspected (eg undercooked meat and abdominal pain), ^{3D} consider clarithromycin 250-500mg BD for 5-7 days, if treated early (within 3 days). ^{3D,4A+}			
Clostridium difficile PHE Clostridium difficile	Stop unnecessary antibiotics, ^{1D,2D} PPIs, ^{3B-} and antiperistaltic agents. ^{2D} Mild cases (<4 episodes of diarrhoea/day) may respond without metronidazole; ^{2D} 70% respond to metronidazole in 5 days; 92% respond to metronidazole in 14 days. ^{4B-} If severe (T>38.5, or WCC>15, rising creatinine, or signs/symptoms of severe colitis): ^{2D} treat with oral vancomycin, ^{1D,2D,5A-} review progress closely, ^{1D,2D} and consider hospital referral. ^{2D}	First episode: metronidazole ^{1D,2D,4B-} Severe/type 027/recurrent: oral vancomycin ^{1D,2D,5A-} Recurrent or second line: fidaxomicin ^{2D,5A-}	400mg TDS ^{1D,2D} ☺ 125mg QDS ^{1D,2D,5A-} ☺ 200mg BD ^{5A-}	10-14 days ^{1D,4B-} 10-14 days, ^{1D,2D} then taper ^{2D} 10 days ^{5A-}

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Diverticulitis	Antibiotic therapy may NOT be indicated, consider a period of observation. If treatment is required:	Co-amoxiclav If penicillin allergic: Ciprofloxacin plus Metronidazole	625 mg TDS 500 mg BD and 400 mg TDS	5-10 days depending on clinical response. Discuss with microbiologist if necessary
Traveller's diarrhoea	Prophylaxis rarely, if ever, indicated. ^{1D} Consider stand-by antimicrobial only for patients at high risk of severe illness, ^{2D} or visiting high risk areas. ^{1D,2D}	<i>Stand-by:</i> azithromycin ^{1D,3A+} <i>Prophylaxis/treatment:</i> bismuth subsalicylate ^{1D,4A-}	500mg OD ^{1D,2D,3A+} 2 tablets QDS ^{1D,2D}	1-3 days ^{1D,2D,3A+} 2 days ^{1D,2D,4A-}
Threadworm CKS Threadworm	Treat all household contacts at the same time. ^{1D} Advise hygiene measures for two weeks ^{1D} (hand hygiene; ^{2D} pants at night; morning shower, including perianal area). ^{1D,2D} Wash sleepwear, bed linen, and dust and vacuum. ^{1D} Child <6 months, add perianal wet wiping or washes three hourly. ^{1D}	<i>Child >6 months:</i> mebendazole ^{1D,3B-} <i>Child <6 months or pregnancy (at least in 1st trimester)</i> hygiene measures alone for six weeks ^{1D}	100mg stat ^{3B-}	Stat dose; ^{3B-} repeat in 2 weeks if persistent ^{3B-}
GENTIAL TRACT INFECTIONS				
STI screening	People with risk factors should be screened for chlamydia, gonorrhoea, HIV, and syphilis. ^{1D} Refer individual and partners to GUM. ^{1D} Risk factors: <25 years; no condom use; recent/frequent change of partner; symptomatic partner; area of high HIV. ^{2B-}			
Chlamydia trachomatis/ urethritis SIGN Chlamydia	Opportunistically screen all patients aged 16-24 years. ^{1B-} Treat partners and refer to GUM. ^{2D,3A+} Repeat test for cure in all at three months. ^{1B-,4B-} Pregnancy/breastfeeding: azithromycin is most effective. ^{5A+,6D,7A+,8A+,9D} As lower cure rate in pregnancy, test for cure at least three weeks after end of treatment. ^{1B-,3A+}	<i>First line:</i> azithromycin ^{2D,3A+,5A+,7A+,8A+} OR doxycycline ^{2D,3A+,5A+} <i>Pregnancy/breastfeeding:</i> azithromycin ^{3A+,7A+,8A+,9D} OR erythromycin ^{3A+,6D,7A+,8A+} OR amoxicillin ^{6D,7A+,8A+}	1g ^{2D,3A+,5A+,7A+} 100mg BD ^{2D,3A+,5A+} 1g ^{2D,3A+,5A+,7A+} 500mg BD ^{3A+} or 500mg QDS 500mg TDS ^{7A+,8A+}	Stat ^{2D,3A+,5A+,7A+,8A+} 7 days ^{2D,3A+,5A+} Stat ^{2D,3A+,5A+,7A+,8A+} 14 days ^{3A+} 7 days 7 days ^{7A+,8A+}
Epididymitis	Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI. ^{1A+,2D} If under 35 years or STI risk, refer to GUM. ^{1A+,2D}	Doxycycline ^{1A+,2D,3A+} OR ofloxacin ^{1A+,2D} OR ciprofloxacin ^{1A+,2D,3A+}	100mg BD ^{1A+,2D,3A+} 200mg BD ^{1A+,2D} 500mg BD ^{1A+,2D,3A+}	10-14 days ^{1A+,2D} 14 days ^{1A+,2D} 10 days ^{1A+,2D,3A+}
Vaginal candidiasis BASHH Vulvovaginal candidiasis	All topical and oral azoles give over 70% cure. ^{1A+,2A+} Pregnancy: avoid oral azoles, ^{1A+,3D} and use intravaginal treatment for 7 days. ^{4A+} Recurrent (>4 episodes per year): ^{5D} 150mg oral fluconazole every 72 hours for three doses induction, ^{1A+} followed by one dose once a week for six months maintenance. ^{1A+,5D}	Clotrimazole ^{1A+,5D} OR miconazole ^{1A+} OR oral fluconazole ^{1A+,3D} <i>Recurrent:</i> fluconazole (induction/maintenance) ^{1A+}	500mg pessary ^{1A+} OR 5g 10% cream ^{1A+} 100mg pessary ^{1A+} 150mg ^{1A+,3D} 150mg every 72 hours <i>THEN</i> 150mg once a week ^{1A+,3D,5D}	Stat ^{1A+} 14 nights ^{1A+} Stat ^{1A+,3D} 3 doses ^{1A+} 6 months ^{1A+,5D}
Bacterial vaginosis BASHH Bacterial vaginosis	Oral metronidazole is as effective as topical treatment, ^{1A+} and is cheaper. ^{2D} Seven days results in fewer relapses than 2g stat at four weeks. ^{1A+,2D} Pregnant/breastfeeding: avoid 2g dose. ^{3A+,4D} Treating partners does not reduce relapse. ^{5A+}	Oral metronidazole ^{1A+,3A+} OR metronidazole 0.75% vaginal gel ^{1A+,2D,3A+} OR clindamycin 2% cream ^{1A+,2D}	400mg BD ^{1A+,3A+} 2g ^{1A+,2D} 5g applicator at night ^{1A+,2D,3A+} 5g applicator at night ^{1A+,2D}	7 days ^{1A+} Stat ^{2D} 5 nights ^{1A+,2D,3A+} 7 nights ^{1A+,2D,3A+}
Genital herpes BASHH Anogenital herpes	Advise: saline bathing, ^{1A+} analgesia, ^{1A+} or topical lidocaine for pain, ^{1A+} and discuss transmission. ^{1A+} First episode: treat within five days if new lesions or systemic symptoms, ^{1A+,2D} and refer to GUM. ^{2D} Recurrent: self-care if mild, ^{2D} or immediate short course antiviral treatment, ^{1A+,2D} or suppressive therapy if more than six episodes per year. ^{1A+,2D}	<i>First line:</i> oral aciclovir ^{1A+,2D,3A+,4A+} OR valaciclovir ^{1A+,3A+,4A+} OR famciclovir ^{1A+,4A+}	400mg TDS ^{1A+,3A+} 800mg TDS (if recurrent) ^{1A+} 500mg BD ^{1A+} 250mg TDS ^{1A+} 1g BD (if recurrent) ^{1A+}	5 days ^{1A+} 2 days ^{1A+} 5 days ^{1A+} 5 days ^{1A+} 1 day ^{1A+}
Gonorrhoea	Antibiotic resistance is now very high. ^{1D,2D} Use IM ceftriaxone ^{2D} and oral azithromycin; ^{1D,3D} refer to GUM. ^{4B-} Test of cure is essential. ^{3D}	Ceftriaxone ^{1D,2D,3D,4B-} PLUS oral azithromycin ^{1D,3D,4B-}	500mg IM ^{1D,2D} 1g ^{1D}	Stat ^{3B-} Stat ^{3B-}
Trichomoniasis BASHH Trichomoniasis	Oral treatment needed as extravaginal infection common. ^{1D} Treat partners, ^{1D} and refer to GUM for other STIs. ^{1D} Pregnancy/breastfeeding: avoid 2g single dose metronidazole; ^{2A+,3D} clotrimazole for symptom relief (not cure) if metronidazole declined. ^{2A+,4A-,5D}	Metronidazole ^{1A+,2A+,3D,6A+} <i>Pregnancy for symptoms:</i> clotrimazole ^{2A+,4A-,5D}	400mg BD ^{1A+,6A+} 2g (more adverse effects) ^{6A+} 100mg pessary at night ^{5D}	5-7 days ^{1A+} Stat ^{1A+,6A+} 6 nights ^{5D}
Pelvic inflammatory disease BASHH PID	Refer women and sexual contacts to GUM. ^{1A+} Always culture for gonorrhoea and chlamydia. ^{1A+} If gonorrhoea likely (partner has it; sex abroad; severe symptoms), ^{2A-} use regimen with ceftriaxone, as resistance to quinolones is high. ^{1A+,2A-,3C,4C}	Metronidazole ^{1A+,5A+} PLUS ofloxacin ^{1A+,2A-,5A+} GC: metronidazole PLUS doxycycline ^{1A+,5A+} PLUS ceftriaxone ^{3C,4C}	400mg BD ^{1A+} 400mg BD ^{1A+,2A-} 400mg BD ^{1A+} 100mg BD ^{1A+} 500mg IM ^{1A+,3C}	14 days ^{1A+} Stat ^{1A+,3C}

SKIN AND SOFT TISSUE INFECTIONS

Note refer to RCGP skin infections on line training

Impetigo PHE Impetigo	Reserve topical antibiotics for very localised lesions to reduce risk of bacteria becoming resistant. ^{1D,2B+} Only use mupirocin if caused by MRSA. ^{1D,3A+} Extensive, severe, or bullous: oral antibiotics. ^{3D}	Topical fusidic acid ^{2D,3B+,4A+} MRSA: topical mupirocin ^{4A+} Oral flucloxacillin ^{1D,4A+} Oral clarithromycin ^{1D,5D}	Thinly TDS ^{5D} ☺ 2% ointment TDS ^{4A+} ☺ 250-500mg QDS ^{4A+} ☺ 250-500mg BD ^{5D} ☺	5 days ^{1D,2D} 5 days ^{1D,2D,4A+} 7 days ^{4A+} 7 days ^{5D}
Cold sores CKS Cold sores	Most resolve after 5 days without treatment. ^{1A-,2A-} Topical antivirals applied prodromally can reduce duration by 12-18 hours. ^{1A-,2A-,3A-} If frequent, severe, and predictable triggers: consider oral prophylaxis. ^{4D,5A+} aciclovir 400mg, twice daily, for 5-7 days. ^{5A+,6A+}			
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. ^{1B+,2B+,3B-} PVL strains are rare in healthy people, but severe. ^{2B+} Suppression therapy should only be started after primary infection has resolved, as ineffective if lesions are still leaking. ^{4D} Risk factors for PVL: recurrent skin infections; ^{2B+} invasive infections; ^{2B+} MSM; ^{3B-} if there is more than one case in a home or close community ^{2B+,3B-} (school children; ^{3B-} military personnel; ^{3B-} nursing home residents; ^{3B-} household contacts). ^{3B-}			
Eczema NICE Eczema	No visible signs of infection: antibiotic use (alone or with steroids) ^{1A+} encourages resistance and does not improve healing. ^{1A+} With visible signs of infection: use oral flucloxacillin ^{2D} or clarithromycin, ^{2D} or topical treatment (as in impetigo). ^{2D}			
Acne CKS Acne vulgaris	Mild (open and closed comedones) ^{1D} or moderate (inflammatory lesions): ^{1D} First line: self-care ^{1D} (wash with mild soap; do not scrub; avoid make-up). ^{1D} Second line: topical retinoid or benzoyl peroxide. ^{2D} Third-line: add topical antibiotic, ^{1D,3A+} or consider addition of oral antibiotic. ^{1D} Severe (nodules and cysts): ^{1D} add oral antibiotic (for 3 months max) ^{1D,3A+} and refer. ^{1D,2D}	First line: self-care ^{1D} Second line: topical retinoid ^{1D,2D,3A+} OR benzoyl peroxide ^{1A-,2D,3A+,4A-} Third-line: topical clindamycin ^{3A+} If treatment failure/severe: oral tetracycline ^{1A-,3A+} OR oral doxycycline ^{3A+,4A-}	Thinly OD ^{3A+} ☺ 5% cream OD-BD ^{3A+} ☺ 1% cream, thinly BD ^{3A+} ☺ 500mg BD ^{3A+} ☺ 100mg OD ^{3A+} ☺	6-8 weeks ^{1D} 6-8 weeks ^{1D} 12 weeks ^{1A-,2D} 6-12 weeks ^{3A+} 6-12 weeks ^{3A+}
Rosacea CKS BNF 74p1162	Get advice from dermatology Mild or moderate papulopustular rosacea (i.e. limited number of papules and pustules, no plaques) —topical treatment Moderate or severe papulopustular rosacea (i.e. extensive papules, pustules, or plaques)	Metronidazole Azelaic acid oxytetracycline Doxycycline erythromycin	gel (0.75%) or cream (1%) cream 20% (or 15%) 500mg BD 100mg OD 500mg BD	6-12 weeks & intermittent repetition
Cellulitis and erysipelas CREST Cellulitis BLS Cellulitis	Class I: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone. ^{1D,2D,3A+} If river or sea water exposure: seek advice. ^{1D} Class II: patient febrile and ill, or comorbidity, admit for intravenous treatment, ^{1D} or use OPAT. ^{1D} Class III: if toxic appearance, admit. ^{1D} Erysipelas: often facial and unilateral. ^{4B+} Use flucloxacillin for non-facial erysipelas. ^{1D,2D,3A+}	Flucloxacillin ^{1D,2D,3A+} Penicillin allergy: clarithromycin ^{1D,2D,3A+,5A} + Penicillin allergy and taking statins: doxycycline ^{2D} Unresolving: clindamycin ^{3A+} Facial (non-dental): co-amoxiclav ^{6B-}	500mg QDS ^{1D,2D} ☺ 500mg BD ^{1D,2D} ☺ 200mg stat then 100mg OD ^{2D} 300mg QDS ^{1D,2D} ☺ 500/125mg TDS ^{1D} ☺	7 days; ^{1D} if slow response, continue for a further 7 days ^{1D}
Infected diabetic foot ulcer	Levine technique preferred when taking a wound swab ie swab is rotated over a 1cm ² area of wound with sufficient pressure to express fluid from within the wound tissue.	Flucloxacillin <i>If previously treated with flucloxacillin</i> Co-amoxiclav <i>Or if penicillin allergic</i> Clindamycin	500mg QDS 625mg TDS 300mg QDS	5-14 days 5-14 days 5-14 days
Leg ulcer PHE Venous leg ulcers	Ulcers are always colonised. ^{1C,2A+} Antibiotics do not improve healing unless active infection ^{2A+} (purulent exudate/odour; increased pain; cellulitis; pyrexia). ^{3D}	Flucloxacillin ^{5D} OR clarithromycin ^{5D}	500mg QDS ^{5D} ☺ 500mg BD ^{5D} ☺	As for cellulitis ^{5D}
Non-healing: antimicrobial reactive oxygen gel may reduce bacterial load. ^{6D,7B-}				
MRSA	For MRSA discuss treatment with microbiologist as required .			
	Do not use clindamycin ^{1,2C} For active MRSA infection, confirmed by lab results use antibiotic sensitivities to guide treatment. If severe infection or no response to monotherapy after 24-48 hours, seek advice from microbiologist on combination therapy and use of linezolid ^{6A} .	Doxycycline alone ^{4B} OR Trimethoprim ^{3,5C}	100mg BD 200mg BD ¹	7 days

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE Click on ☺ for child doses	DURATION OF TREATMENT
Bites: CKS Bites	Human: thorough irrigation is important. ^{1A+,2D} Antibiotic prophylaxis is advised. ^{1A+,2D,3D} Assess risk of tetanus, rabies, ^{1A+} HIV, and hepatitis B and C. ^{3D} Cat: always give prophylaxis. ^{1A+,3D} Dog: give prophylaxis if: puncture wound; ^{1A+,3D} bite to hand, foot, face, joint, tendon, or ligament; ^{1A+} immunocompromised, cirrhotic, asplenic, or presence of prosthetic valve/joint. ^{2D,4A+} Penicillin allergy: Review all at 24 and 48 hours, ^{3D} as not all pathogens are covered. ^{2D,3D}	<i>Prophylaxis or treatment:</i> co-amoxiclav ^{2D,3D} <i>Penicillin allergy:</i> <i>Human:</i> metronidazole ^{3D,4A+} AND clarithromycin ^{3D,4A+} <i>Animal:</i> metronidazole ^{3D,4A+} AND doxycycline ^{3D}	375-625mg TDS ^{3D} ☺ 400mg TDS ^{2D} ☺ 250-500mg BD ^{2D} ☺ 400mg TDS ^{2D} ☺ 100mg BD ^{2D} ☺	7 days ^{3D,5D}
Scabies NHS Scabies	Treat whole body from ear/chin downwards, ^{1D,2D} and under nails. ^{1D,2D} Under 2 years/elderly: also treat face/scalp. ^{1D,2D} Home/sexual contacts: treat within 24 hours. ^{1D}	Permethrin ^{1D,2D,3A+} <i>Permethrin allergy:</i> malathion ^{1D}	5% cream ^{1D,2D} ☺ 0.5% aqueous liquid ^{1D} ☺	2 applications, 1 week apart ^{1D}
Mastitis CKS Mastitis and breast abscess	<i>S. aureus</i> is the most common infecting pathogen. ^{1D} Suspect if woman has: a painful breast; ^{2D} fever and/or general malaise; ^{2D} a tender, red breast. ^{2D} Breastfeeding: oral antibiotics are appropriate, where indicated. ^{2D,3A+} Women should continue feeding, ^{1D,2D} including from the affected breast. ^{2D}	Flucloxacillin ^{2D} <i>Penicillin allergy:</i> erythromycin ^{2D} OR clarithromycin ^{2D}	500mg QDS ^{2D} 250-500mg QDS ^{2D} 500mg BD ^{2D}	10-14 days ^{2D}
Dermatophyte infection: skin PHE Fungal skin and nail infections	Most cases: terbinafine is fungicidal; ^{1D} treatment time shorter than with fungistatic imidazoles. ^{1D,2A+,3A+} If candida possible, use imidazole. ^{4D} If intractable, or scalp: send skin scrapings. ^{1D} If infection confirmed: use oral terbinafine ^{1D,3A+,4D} or itraconazole. ^{2A+,3A+,5D} Scalp: oral therapy, ^{6D} and discuss with specialist. ^{1D}	Topical terbinafine ^{3A+,4D} OR topical imidazole ^{2A+,3A+} <i>For athlete's foot:</i> topical undecenoates ^{2A+} (eg Mycota®) ^{2A+}	1% OD-BD ^{2A+} ☺ 1% OD-BD ^{2A+} ☺ OD-BD ^{2A+} ☺	1-4 weeks ^{3A+} 4-6 weeks ^{2A+,3A+}
Dermatophyte infection: nail CKS Fungal nail infection	Take nail clippings; ^{1D} start therapy only if infection is confirmed. ^{1D} Oral terbinafine is more effective than oral azole. ^{1D,2A+,3A+,4D} Liver reactions 0.1 to 1% with oral antifungals. ^{3A+} If candida or non-dermatophyte infection is confirmed, use oral itraconazole. ^{1D,3A+,4D} Topical nail lacquer is not as effective. ^{1D,5A+,6D} To prevent recurrence: apply weekly 1% topical antifungal cream to entire toe area. ^{6D} Children: seek specialist advice. ^{4D}	<i>First line:</i> terbinafine ^{1D,2A+,3A+,4D,6D} <i>Second line:</i> itraconazole ^{1D,3A+,4D,6D}	250mg OD ^{1D,2A+,6D} ☺ 200mg BD ^{1D,4D} ☺	Fingers: 6 weeks ^{1D,6D} Toes: 12 weeks ^{1D,6D} 1 week a month: ^{1D} Fingers: 2 courses ^{1D} Toes: 3 courses ^{1D}
Varicella zoster/ chickenpox PHE Varicella Herpes zoster/ shingles PCDS Herpes zoster	Pregnant/immunocompromised/neonate: seek urgent specialist advice. ^{1D} Chickenpox: consider aciclovir ^{2A+,3A+,4D} if: onset of rash <24 hours, ^{3A+} and one of the following: >14 years of age; ^{4D} severe pain; ^{4D} dense/oral rash; ^{4D,5B+} taking steroids; ^{4D} smoker. ^{4D,5B+} Shingles: treat if >50 years ^{6A+,7D} (PHN rare if <50 years) ^{8B+} and within 72 hours of rash, ^{9A+} or if one of the following: active ophthalmic, ^{10D} Ramsey Hunt; ^{4D} eczema; ^{4D} non-truncal involvement; ^{7D} moderate or severe pain; ^{7D} moderate or severe rash. ^{5B+,7D} Treatment not within 72 hours: consider starting antiviral drug up to one week after rash onset, ^{11B+} if high risk of severe shingles ^{11B+} or complications ^{11B+} (continued vesicle formation; ^{4D} older age; ^{6A+,7D,11B+} immunocompromised; ^{4D} severe pain). ^{7D,11B+}	Aciclovir ^{3A+,6A+,9A+,12B+,13A-,14A+} <i>Second line for shingles if poor compliance:</i> valaciclovir ^{7D,9A+,13A-} OR famciclovir ^{7D,13A-,15A-}	800mg five times daily ^{15A-} ☺ 800mg five times daily ^{15A-} ☺ 1g TDS ^{13A-} ☺ 250-500mg TDS ^{14A+} OR 750mg BD ^{14A+}	7 days ^{13A-,15A-}
			Stop treatment when continual, new, healthy, proximal nail growth. ^{6D}	

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE (☺ = child doses)	DURATION OF TREATMENT
EYE INFECTIONS				
Conjunctivitis AAO Conjunctivitis	First line: bath/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting. ^{1D} Treat only if severe, ^{2A+} as most cases are viral ^{3D} or self-limiting. ^{2A+} Bacterial conjunctivitis: usually unilateral and also self-limiting. ^{2A+,3D} It is characterised by red eye with mucopurulent, not watery discharge. ^{3D} 65% and 74% resolve on placebo by days 5 and 7. ^{4A-,5A+} Second line: fusidic acid as it has less gram-negative activity. ^{6A-,7D}	First line: self-care ^{1D} Second line: chloramphenicol ^{1D,2A+,4A-,5A+} 0.5% eye drop ^{1D,2A+} OR 1% ointment ^{1D,5A+} Third line: fusidic acid 1% gel ^{2A+,5A+,6A-}	2 hourly for 2 days, ^{1D,2A+} then reduce frequency ^{1D} ☺ 3-4 times daily, ^{1D} or just at night if using eye drops ^{1D} BD ^{1D,7D} ☺	48 hours after resolution ^{2A+3, 7D}
Blepharitis CKS Blepharitis	First line: lid hygiene ^{1D,2A+} for symptom control, ^{1D} including: warm compresses; ^{1D,2A+} lid massage and scrubs; ^{1D} gentle washing; ^{1D} avoiding cosmetics. ^{1D} Second line: topical antibiotics if hygiene measures are ineffective after 2 weeks. ^{1D,3A+} Signs of Meibomian gland dysfunction,^{3D} or acne rosacea:^{3D} consider oral antibiotics. ^{1D}	First line: self-care ^{1D} Second line: Chloramphenicol ^{1D,2A+,3A-} Third line: oral oxytetracycline ^{1D,3D} OR oral doxycycline ^{1D,2A+,3D}	1% ointment BD ^{2A+,3D} ☺ 500mg BD ^{3D} ☺ 250mg BD ^{3D} ☺ 100mg OD ^{3D} ☺ 50mg OD ^{3D} ☺	6 week trial 4 weeks (initial) 8 weeks (maint) 4 weeks (initial) 8 weeks (maint)

Summary table – Suspected dental infections treated in primary care outside dental setting

Scottish Dental Clinical Effectiveness Programme (SDCEP) 2013 Guidelines

This guidance is not designed to be a definitive guide to oral conditions, as GPs should not be involved in dental treatment. Patients presenting to non-dental primary care services with dental problems should be directed to their regular dentist, or if this is not possible, to the NHS 111 service (in England), who will be able to provide details of how to access emergency dental care.

ILLNESS	GOOD PRACTICE POINTS	TREATMENT	ADULT DOSE <small>Click on ☺ for child doses</small>	DURATION OF TREATMENT
<p><i>Note: Antibiotics do not cure toothache^{1D} First line treatment is with paracetamol^{1D} and/or ibuprofen;^{1D} codeine is not effective for toothache.</i></p>				
Mucosal ulceration and inflammation (simple gingivitis) SDCEP Dental problems	Temporary pain and swelling relief can be attained with saline mouthwash. ^{1D} Use antiseptic mouthwash if more severe, ^{1D} and if pain limits oral hygiene to treat or prevent secondary infection. ^{1D,2A-} The primary cause for mucosal ulceration or inflammation (aphthous ulcers; ^{1D} oral lichen planus; ^{1D} herpes simplex infection; ^{1D} oral cancer) ^{1D} needs to be evaluated and treated. ^{1D}	Saline mouthwash ^{1D} Chlorhexidine 0.12-0.2% ^{1D, 2A-,3A+,4A+} (do not use within 30mins of toothpaste) ^{1D} Hydrogen peroxide 6% ^{5A-} (spit out after use) ^{1D}	½ tsp salt in warm water ^{1D} ☺ 1 min BD with 10mL ^{1D} ☺ 2-3 mins BD-TDS with 15ml in ½ glass warm water ^{1D} ☺	Always spit out after use ^{1D} Use until lesions resolve ^{1D} /less pain allows for oral hygiene ^{1D}
Acute necrotising ulcerative gingivitis	Refer to dentist for scaling and hygiene advice. ^{1D,2D} Antiseptic mouthwash if pain limits oral hygiene. ^{1D} Commence metronidazole in the presence of systemic signs and symptoms. ^{1D,2D,3B-,4B+,5A-}	Chlorhexidine 0.12-0.2% ^{1D} OR hydrogen peroxide 6% ^{1D} Metronidazole ^{1D,3B-,4B+,5A-}	See above dosing for mucosal ulceration ^{6D} 400mg TDS ^{1D,2D} ☺	Until pain allows for oral hygiene ^{6D} 3 days ^{1D,2D}
Pericoronitis SDCEP Dental problems	Refer to dentist for irrigation and debridement. ^{1D} If persistent swelling or systemic symptoms, ^{1D} use metronidazole ^{1D,2A+,3B+} or amoxicillin. ^{1D,3B+} Use antiseptic mouthwash if pain and trismus limit oral hygiene. ^{1D}	Metronidazole ^{1D,2A+,3B+} OR amoxicillin ^{1D,3B+} Chlorhexidine 0.2% ^{1D} OR hydrogen peroxide 6% ^{1D}	400mg TDS ^{1D} ☺ 500mg TDS ^{1D} ☺ See above dosing for mucosal ulceration ^{1D}	3 days ^{1D,2A+} 3 days ^{1D} Until pain allows for oral hygiene ^{1D}
Dental abscess SDCEP Dental problems	Regular analgesia should be the first option ^{1A+} until a dentist can be seen for urgent drainage, ^{1A+,2B-,3A+} as repeated courses of antibiotics for abscesses are not appropriate. ^{1A+,4A+} Repeated antibiotics alone, without drainage, are ineffective in preventing the spread of infection. ^{1A+,5C} Antibiotics are only recommended if there are signs of severe infection, ^{3A+} systemic symptoms, ^{1A+,2B-,4A+} or a high risk of complications. ^{1A+} Patients with severe odontogenic infections (cellulitis, ^{1A+,3A+} plus signs of sepsis; ^{3A+,4A+} difficulty in swallowing; ^{6D} impending airway obstruction) ^{6D} should be referred urgently for hospital admission to protect airway, ^{6D} for surgical drainage ^{3A+} and for IV antibiotics. ^{3A+} The empirical use of cephalosporins, ^{6D} co-amoxiclav, ^{6D} clarithromycin, ^{6D} and clindamycin ^{6D} do not offer any advantage for most dental patients, ^{6D} and should only be used if there is no response to first line drugs. ^{6D}	Amoxicillin ^{6D,8B+,9C,10B+} OR phenoxymethylpenicillin ^{11B-} Metronidazole ^{6D,8B+,9C} <i>Penicillin allergy:</i> clarithromycin ^{6D}	500mg-1g TDS ^{6D} ☺ 500mg-1g QDS ^{6D} ☺ 400mg TDS ^{6D} ☺ 500mg BD ^{6D} ☺	Up to 5 days; ^{6D,10B+} review at 3 days ^{9C,10B+}

Evidence base

For references quoted please refer to:

<https://www.gov.uk/government/publications/managing-common-infections-guidance-for-primary-care>

GRADING OF GUIDANCE RECOMMENDATIONS

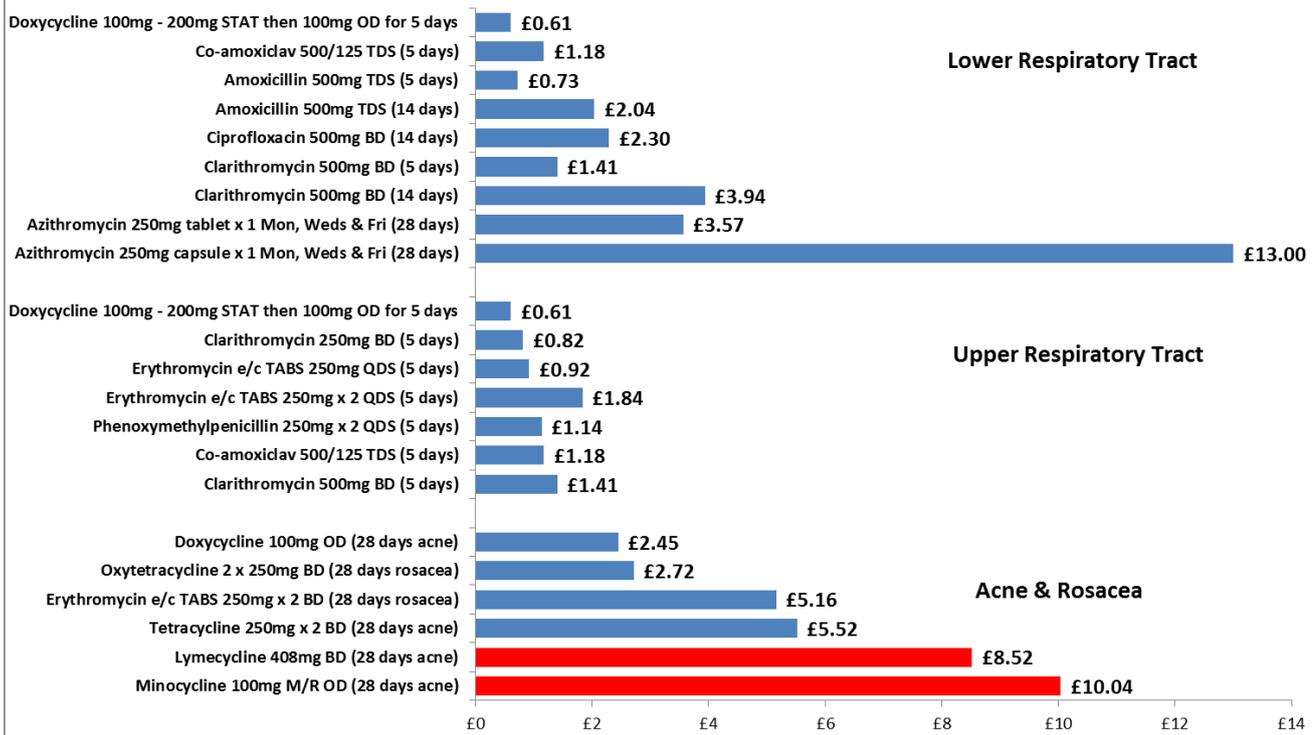
The strength of each recommendation is qualified by a letter in parenthesis.

Study design	Recommendation grade
Good recent systematic review of studies	A+
One or more rigorous studies, not combined	A-
One or more prospective studies	B+
One or more retrospective studies	B-
Formal combination of expert opinion	C
Informal opinion, other information	D

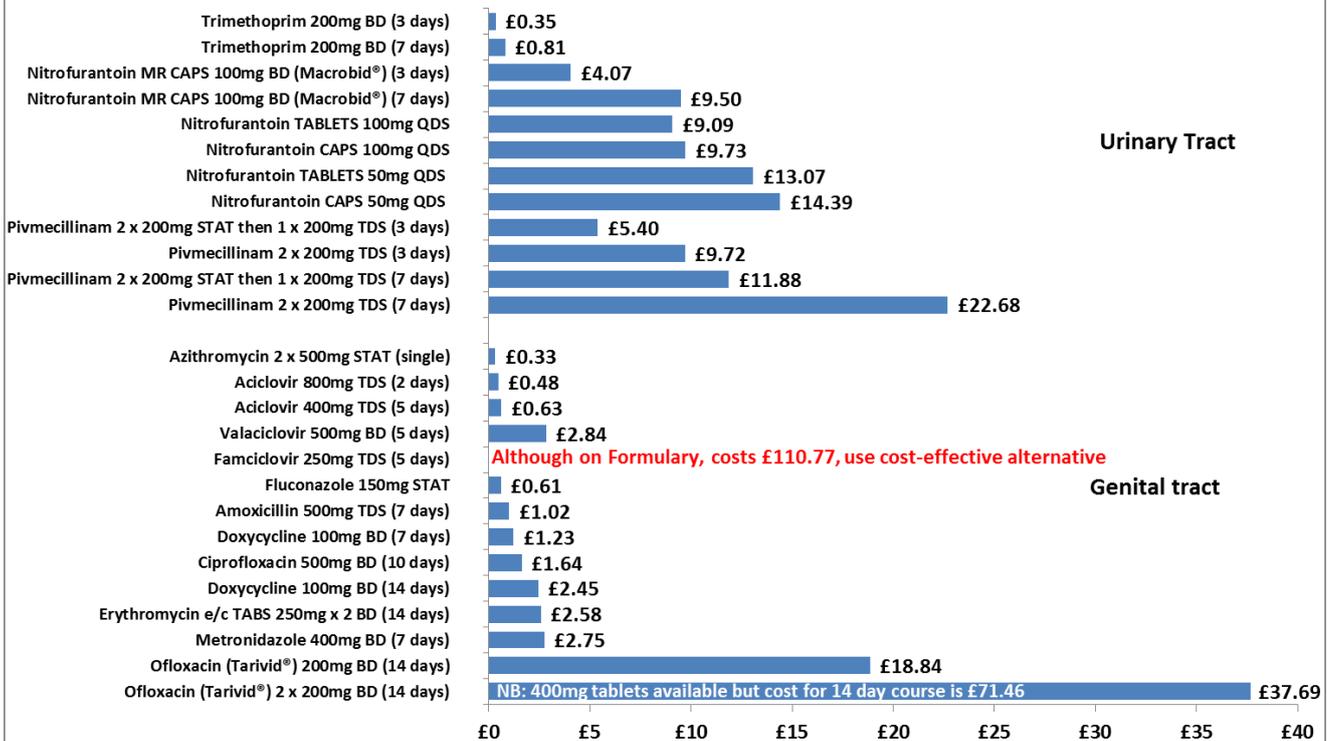
This guidance should not be used in isolation, it should be supported with patient information about back-up / delayed antibiotics, infection severity and usual duration, clinical staff education, and audits. Materials are available on the [RCGP TARGET website](#).

See cost charts on pages 11 & 12.

Comparative Antibiotic Costs by Infection Classification Cost per stated course (£) Feb 2018



Comparative Antibiotic Costs by Infection Classification Cost per stated course (£) Feb 2018



Antibiotic Liquids £ per 100ml Jan 2018

