NHS Blackpool Clinical Commissioning Group

Blackpool Teaching Hospitals NHS NHS Foundation Trust

NHS Fylde and Wyre Clinical Commissioning Group

MANAGEMENT OF INFECTION GUIDANCE FOR PRIMARY CARE
Fylde and Wyre and Blackpool CCGs
January 2017

Aims

To provide a simple, 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 judgement should be used and patients should be involved in the decision.
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 via the BVH switchboard 01253 300000
4. **Prescribe an antibiotic only when there is likely to be a clear clinical benefit.**
5. Consider a 'No' or 'Back-up/Delayed', antibiotic strategy for acute self-limiting upper respiratory tract infections and mild UTI symptoms.
6. **Limit prescribing over the telephone to exceptional cases**
7. Use simple generic antibiotics if possible. Avoid broad spectrum antibiotics (eg. co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase 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. In severe or recurrent cases consider a larger dose or longer course.
9. Child doses are provided when appropriate and can be accessed through the ☺ symbol
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; culture and seek advice.
12. Avoid widespread use of topical antibiotics (especially those agents also available as systemic preparations, e.g. fusidic acid).
13. In pregnancy take specimens to inform treatment; where possible avoid tetracyclines, aminoglycosides, quinolones, *high dose* metronidazole (2 g) unless benefit out ways risks. Short-term use of nitrofurantoin (at term, theoretical risk of neonatal haemolysis) is not expected to cause foetal problems. Trimethoprim is also unlikely to cause problems unless poor dietary folate intake or taking another folate antagonist eg antiepileptic.
14. The doxycycline dose of 100mg bd is a local decision based on effectiveness in all population groups. (The bd dose is in MRSA guidance. Using a standard dose provides an effective dose for all groups, irrespective of risk and reduces the risk of resistance.)

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. Where a 'best guess' therapy has failed or special circumstances exist, microbiological advice can be obtained via the BTH switchboard: 01253 300000

Summary tables – Infections in primary care

ILLNESS	COMMENTS	DRUG	ADULT DOSE ☺ = childrens' dose (Ctrl +click on icon to follow link)	DURATION OF TREATMENT
UPPER RESPIRATORY TRACT INFECTIONS				
Influenza treatment PHE Influenza **For prophylaxis see**: NICE Influenza	**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. At risk: 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, morbid obesity (BMI>=40). Use 5 days treatment with oseltamivir 75mg bd. If resistance to oseltamivir or severe immunosuppression, use zanamivir 10mg BD (2 inhalations by diskhaler 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).			
Acute Sore Throat CKS FeverPAIN	**Avoid antibiotics** as 90% resolve in 7 days without, 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). **Score 0-1:** 13-18% streptococci, use NO antibiotic strategy; **2-3:** 34-40% streptococci, use 3 day back-up antibiotic; **>4**: 62-65% streptococci, use immediate antibiotic if severe, or 48hr short backup prescription. Always share self-care advice & safety net. Antibiotics to prevent Quinsy NNT >4000. Antibiotics to prevent Otitis media NNT 200. 10d penicillin lower relapse vs 7d in <18yrs.	Phenoxymethylpenicillin *Penicillin Allergy:* Clarithromycin	500 mg QDS ☺ or 1G BD (QDS when severe) 250-500mg BD ☺	10 days 5 days
Acute Otitis Media CKS OM NICE feverish children	**Optimise analgesia and target antibiotics** AOM resolves in 60% in 24 h without antibiotics, which only reduce pain at 2 days (NNT15) **and does not prevent deafness.** Consider 2 or 3-day delayed or immediate antibiotics for pain relief if: **<2 years** AND bilateral AOM (NNT4) or bulging membrane and ≥ 4 marked symptoms **All ages** with otorrhoea NNT3 For Abx to prevent Mastoiditis the NNT >4000	Amoxicillin *Penicillin Allergy:* clarithromycin	***Child doses*** Neonate 7-28 days 30mg/kg TDS 1 month-1 yr: 125mg TDS 1-5 years: 250mg TDS 5-18 years: 500mg TDS 12-18years severe infection 1g TDS ***Adult dose*** 250-500mg BD ☺	5 days 5 days
Acute Otitis Externa CKS OE	First use aural toilet (if available) and analgesia. Cure rates similar at 7 days for topical acetic acid or antibiotic +/- steroid. If cellulitis/disease extending outside ear canal, start oral antibiotics & refer to exclude malignant OE	*First Line:* acetic acid 2% *Second Line:* neomycin sulphate with corticosteroid	1 spray TDS 3 drops TDS	7 days 7 days min to 14 days max
Acute Rhinosinusitis CKS RS	**Avoid antibiotics as** 80% resolve in 14 days without, and they only offer marginal benefit after 7 days NNT15 **Use adequate analgesia** Consider 7-day delayed or immediate antibiotic when purulent nasal discharge NNT8 In persistent infection use an agent with anti-anaerobic activity eg. metronidazole	Amoxicillin *or* doxycycline *or* phenoxymethylpenicillin *For persistent symptoms:* Amoxicillin plus metronidazole	500mg TDS ☺ 1g if severe 100mg BD 500mg QDS ☺ 500mg TDS + 400mg TDS ☺	7 days 7 days 7 days 7 days 7 days

ILLNESS	COMMENTS	DRUG	ADULT DOSE ☺ = childrens' dose (Ctrl + click on icon to follow link)	DURATION OF TREATMENT
LOWER RESPIRATORY TRACT INFECTIONS				
Note: *Low doses of penicillins are more likely to select out resistance, we recommend 500mg of amoxicillin. Do **not** use quinolone (ciprofloxacin, ofloxacin) first line due to poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.*				
Acute cough, bronchitis CKS NICE 69	Antibiotic little benefit if no co-morbidity Consider 7d delayed antibiotic with advice Symptom resolution can take 3 weeks. Consider immediate antibiotics if > 80yr and ONE of: hospitalisation in past year, oral steroids, diabetic, congestive heart failure **OR** > 65yrs with 2 of above.	amoxicillin *or* doxycycline	500 mg TDS ☺ 100 mg BD	5 days 5 days
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 Check previous results of sputum culture contact microbiologist if failure to respond / resistant pathogens *Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months*	Amoxicillin *or* doxycycline *or* clarithromycin *If resistance:* Clarithromycin	500 mg TDS 100 mg BD 500mg BD 500mg BD	5 days 5 days 5 days 5 days
Community-acquired pneumonia-treatment in the community BTS 2009 NICE 191	Use CRB65 score to guide mortality risk, place of care and antibiotics. Each CRB65 parameter scores 1: **C**onfusion (AMT<8); **R**espiratory rate >30/min; **B**P systolic <90 or diastolic ≤ 60; Age >**65**; Score 0: Low risk: consider home based care Score 1-2: intermediate risk: consider hospital assessment **Score 3-4: urgent hospital admission** **Always give safety net advice** and likely duration of symptoms. Give immediate IM benzylpenicillin or amoxicillin 1G po if delayed admission/life threatening Mycoplasma infection is rare in over 65s	**IF CRB65=0**: amoxicillin *or* clarithromycin *or* doxycycline **If CRB65=1-2** & AT HOME, **clinically assess need for dual therapy for atypicals:** amoxicillin AND clarithromycin *OR* doxycycline alone	500 mg TDS ☺ 500 mg BD ☺ 100 mg BD 500 mg TDS ☺ 500 mg BD ☺ 100 mg BD	5 days then review. Stop or change If poor response 7 days
URINARY TRACT INFECTIONS – refer to HPA UTI guidance for diagnosis information. As antimicrobial resistance and community E.coli bacteraemia is increasing, use nitrofurantoin first line, always safety net and consider risks for resistance.				
UTI in adults (no fever or flank pain) PHE URINE SIGN CKS women CKS men RCGP UTI clinical module SAPG UTI	**Treat women** with severe/or ≥ 3 symptoms; **women** mild/or ≤ 2 symptoms AND Urine NOT cloudy 97% negative predictive value, do not treat unless other risk factors for infection. If cloudy urine use dipstick to guide treatment. Nitrite plus blood or leucocytes has 92% positive predictive value; nitrite, leucocytes, blood all negative 76% NPV. Consider a back-up/ delayed antibiotic option. **Men**: Consider prostatitis and send pre-treatment MSU OR if symptoms mild/non-specific, use negative dipstick to exclude UTI. **Always safety net.** **Check all previous MSUs.** **First line**: nitrofurantoin if GFR over 45ml/min. GFR 30-45: only use if resistance and no alternative. ***In treatment failure***: always perform culture. **People > 65 years: do not treat asymptomatic bacteriuria;** it is common but is not associated with increased morbidity **Catheter in situ: antibiotics will not eradicate asymptomatic bacteriuria;** only treat if systemically unwell or pyelonephritis likely. Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI or trauma (NICE , SIGN guidance).	**First line: nitrofurantoin if GFR > 45ml/min.** GFR 30-45: only use in caution if resistance and no alternative and benefit outweighs risk – discuss with microbiologist. GFR < 30 or 30-45 and organism susceptible on culture: Trimethoprim If organism susceptible: amoxicillin	100mg m/r BD 200mg BD 500mg TDS	Women all ages 3 days, Men 7 days
		Use nitrofurantoin first line as general resistance and community multi-resistant. Extended-spectrum Beta-lactamase E. coli are increasing. Trimethoprim (if low risk of resistance) is alternative first line agent. **Risk factors for increased resistance include**: care home resident, recurrent UTI, Long-term prophylaxis, catheter use, hospitalisation >7d in the last 6 months, unresolving urinary symptoms, recent travel to a country with increased antimicrobial resistance (outside Northern Europe and Australasia) especially health related, previous known UTI resistant to trimethoprim, cephalosporins or quinolones. **If increased resistance risk,** send culture for susceptibility testing & give safety net advice.		

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Acute prostatitis BASHH, CKS	Send MSU for culture and start antibiotics. 4-wk course may prevent chronic prostatitis. Quinolones achieve higher prostate levels.	Ciprofloxacin *or* ofloxacin 2nd line: trimethoprim	500mg BD 200 mg BD 200 mg BD	28 days 28 days 28 days [1C]
UTI in pregnancy PHE URINE CKS NICE	Send MSU for culture and start antibiotics. Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus. Avoid trimethoprim if low folate status or on folate antagonist (eg antiepileptic or proguanil)	*First line:* nitrofurantoin *IF* susceptible, amoxicillin *Second line:* trimethoprim *Give folate if 1st trimester* *Third line:* cefalexin	100 mg m/r BD 500 mg TDS 200 mg BD (off-label) 500 mg BD	7 days
UTI in Children PHE URINE CKS NICE	**Child <3 months**: refer urgently for assessment **Child ≥ 3 months**: use positive nitrite to guide. Start antibiotics: also send pre-treatment MSU. **Imaging:** only refer if child <6 months, or recurrent or atypical UTI	***Lower UTI****:* trimethoprim ☺ *or* nitrofurantoin ☺ IF susceptible, amoxicillin ☺ Second line: cefalexin ☺ ***Upper UTI****:* co-amoxiclav ☺ Second line: cefixime ☺		*Lower UTI* 3 days *Upper UTI* 7-10 days
Acute pyelonephritis CKS	If admission not needed, send MSU for culture & susceptibility and start antibiotics. If no response within 24 hours, admit. **If ESBL risk** and with microbiology advice consider IV antibiotic via COMMIT	Ciprofloxacin *or* Co-amoxiclav *If lab report shows sensitive:* trimethoprim	500 mg BD 500/125mg TDS 200mg BD	7 days 7 days 14 days
Recurrent UTI in non-pregnant women: 2 in 6 months or ≥ 3 UTIs/year	To reduce recurrence first advise simple measures, including hydration, analgesia, then standby or post-coital antibiotics, then prophylaxis. Cranberry products work for some women, but good evidence is lacking. Methenamine can be used as prophylaxis in patients without renal tract abnormalities. Nightly prophylaxis reduces UTIs but adverse effects and long term compliance is poor. 1. Consider referral for appropriate investigations as to cause before starting long term antibiotics. 2. Carry out blood tests, including U&Es, fasting glucose. 3. GP review 6 monthly and stop for at least one month each year to ensure continued effectiveness, as resistance likely to develop during this time. Consider sending MSU for culture to check sensitivity.	**Susceptibilty results should be used to guide antibiotic choice.** **If eGFR>45, use nitrofurantoin first line if sensitive** *2nd line: If recent culture sensitive:* Trimethoprim. Methenamine hippurate	100 mg At night OR *post-coital* 200 mg Stat (off-label) 1g BD	For 6 months, then review recurrence rate and need. 6 months. NB. Long term prophylaxis should usually be for six months in the first instance, then careful assessment of long term risk, as resistance likely.
MENINGITIS (NICE fever guidelines)				
Suspected meningococcal disease PHE Meningo	**Transfer all patients to hospital immediately.** IF time before admission, and non-blanching rash, give IV benzylpenicillin or cefotaxime, unless definite history of hypersensitivity	IV or IM benzylpenicillin *Or* IV or IM cefotaxime	Age 10+ years: 1200mg Children 1 - 9 yr: 600mg Children <1 yr: 300mg Age 12+ years: 1gram Child < 12 yrs: 50mg/kg	Give IM if vein cannot be found
Prevention of secondary case of meningitis: Only prescribe following advice from Public Health Doctor: 01253 300000				
GASTRO-INTESTINAL TRACT INFECTIONS				
Oral candidiasis CKS	**Topical azoles** more effective than topical nystatin. Oral candidiasis rare in immunocompetent adults; consider undiagnosed risk factors including HIV. Fluconazole if extensive/severe candidiasis; if HIV or immunosuppression use 100mg.	Miconazole oral gel *If miconazole not tolerated* nystatin suspension Fluconazole oral tablets	20mg/ml QDS 400,000 – 600,000 units QDS 50mg OD *or* 100mg OD	7 days or until 2 days after symptoms. 7 days, further 7 days if persistent

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Eradication of Helicobacter pylori NICE dyspepsia NICE H.pylori PHE H.pylori CKS	Treat all positives if known DU, GU low grade MALToma, or NNT in Non-Ulcer dyspepsia (NNT 14 for symptom relief). Consider test and treat in persistent un-investigated dyspepsia. Do not offer eradication for GORD. Do not use clarithromycin, metronidazole or quinolone if used in past year for any infection. **Penicillin allergy**:1 use PPI + clarithromycin & MTZ. If previous clarithromycin use PPI + bismuth salt + metronidazole + tetracycline. **Relapse and previous MTZ & clari:** use PPI + amoxicillin + either tetracycline or levofloxacin. Penicillin allergy: PPI+ tetracycline + levofloxacin. **Retest for H.pylori** post DU/GU or relapse after second line therapy: using breath or stool test OR consider endoscopy for culture & susceptibility.	**Always use PPI.** PPI WITH amoxicillin and either clarithromycin OR metronidazole. *Penicillin allergy & previous Clarithromycin:* PPI WITH De-nol tab® (tripotassium dicitratobismuthate) OR bismuth subsalicylate + metronidazole + Tetracycline hydrochloride *Relapse & previous MTZ+clari:* PPI WITH amoxicillin + tetracycline hydrochloride OR levofloxacin	BD 1g BD 500mgBD 400mg BD BD 240mg BD 525mg QDS 400mg BD 500mg QDS BD 1g BD 500mg QDS 250mg BD	*All for* 7 days *MALToma* 14 days
Infectious diarrhoea CKS	Refer previously healthy children with acute painful or bloody diarrhoea to exclude *E. coli* 0157 infection. **Antibiotic therapy not indicated unless systemically unwell**. 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 (within 3 days).			
Clostridium difficile DH PHE	**MUST CONTACT MICROBIOLOGIST FOR ALL CASES. ALSO DISCUSS USE OF ANY ANTIBIOTIC IN PATIENTS WITH PREVIOUS CDIFF.** Stop unnecessary antibiotics and/or PPIs 70% respond to MTZ in 5days; 92% in 14days. If severe symptoms or signs (below) should treat with oral vancomycin, review progress closely and/or consider hospital referral. Definition of severe: T >38.5; or WCC >15, or rising creatinine or signs/symptoms of severe colitis Complete a PIR form within 10 days of notification of CDI.	*1st episode/ mild/ moderate:* metronidazole (MTZ) *2nd episode/severe/type 027:* oral vancomycin *Recurrent disease see rationale:* oral vancomycin	 400mg or 500mg TDS 125mg QDS 125mg QDS consider taper	 14 days 14 days 14 days
Traveller's diarrhoea CKS	**Only consider standby antibiotics for** remote areas or people at high-risk of severe illness with travellers' diarrhoea. If standby treatment appropriate give ciprofloxacin 500 mg twice a day for 3 days (private Rx). If quinolone resistance high (eg south Asia): consider bismuth subsalicylate (Pepto Bismol) 2 tablets QDS as prophylaxis or for 2 days treatment			
Threadworm CKS 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. Child <6 months add perianal wet wiping or washes 3 hourly during day.	*All patients over 6 months:* mebendazole (off-label if <2yrs) *Child <6 mths*: mebendazole is unlicensed, use hygiene measures alone for 6 weeks	 100 mg	Stat dose, but repeat in 2 weeks if infestation persists
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: < 25y, no condom use, recent (<12mth)/frequent change of partner, symptomatic partner, area of high HIV.			
Chlamydia trachomatis/ urethritis SIGN BASHH PHE, CKS	Opportunistically screen all aged 15-25yrs. Treat partners and refer to GUM service. Pregnancy or breastfeeding: azithromycin is the most effective option. Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment.	Azithromycin *or* doxycycline *Pregnant or breastfeeding:* azithromycin *or* erythromycin *or* amoxicillin	1 g 100 mg BD 1g (off-label use) 500 mg QDS 500 mg TDS	stat 7 days stat 7 days 7 days
Epididymitis	For suspected epididymitis in men over 35 years with low risk of STI (High risk, refer to GUM)	Ofloxacin *or* doxycycline	200 mg BD 100mg BD	14 days 14 days

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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. *Pregnant:* clotrimazole *or* miconazole 2% cream	500 mg pess or 10% cream 150 mg orally 100 mg pessary at night 5 g intravaginally BD	Stat stat 6 nights 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 wks. **Pregnant/breastfeeding**: avoid 2g stat. Treating partners does not reduce relapse	oral metronidazole (MTZ) *or* MTZ 0.75% vag gel *or* clindamycin 2% cream	400 mg BD *or* 2 g stat 5 g applicator at night 5 g applicator at night	7 days stat 5 nights 7 nights
Gonorrhoea	Antibiotic resistance is now very high. Use IM ceftriaxone plus azithromycin and refer to GUM.	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	400 mg BD or 2 g 100 mg pessary at night	5-7 days stat 6 nights
Pelvic Inflammatory Disease BASHH CKS	Refer woman and contacts to GUM service. Always culture for gonorrhoea & chlamydia. If gonorrhoea likely (partner has it, severe symptoms, sex abroad) resistance to quinolones is high, use ceftriaxone regimen or refer to GUM. Avoid doxycycline in pregnancy Nb. Ofloxacin when being started empirically in the community as second line agents should be avoided in patients who are at high risk of gonococcal PID because of increasing quinolone resistance in the UK	Metronidazole PLUS ofloxacin *or* doxycycline *If high risk of Gonorrhoea* ADD ceftriaxone	400 mg BD 400 mg BD 100mg BD 500 mg IM	14 days 14 days 14 days Stat
SKIN INFECTIONS – For MRSA infection see PHE Quick Reference Guide				
Impetigo CKS	For extensive, severe, or bullous impetigo, use oral antibiotics. Reserve topical antibiotics for very localised lesions to reduce the risk of resistance Reserve mupirocin for MRSA	Oral flucloxacillin *If penicillin allergic:* oral clarithromycin ***MRSA only*** *m*upirocin	500 mg QDS ☺ 250-500 mg BD ☺ TDS	7 days 7 days 5 days
Eczema CKS	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			
Cellulitis CKS	**Class I:** patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone. **Class II** febrile & 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.	Flucloxacillin *If penicillin allergic:* Clarithromycin *or* clindamycin *If unresolved:* clindamycin *If facial:* co-amoxiclav	500 mg QDS ☺ 500 mg BD ☺ 600 mg QDS 300-450mg QDS* * = ***discuss with microbiologists*** 500/125 mg TDS ☺	All for 5 – 7 days, then discuss with microbiologist if unresponsive
Leg ulcer PHE CKS	**Ulcers always colonized. Antibiotics do not improve healing unless active infection – inappropriate use of Abx can lead to a C. Diff infection.** **If active infection, send pre-treatment swab.** **Review antibiotics after culture results.**	Active infection if cellulitis/increased pain/pyrexia/purulent exudate/odour *If active infection:* flucloxacillin *or* clarithromycin	 500 mg QDS ☺ 500 mg BD ☺	 } As for cellulitis
MRSA	For MRSA infection: see PHE Quick Reference Guide			
PVL PHE	Panton-Valentine Leukocidin (PVL) is a toxin produced by 4.9% of S. aureus from boils/abscesses. This bacteria can rarely cause severe invasive infections in healthy people; if found suppression therapy should be given. Send swabs if recurrent boils/abscesses. At risk: close contact in communities or sport; poor hygiene.			

ILLNESS	COMMENTS	DRUG	ADULT DOSE ☺ = childrens' dose (Ctrl + click on icon to follow link)	DURATION OF TREATMENT
Bites Human: CKS **Bites Cat or dog:**	Thorough irrigation is important Assess risk of tetanus, rabies, HIV, hepatitis B/C Antibiotic prophylaxis is advised. Give prophylaxis if cat bite/puncture wound; bite to hand, foot, face, joint, tendon, ligament; immunocompromised/diabetic/asplenic/ Cirrhotic/ presence of valve or prosthetic joint.	*Prophylaxis or treatment:* co-amoxiclav *If penicillin allergic:* metronidazole PLUS doxycycline (cat/dog/man) *or* metronidazole PLUS clarithromycin (human bite) AND review at 24 & 48hrs	 375-625 mg TDS ☺ 400 mg TDS ☺ 100 mg BD 200-400 mg TDS 250-500 mg BD ☺	All for 7 days
Scabies CKS	Treat whole body from ear/chin downwards and under nails. If under 2/elderly, also face/scalp. Treat all home and sexual contacts within 24hrs.	permethrin *If allergy:* malathion	5% cream 0.5% aqueous liquid	Two applications one week apart
Dermatophyte infection – skin 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 with specialist, oral therapy indicated.	Topical terbinafine *or* topical imidazole *or (athlete's foot only):* topical undecanoates: Mycota®	BD BD BD	1-2 weeks for 1-2 wks after healing (i.e. 4 - 6 wks)
Dermatophyte infection - nail CKS	Take nail clippings: start therapy only if infection is confirmed by laboratory. Oral terbinafine is more effective than oral azole. Liver reactions rare with oral antifungals. If candida or non-dermatophyte infection confirmed, use oral itraconazole. For children, seek specialist advice.	*First line*: terbinafine *Second line*: itraconazole. *Third line for very superficial as limited evidence of effectiveness:* amorolfine 5% nail lacquer	250mg OD fingers toes 200mg BD fingers toes 1-2x/weekly fingers toes	6 – 12 weeks 3 – 6 months 7 days mnthly 2 courses 3 courses 6 months 12 months
Varicella zoster/chicken pox CKS **Herpes zoster/shingles** CKS	Pregnant/immunocompromised/neonate: seek urgent specialist advice. **Chicken pox:** IF onset of rash <24h & >14y or severe pain or dense/oral rash or 2° household case or steroids or smoker, consider aciclovir **Shingles:** treat if >50 yrs and within 72 hrs of rash (PHN rare if <50yrs); or if active ophthalmic or Ramsey Hunt or eczema.	*If indicated:* aciclovir *Second line for shingles if compliance a problem, as ten times cost* valaciclovir or famciclovir	 800 mg five times a day 1 g TDS 500 mg TDS or 750mg BD	7 days 7 days 7 days
Cold sores	Cold sores resolve after 7–10d without treatment. Topical antivirals applied prodromally reduce duration by 12-24hrs			
EYE INFECTIONS				
Conjunctivitis CKS	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	*If severe:* chloramphenicol 0.5% drops and 1% ointment *Second line:* fusidic acid 1% gel	 2 hourly for 2 days then 4 hourly (whilst awake) at night Two times a day	All for 48 hours after resolution

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

DENTAL INFECTIONS – derived from the Scottish Dental Clinical Effectiveness Programme 2011 SDCEP Guidelines

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)

ILLNESS	COMMENTS	DRUG	ADULT DOSE ☺ = childrens' dose (Ctrl + click on icon to follow link)	DURATION OF TREATMENT
Mucosal ulceration and inflammation (simple gingivitis)	Temporary pain and swelling relief can be attained with saline mouthwash Use antiseptic mouthwash if more severe & 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.	Simple saline mouthwash Chlorhexidine 0.12-0.2% *(Do not use within 30 mins of toothpaste)* Hydrogen peroxide 6% *(spit out after use)*	½ tsp salt dissolved in glass warm water. Rinse mouth for 1 minute BD with 5 ml diluted with 5-10 ml water. Rinse mouth for 2 mins TDS with 15ml diluted in ½ glass warm water	Always spit out after use. Use until lesions resolve or less pain allows oral hygiene
Acute necrotising ulcerative gingivitis	Commence metronidazole and refer to dentist for scaling and oral hygiene advice. Use in combination with antiseptic mouthwash if pain limits oral hygiene.	Metronidazole Chlorhexidine or hydrogen peroxide	400 mg TDS see above dosing in mucosal ulceration	3 days Until oral hygiene possible
Pericoronitis	Refer to dentist for irrigation & debridement. If persistent swelling or systemic symptoms use metronidazole. Use antiseptic mouthwash if pain and trismus limit oral hygiene.	Amoxicillin Metronidazole Chlorhexidine or hydrogen peroxide	500 mg TDS 400 mg TDS see above dosing in mucosal ulceration	3 days 3 days Until oral hygiene possible
Dental abscess[B]	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 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.			
	If pus drain by incision, tooth extraction or via root canal. Send pus for microbiology. *If spreading infection* (lymph node involvement, or systemic signs ie fever or malaise) ADD metronidazole. *True penicillin allergy:* use clarithromycin *If severe*: refer to hospital.	Amoxicillin or Phenoxymethylpenicillin *Spreading infection or allergy:* Metronidazole *True penicillin allergy:* clarithromycin	500 mg TDS 500 mg – 1g QDS 400 mg TDS 500 mg BD	Up to 5 days review at 3 days