C&SR and GP Antimicrobial Prescribing Guideline for Primary Care: January 2018

Principles of treatment:

1. This guidance has been adapted from Public Health England's guidelines: 'Management and treatment of common infections: Antibiotic guidance for primary care'. PHE guidelines are based on the best available evidence but prescribers must 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 empirical therapy had failed or special circumstances exist, microbiological advice can be obtained. See 'useful contact numbers' list.
4. Prescribe an antibiotic only when there is likely to be 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 (e.g. co- amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective , as they increase the 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 a longer course.
9. Doses in this guideline are for adults unless otherwise stated. Child doses are available in the **BNF for children** and can be accessed via the link.
10. Please refer to the **BNF** online 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)

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

Pregnancy:

Some of the recommendations in this guideline are unsuitable for pregnant women (unless otherwise stated).

Please refer to BNF for suitability of antimicrobials in pregnancy. The BNF identifies drugs which may have harmful effects in pregnancy and indicates trimester of risk. The BNF identifies drugs which are not known to be harmful in pregnancy. (no drug is safe beyond all doubt in early pregnancy)

Antimicrobials should only be prescribed in pregnancy if the expected benefit to the mother is thought to be greater than the risks to the fetus. In **pregnancy** take specimens to inform treatment, use this guidance or seek expert advice. **Avoid tetracyclines, quinolones, aminoglycosides, azithromycin (except in chlamydial infection), clarithromycin, high dose metronidazole (2g**) unless the benefits outweigh risks**.** [(1) (2)]

Refer to the BNF for suitability of antimicrobials in the breast-feeding mother.

Doses in this guideline are for adults unless otherwise stated. Refer to the BNF for children for child doses.

UPPER RESPIRATORY TRACT INFECTIONS [1]

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Influenza: PHE Influenza NICE Influenza	**Annual Vaccination** is essential for all those 'at risk' of influenza see PHE guidance for definition of 'at risk' **Antivirals** are not recommended for healthy adults. Treat "at risk" patients as per NICE guidelines		
Acute sore throat NICE CKS FeverPAIN Scoring Tool NICE RTIs	Acute sore throat is usually caused by a viral or a bacterial infection. Non-infectious cases are uncommon. Sore throat due to a viral or bacterial cause is a self-limiting condition. Symptoms resolve in 82% of cases in 7 days irrespective of whether or not the sore throat is due to a streptococcal infection. Adequate analgesia and fluids will usually be all that is required. A systematic 'antibiotics for sore throat' review found that antibiotics shortened the duration of symptoms by 16 hours overall [30] [31] **Always share self-care advice & safety net.** **FeverPAIN score** Clinical scoring systems can be used to help decide whether to prescribe an antibiotic. PHE recommend using the FeverPAIN score **F**ever in last 24 hours, **P**urulence, **A**ttend rapidly under 3 days, severely **I**nflamed tonsils, **N**o cough or coryza Score 0-1: use NO antibiotic strategy with discussion; Score 2-3: use 3 day back-up antibiotic with discussion; Score ≥4: use immediate antibiotic if severe, or 48hr short back-up prescription.	Phenoxymethylpenicillin 500mg QDS (Note: A dose of 1g BD for 5 – 10 days can be prescribed but only in cases of sore throat which is less severe) **Penicillin allergy**: Clarithromycin 250mg – 500mg BD	5 - 10 days (In patients <18 years; 10 days penicillin has a lower relapse than 5 days) 5 days
Scarlet fever (GAS) PHE Managing outbreaks in schools and nurseries	Prompt treatment with appropriate antibiotics significantly reduces complications. Observe immunocompromised individuals, patients with co-morbidities e.g. diabetes, patients with skin lesions such as chickenpox or wounds, injecting drug users and women in the puerperal period as they are at increased risk of developing invasive infection.	First line (mild) : analgesia Phenoxymethylpenicillin 500mg QDS **Penicillin allergy**: Clarithromycin 250mg – 500mg BD	 10 days 5 days

PHE Scarlet fever NICE CKS		The above are adult doses. Please refer to the latest **BNF for children** for up to date and accurate child dose	
Acute Otitis Media (2) (12) CKS OM-Acute NICE feverish children NICE RTIs	Optimise analgesia and target antibiotics. AOM resolves in 60% of cases in 24hrs without antibiotics. Antibiotics only reduce pain at 2 days and do not prevent deafness. Consider 2 or 3-day delayed antibiotics. **Consider immediate antibiotics if:** • <2 years AND bilateral AOM • bulging membrane • symptom score >8 for fever, tugging ears, crying, irritability, difficulty sleeping, less playful, eating less (0 = no symptoms, 1 = a little, 2 = a lot) • All ages with otorrhoea **Offer immediate antibiotics to patients:** -who are systemically unwell but do not require admission -who are at high risk of serious complications due to co-morbidities -whose symptoms have lasted ≥4 days and aren't improving	Amoxicillin **Penicillin Allergy**: Erythromycin OR Clarithromycin (immediate release medicines) Please refer to the latest **BNF for children** for up to date and accurate child dose	5 Days 5 Days 5 Days
Acute Otitis Externa (2) NICE CKS OE	First use analgesia and apply localised heat (e.g. a warm flannel) Second line: topical acetic acid or topical antibiotic +/- steroid. Cure rates at 7 days are similar with both. If cellulitis or disease extends outside the ear canal or systemic signs of infection start oral flucloxacillin and refer to exclude malignant OE	**First line:** Analgesia for pain relief **Second Line :** **Topical Acetic acid 2%** (≥12 years) (EarCalm spray® can be bought OTC) :1 spray TDS **OR** **Topical Neomycin sulphate with corticosteroid**. Choices include: -Neomycin plus Acetic acid plus Dexamethasone (Otomize ®): 1 spray TDS or -Neomycin plus Betamethasone (Betnesol N ®): 3 drops TDS **If cellulitis:** Flucloxacillin 250mg QDS. **If severe cellulitis**: Flucloxacillin 500mg QDS	7 Days 7 days minimum to 14 days maximum 7 days minimum to 14 days maximum 7 days 7 days
Sinusitis (acute) (19)	**Patients presenting with symptoms for ≤10 days:** Do not offer antibiotics and give advice that sinusitis is usually caused by a virus and most cases resolve in 2.5 weeks without antibiotic **Patients presenting with symptoms for ≥10 days with no improvement;**	Self-care (paracetamol/ibuprofen for pain/fever) and give safety net advice Phenoxymethylpenicillin 500mg QDS	5 days

NICE CKS Acute Sinusitis NICE NG79	No antibiotic or prescribe a back-up antibiotic when multiple factors (purulent nasal discharge, severe localised unilateral pain, fever, marked deterioration after initial milder phase) suggest a bacterial cause. **Systemically very unwell, or more serious signs and symptoms or at high risk of complications**: Give immediate antibiotic **Suspected complications**: e.g. sepsis, intraorbital, periorbital or intracranial complications: Refer to hospital immediately	**Penicillin allergy or intolerance**: Doxycycline: 200mg STAT then 100mg OD ***OR*** Clarithromycin 500mg BD ***Very unwell or worsening:*** Co-amoxiclav 500/125mg TDS	5 Days 5 days 5 days

LOWER RESPIRATORY TRACT INFECTIONS [1]

NOTE: Low doses of penicillin are more likely to select for resistance. Do **not** use quinolones (ciprofloxacin, ofloxacin) first line due to poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Acute Cough and Bronchitis NICE 69 NICE CKS acute bronchitis NICE CKS acute cough	Antibiotics have little benefit if no co-morbidity. Consider 7day delayed antibiotic with safety net advice. Symptom resolution can take 3 weeks. Consider immediate antibiotics if >80 years and ONE of: hospitalisation in past year, currently taking oral steroids, Type 1 or Type 2 Diabetes mellitus, congestive heart failure, serious neurological disorder/stroke **OR**> 65years with 2 of above.	First line: self-care and safety netting advice Second line: Amoxicillin 500mg TDS OR **If penicillin allergy:** Doxycycline 200mg STAT then 100mg OD	 5 Days 5 Days
Acute exacerbation of COPD [1] [13] NICE COPD CG101 GOLD COPD	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-morbidity, severe COPD, frequent exacerbations, and antibiotics in last 3 months.	Amoxicillin 500mg TDS ***OR*** Doxycycline 200 mg STAT then 100mg OD ***OR*** Clarithromycin 500mg BD **Doxycycline** is first choice if recent treatment with a beta-lactam antibiotic or if penicillin allergic [3] [4] If resistance: Co-Amoxiclav 500/125 mg TDS	5 Days 5 Days 5 Days 5 Days
Community-acquired pneumonia in Adults : treatment in the community	Use CRB65 score to guide mortality risk, place of care & antibiotics. Each CRB65 parameter scores1: **C**onfusion (AMT<8); **R**espiratory rate >30/min; **B**P 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. For example most	**If CRB65=0:** **First Line**: Amoxicillin 500mg TDS **If penicillin allergic:** Clarithromycin 500mg BD **OR** Doxycycline 200mg STAT then 100mg OD	 5 days. Review at 3 days & extend to 7-10 days if poor response

(1)(13) BTS guidelines NICE 191	patients can expect that at 6 weeks the cough should have substantially reduced. (see NICE CG 101 for expected duration of all symptoms) Mycoplasma infection is rare in >65s.	**If CRB65=1,2** and AT HOME Clinically assess the need for dual therapy for atypicals: Amoxicillin 500mg TDS **AND** clarithromycin 500mg BD **OR** Doxycycline alone: 200mg STAT then 100mg OD	 7-10 days 7-10 days

URINARY TRACT INFECTIONS [1] – refer to PHE UTI guidance for diagnosis information [14]

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
UTI (lower) in Adults: Men and Non-Pregnant Women PHE Urine SIGN CKS Women CKS Men RCGP UTI Clinical Module SAPG UTI TARGET UTI Treating Your Infection leaflet	Antimicrobial resistance and Escherichia coli bacteraemia in the community is increasing. ALWAYS give safety net and self-care advice and consider risks for resistance. Advise symptomatic relief with analgesia **Refer to PHE diagnosis of UTIs quick reference guide:** PHE Urine **Women with severe/or ≥3 symptoms: Give empirical antibiotic treatment.** **Women under 65 years of age with mild/or <2 symptoms**: Cloudy Urine If urine is cloudy, use dipstick to guide treatment: • Positive nitrite and leucocyte and blood or Positive Nitrite alone. UTI likely. **Give empirical antibiotic treatment.** • Negative Nitrite Positive leukocyte. UTI or other diagnosis equally likely. Treat if severe symptoms, or consider delayed antibiotic prescription and send urine for culture • If nitrite, leucocytes, blood all negative OR Negative nitrite and leukocyte; positive blood or protein. UTI is unlikely. Consider other diagnosis. Urine NOT cloudy. UTI is unlikely. Consider other diagnosis. **Men:** Send urine for culture if suspected UTI in men. **Give empirical antibiotic treatment.** **Men** <65 years: consider prostatitis and send MSU OR if symptoms are mild/ non – specific, use negative dipstick to exclude UTI. **Adults >65 years**: treat if fever ≥ 38 ^{0}C or 1.5 ^{0}C above base twice in 12 hours AND ≥ 1 other symptom **In treatment failure: always perform culture.** [14] [18] [32]	**Fist line in adult male and non-pregnant female patients:** Nitrofurantoin if GFR >45ml/min 100mg Modified Release BD OR 50mg (standard release) QDS . **Second Line** If **low risk** of resistance (see below): Trimethoprim 200mg BD **If nitrofurantoin or trimethoprim unsuitable**: Pivmecillinam 400mg STAT then 200mg TDS	Women : 3 days Men: 7 days
		Low Risk of Resistance: Younger women with acute UTI and no resistance risks **Risk factors for increased resistance include**: age>65 years, care home resident, recurrent UTI, (2 in 6 months; ≥ 3 in 12 months),hospitalisation >7days in the last 6 months, unresolving urinary symptoms, recent travel to a country with increased antimicrobial resistance, previous UTI resistant to trimethoprim, cephalosporins or quinolones. **If risk of resistance**, send urine for culture and susceptibilities and give safety net advice. **Nitrofurantoin and Renal Impairment**; avoid nitrofurantoin if GFR < 45ml/min. If GFR 30-44ml/min: only use with caution for short courses (3-7 days) to treat uncomplicated lower UTI **if** resistance and no alternative. [2] [6]	

UTI in patients with catheters; 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. Take sample if new onset of delirium or one or more symptoms of UTI			
Acute prostatitis CKS Prostatitis - Acute	Obtain an MSU for culture and start antibiotics. 4 week course may prevent chronic prostatitis. Quinolones achieve high prostate levels.	Ciprofloxacin 500mg BD OR Ofloxacin 200mg BD 2nd line: Trimethoprim 200mg BD	28 Days 28 Days 28 Days
UTI (lower) in pregnancy PHE Urine NICE CKS - Women UKtis - Antibiotic use in pregnancy SIGN UTI	Symptomatic bacteriuria occurs in 17 -20 % of pregnancies (17) Suspected UTI in pregnant women: Obtain an MSU for culture & sensitivity AND start antibiotics. Send MSU for culture 7 days after antibiotic treatment course has completed as a test of cure. Treat asymptomatic bacteriuria detected during pregnancy with an antibiotic (18) Nitrofurantoin: Short term use of nitrofurantoin in pregnancy is not expected to cause problems to the foetus. The BNF recommends that nitrofurantoin should be avoided at term, because of the risk of neonatal haemolysis. Avoid if GFR <45ml/min (1) (2) (5)	Nitrofurantoin (AVOID at TERM) 100mg Modified Release BD or 50mg (standard release) QDS **OR** Cefalexin500mg BD (3) (4) Alternatives can be considered according to sensitivities or consult with microbiology. It is essential to consider potential risks to the foetus with any alternatives to the above choices.	7 days
UTI in children PHE Urine NICE 54	**CHILD <3 months:** refer urgently to the care of paediatric specialists (16) **CHILD ≥3 months:** use positive nitrite dipstick to guide antibiotic use. Send pre-treatment MSU. **Imaging:** refer if child < 6 months, or recurrent or atypical UTI **Refer to PHE diagnosis of UTIs quick reference guide:** PHE Urine	**Lower UTI:** **First Line**: Nitrofurantoin OR Trimethoprim As nitrofurantoin oral suspension is costly, if the child requires oral medication in liquid form, consider using trimethoprim as first choice **Second line**: Cefalexin **Upper UTI:** Refer to paediatrics to: obtain a urine sample for culture; assess for signs of systemic infection; consider systemic antimicrobials	Lower UTI 3 days
Acute Pyelonephritis **CKS-acute pyelonephritis >16yrs**	-Arrange admission if this is indicated. (see **CKS**) -If admission not needed obtain an MSU for culture & susceptibility AND then start empirical antibiotics -If no response OR deterioration within 24 hours, **admit.** **Admit pregnant women** with acute pyelonephritis, for at least a short observation period, because of the risk of preterm labour and maternal renal complications (11)	Non-Pregnant Women, Men and patients with indwelling catheters: Ciprofloxacin 500mg BD **OR** Co-amoxiclav 500/125 mg TDS	7 Days 7 Days

SKIN INFECTIONS [1]

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Impetigo NICE CKS	-Use topical antibiotics for localised lesions to reduce the risk of resistance. Only use mupirocin if impetigo has been caused by MRSA -Use oral antibiotics for extensive, severe, or bullous impetigo infection.	Topical fusidic acid 2% cream Apply TDS **MRSA only**: Mupirocin 2% ointment. Apply TDS (manufacturer advises caution when used in moderate or severe renal impairment as it contains polyethylene glycol. Do not use in conditions where large quantities of absorption of polyethylene glycol is possible) [2] [24] Oral Flucloxacillin 250mg - 500mg QDS ***If penicillin allergic:*** Oral clarithromycin 250mg -500mg BD	5 Days 5 Days 7 Days 7 Days
Eczema CKS NICE Eczema	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 oral flucloxacillin or clarithromycin or topical treatment (as in impetigo).		
Cellulitis and erysipelas **NICE CKS Cellulitis - Acute**	**Class I:** If patient afebrile and otherwise healthy, use oral flucloxacillin (if not allergic) alone **Class II**: Patient is febrile and ill, or well but with comorbidity: admit for IV treatment. **Class III or Class IV**: admit. **If fresh water or sea water exposure, seek advice from local microbiologist.** For management of cellulitis and for those groups who require admission to hospital - Follow NICE CKS Cellulitis Acute Erysipelas: Is often facial and unilateral. If non-facial erysipelas, use flucloxacillin.	Flucloxacillin 500mg QDS ***If penicillin allergic:*** Clarithromycin 500mg BD ***If on statins and penicillin allergic***: doxycycline 200mg STAT then 100mg OD ***If unresolving***: clindamycin 300mg QDS ***If facial (non-dental):*** *co-amoxiclav* 500/125mg TDS	All for 7 Days; if slow response continue for a further 7 days

Leg ulcer PHE Venous Leg Ulcer	Ulcers are always colonised. Antibiotics do not improve healing unless there is active infection. Therefore antibiotics should only be prescribed in cases of active clinical infection. Signs of active infection include: cellulitis, increased pain, pyrexia, increased exudate, increased odour or enlarging ulcer with abnormal bleeding or bridging granulation tissue. *If patient has signs of active infection, send pre-treatment swab, start treatment and then Review antibiotics after culture results*	***If active infection:*** Flucloxacillin 500mg QDS **OR** Clarithromycin 500mg BD	for 7 Days; if slow response continue for a further 7 days
Acne **NICE CKS Acne Vulgaris**	**Mild (open and closed comedones) or moderate (inflammatory lesions)** **First line:** self-care. Wash with mild soap, do not scrub, avoid make-up. **Second line:** topical retinoid or benzoyl peroxide. (Mild acne: topical benzoyl peroxide should be purchased Over-The-Counter as per CCG LPP policy C&SR and GP CCG Low Priority prescribing policy) **Third line:** add topical antibiotic combined with topical retinoid or benzoyl peroxide or consider addition of oral antibiotic combined with topical retinoid or benzoyl peroxide **Severe (nodules and cysts)** refer to specialist – while waiting for specialist assessment add oral antibiotic (for 3 months maximum) in combination with topical benzoyl peroxide or retinoid	**First line**: Self-care advice **Second line:** Topical Benzoyl peroxide 5% w/w gel. Apply after washing either OD – BD depending on the product used. Note there is a variation in the licensing of different benzoyl peroxide products. **OR** Topical benzoyl peroxide wash 5% w/w gel. Wash the affected area BD For stubborn cases treatment may be continued with Benzoyl Peroxide 10 % w/w provided 5% has been well tolerated – apply 10% OD **(Mild acne: topical benzoyl peroxide should be purchased OTC as per CCG LPP policy)** **OR** Topical retinoid Apply Thinly OD **Third line:** Topical clindamycin 1% w/w gel apply thinly OD **OR** Topical clindamycin 1% w/v topical solution or topical lotion apply thinly BD **If treatment failure or severe;** Oral tetracycline 500mg BD **OR** Oral doxycycline 100mg OD	 6 – 8 weeks 6 - 8 weeks 6 – 8 weeks 12 weeks 12 weeks 6 - 12 weeks 6 - 12 weeks

MRSA **NICE CKS MRSA in Primary Care**	For MRSA infection, Contact microbiology for advice. Do not prescribe empirically		
PVL-SA **PHE**	Panton-valentine leucocidin (PVL) is a toxin produced by 20.8 – 46 % of S. aureus from boils/abscesses. PVL strains are rare among healthy people but mainly severe. Suppression therapy should only be started after the primary infection has resolved as therapy is ineffective if skin lesions are still leaking. Risk factors for PVL: recurrent skin infections, invasive infections, men who have sex with men, injecting drug users and if there is more than one case in a home or close community (e.g. school children, military personnel, nursing home residents, household contacts of individuals with PVL-SA disease)		
Bites **CKS: Bites - Human and Animal**	Thorough irrigation with warm, running water is important. Assess whether the wound is infected. Determine whether the patient is at increased risk of the wound becoming infected, either due to the nature of the bite or due to a medical condition. **Specialist advice should be sought for children under the age of 12 years** Human bite: Antibiotic prophylaxis is advised. Assess risk of tetanus, rabies, HIV, hepatitis B&C Prescribe prophylactic antibiotic if the wound is <72 hours old even if there is no sign of infection Cat/Dog Bite: always give antibiotic prophylaxis with Cat Bites. Give antibiotic prophylaxis in Dog bite if; puncture wound, bite to hand, foot, face, joint, tendon or ligament; immunocompromised, asplenic, cirrhotic patient or presence of prosthetic valve or prosthetic joint. Prescribe prophylactic antibiotic for cat/dog bite: if the wound <48 hours old and if risk of infection is high. Assess risk of tetanus /rabies.	**Prophylaxis or treatment**: Human or Cat/Dog Bite: Co-amoxiclav 375mg - 625mg TDS ***If penicillin allergic;*** Human bite: Metronidazole 400mg TDS PLUS Clarithromycin 250mg – 500mg BD Cat/Dog Bite**:** Metronidazole 400mg TDS PLUS Doxycycline 100mg BD **In penicillin allergy**: review all bites at 24 and 48 hours after starting the antibiotic course as the recommended regimen covers the majority, but not all, of the likely pathogens from human and cat/dog bites.	ALL FOR 7 DAYS
Scabies **NICE CKS Scabies**	Treat whole body from ear/chin downwards and under nails. If under 2/elderly, also treat face/scalp. Treat all home and sexual contacts within 24hr	Permethrin 5% w/w cream ***If Permethrin allergy;*** Malathion 0.5% w/w aqueous liquid	2 Applications 1 week apart
Mastitis **NICE CKS Mastitis and Breast Abscess**	Staphylococcus Aureus is the most common infecting pathogen. Suspect mastitis if the woman has a painful breast, fever and/or general malaise, a tender, red breast. Mastitis in the lactating female: where indicated antibiotics are appropriate. Women should continue breastfeeding, including from the affected breast. Refer to the BNF for suitability of antimicrobials in the breast feeding mother	Flucloxacillin 500mg QDS **If Penicillin allergy** Erythromycin 250mg – 500mg QDS **OR** Clarithromycin 500mg BD	10 - 14 days 10 – 14 days 10 – 14 days
Fungal skin infection (2) (27) (28)	**Patients should buy treatment for athletes foot, unless they have an exception as listed in LPP CCG policy** C&SR and GP CCG Low Priority prescribing policy	**Fungal skin infection:** Topical terbinafine 1% cream Apply thinly OD - BD (topical terbinafine is not licensed for use in	1 week (tinea pedis) 1 -2 weeks (tinea corporis)

NICE CKS Fungal Skin Body and Groin NICE CKS Fungal skin Foot NICE CKS Fungal skin Scalp PHE Fungal skin and nail infections	Mild, non-extensive disease: treat with topical imidazole or topical Terbinafine. Topical terbinafine is preferred as terbinafine is fungicidal and so the treatment time is shorter than with fungistatic imidazoles (clotrimazole, miconazole) If Candida is possible use imidazole. In adult with severe or extensive disease or where topical treatment has failed: send skin scrapings and if infection confirmed, use oral terbinafine or itraconazole. (monitor hepatic function) **Seek specialist advice for child** Scalp Infection: Send skin scrapings, discuss with specialist, oral therapy indicated Systemic absorption from topical miconazole may occur therefore use with caution, if no other alternatives available, in patients on coumarin anticoagulants and monitor INR closely	children) **OR** Topical Imidazole e.g. Clotrimazole 1% w/w cream Apply BD **Athletes Foot** Topical Undecanoates (for athletes foot only) (e.g. Mycota cream -Apply BD)	1 -2 weeks (tinea cruris)[2] 2 weeks at least (candida infections) 4 weeks at least (dermatophyte infections) [26] Continue use for 7 days after signs of infection has disappeared [2]
Fungal nail infection (2) (27) (28) **NICE CKS Fungal nail**	Self-care alone may be appropriate for people who are not bothered by the infected nail or who wish to avoid the possible adverse effects of drug treatment.[28] See **NICE CKS Fungal nail** for self-care advice Take nail clippings; start therapy only if infection is confirmed by laboratory Oral terbinafine is more effective than oral azoles Medication can cause unpleasant adverse effects. See BNF for further information. If candida or non-dermatophyte infection confirmed, use oral itraconazole Recurrent episodes: As this may be due to tinea pedis, once the infection has been eradicated, consider application of a topical antifungal cream once or twice a week to entire toe area. **For children seek specialist advice**	***First Line:*** Oral terbinafine 250mg OD Monitor hepatic function before treatment and then every 4 – 6 weeks during treatment. Discontinue if abnormalities in Liver function tests [2] ***Second line:*** Oral Itraconazole 200mg BD Monitor hepatic function. Potentially serious hepatotoxicity reported very rarely. Discontinue if signs of hepatitis develop. [2]	6 weeks for fingers 12 weeks for toes 7 days. Subsequent courses repeated after 21 day interval. 2 courses for fingers 3 courses for toes Stop treatment when continual, new, health proximal nail growth occurs
Varicella zoster/ chicken pox **CKS - chicken pox**	**Pregnant/ immunocompromised/ neonate: seek urgent specialist advice** **Chicken pox:** Consider Aciclovir if: Onset of the rash < 24hrs AND one of the following criteria : >14years, severe pain, dense/ oral rash, patient is taking steroids or patient is a smoker. These patients are at increased risk of complications. **Shingles within 72 hours of rash onset:** Treat all patients ≥ 50 years. Treat	**If treatment is indicated for Chicken pox or Shingles:** **First line** Aciclovir 800mg five times a day (Although not licensed for treatment of herpes zoster in children, the BNF for children gives	

Herpes Zoster/ shingles NICE CKS Shingles PCDS clinical guidance: herpes-zoster	patients <50 years with any of the following criteria: Ophthalmic zoster, Ramsey Hunt syndrome (contact on-call ENT), eczema, non-truncal involvement, moderate or severe pain, moderate or severe rash. **Shingles treatment if not within 72 hours:** Consider starting antiviral treatment up to one week after rash onset: if high risk of severe shingles or complications (continued vesicle formation, older age, immunocompromised, severe pain)	dosing advice in children) **Second line for Shingles** - taking in account compliance issues and cost. (Valaciclovir and famciclovir are both many times more expensive than aciclovir) Valaciclovir 1g TDS (not licensed for treatment of herpes zoster in children) **OR** Famciclovir 250mg -500mg TDS or 750mg BD (not licensed for treatment of herpes zoster in children)	All 7 days
Cold sores	Self-care unless immunocompromised or under 12. C&SR and GP CCG Low Priority prescribing policy Cold sores usually resolve after 5 days without treatment. Topical antivirals applied prodromally can reduce duration by 12-18 hours.		

EYE INFECTIONS [1]

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Conjunctivitis [7] NICE CKS conjunctivitis-infective	First line: self-care. Bath or clean the eyelids with cotton wool dipped in sterile saline or boiled and cooled water to remove any crusting. Treat only if severe, as most cases are viral or self- limiting. Bacterial conjunctivitis is usually unilateral and also self-limiting. It is characterised by red eye with mucopurulent, not watery discharge **Unless the patient is pregnant, breastfeeding or under 2 years of age, patients with uncomplicated conjunctivitis who require chloramphenicol eye drops should be advised to purchase these Over-the-Counter** C&SR and GP CCG Low Priority prescribing policy Fusidic acid has less Gram-negative activity and for this reason it should be used as third line choice after second line chloramphenicol.	***First line:*** *self-care as described in notes and general advice section* ***Second line:*** Chloramphenicol 0.5% eye drops : 1 drop 2 hourly for 2 days then reduce frequency to 1 drop 3 – 4 times a day **OR** Chloramphenicol 1% ointment : Apply Once each night (if chloramphenicol eye drops are used during the day) Alternatively: (if ointment used alone) Apply 3 – 4 times a day ***Third line:*** Fusidic acid 1% viscous eye drops: Apply BD	All for 48 hours After resolution
Blepharitis [29] NICE CKS blepharitis	First line: lid hygiene self-care measure for symptom control, including warm compresses, lid massage and gentle washing. Eyelid scrubs or wipes can be used to clear away the scales on the lashes. Advise the patient to avoid eye make-up especially eyeliner and to avoid contact lens wear especially during the acute inflammatory episode. Second line: antibiotic eye ointment/drops if hygiene measures are ineffective after 2 weeks. **If there are signs of** Meibomian gland dysfunction or acne rosacea, consider oral antibiotics e.g. tetracyclines	**First-line:** Self-care **Second-line:** Chloramphenicol 1% eye ointment – apply BD (Drops may be less effective, as they will be in contact with the lid margin for less time) **Third-line/Signs of Meibomian gland dysfunction or acne rosacea** Oxytetracycline 500mg BD for 4 weeks thereafter reduce to 250mg BD for a further 8 weeks OR Doxycycline 100mg OD for 4 weeks thereafter reduce to 50mg OD for a further 8 weeks	6 week trial

Meningitis [1] (NICE fever guidelines)

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Suspected Meningococcal disease PHE Meningo NICE Guidance CG102	**Transfer all patients to hospital immediately.** IF there is time before hospital admission, and non-blanching rash give IV benzylpenicillin or IV cefotaxime. Do not give antibiotics if there is a definite history of anaphylaxis , history of rash is not a contra-indication	**IV or IM Benzylpenicillin** Adults and Children ≥ 10 years: 1.2 gram Children 1- 9 year: 600mg Children < 1 year: 300mg **OR** **IV or IM cefotaxime** Adults and Children ≥ 12 years: 1 gram Child < 12 years: 50mg/kg	STAT dose (Give IM if vein cannot be found) STAT dose (Give IM if vein cannot be found)
Prevention of secondary case of meningitis: Only prescribe following advice from the Local Health Protection Team Doctor: Tel: 0344 225 0562 Select Option 2. Note – if calling out of hours directions to the out of hours number will be given.			

GASTRO-INTESTINAL TRACT INFECTIONS [1]

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
Oral Candidiasis CKS	Topical azoles are more effective than topical nystatin. Oral candidiasis rare in immunocompetent adults; consider undiagnosed risk factors including HIV. Miconazole (including oral gel) greatly enhances the anticoagulant effect of coumarins. e.g. warfarin. Avoid concomitant use. [2] **MHRA alert 26th September 2017: Over-the-counter Miconazole oral gel is contra-indicated in patients taking coumarin anticoagulants e.g. warfarin** Treat with fluconazole if the oral candidiasis is extensive or severe or if the patient has HIV or is immunocompromised. Fluconazole has a number of significant drug interactions – check the BNF before prescribing	Miconazole oral gel 20mg/g. Child >2 years and Adults: 2.5ml QDS after meals **Confirm patient is Not on Coumarin therapy** [2] **Unless patient has an exception, miconazole oral gel should be bought Over-the-Counter for oral candidiasis** – C&SR and GP CCG Low Priority prescribing policy ***If miconazole not tolerated or C-I/caution:*** Nystatin oral suspension 100,000 units/ml 1ml QDS Fluconazole oral 50mg OD (If oral candidiasis is extensive or severe) Fluconazole oral 100mg OD (if HIV or immunosuppression)	7 days (and advise patient to continue treatment for 7 days after lesions have healed or symptoms have resolved. 7 days (and advice patient to continue treatment for 2 days after lesions have healed or symptoms have resolved. 7 days – extend for further 7 days if persistent. (refer to oral surgeon if symptoms persist after this) 7 days – extend for further 7 days if persistent. (refer to oral surgeon if symptoms persist after this)
Helicobacter Pylori [4] [10] [21] NICE dyspepsia NICE H. Pylori PHE HPylori	The presence of H.Pylori should be confirmed before starting eradication therapy Do not use clarithromycin, metronidazole or quinolone if used in past year for any infection. **Retest for H. Pylori** post DU/GU or relapse after second line therapy: using urea breath test (most accurate) or stool helicobacter antigen test (an alternative) OR consider endoscopy for culture and susceptibility For children: refer to specialist for advice. [10]	**Always use PPI TWICE DAILIY** *Helicobacter pylori* eradication regimens consist of a proton pump inhibitor (PPI) together with a combination of antibiotics (taking into account previous exposure to antibiotics within the last year). Ensure the patient is aware of the importance of compliance with the prescribed regimen. [33] Refer to PHE HPylori quick reference guide for	Refer to PHE HPylori quick reference guide for duration

quick reference guide		guidance on choice of eradication regime For relapses discuss with specialist before initiating treatment Use of bismuth subsalicylate tablets as part of a H.Pylori eradication regime is off-label.	
Infectious diarrhoea CKS	Refer previously healthy children with acute painful or bloody diarrhoea to exclude E.coli 0157 infection. **Antibiotic therapy is not usually indicated unless the patient is systemically unwell.** If systemically unwell and campylobacter suspected (e.g. Undercooked meat and abdominal pain),consider clarithromycin 250-500mg BD for 5-7 days if treated early.(within 3 days)		
Clostridium Difficile PHE clostridium difficile DH diagnosis and reporting guidance	Stop unnecessary antibiotics, PPIs and antiperistaltic agents. Supportive care should be given, including attention to hydration, electrolytes and nutrition. Patients with mild disease may not require specific C. difficile antibiotic treatment. If treatment is required, oral metronidazole is recommended. For patients with moderate disease, metronidazole is recommended. For patients with severe disease (see below for criteria) treat with oral vancomycin, review progress closely and consider hospital referral. The following symptoms should be used to indicate severe CDI: Temperature > 38.5; WCC > 15 x 10^9/L, acutely rising serum creatinine or signs/symptoms of severe colitis. [22]	***Mild/ Moderate*** (1st episode) Metronidazole 400mg TDS ***Recurrent CDI/ severe/ type 027*** oral vancomycin 125mg QDS Severe CDI patients who are considered at high risk of recurrence/ severe CDI case not responding to oral vancomycin: Discuss with microbiologist	10-14 days 10- 14 days (consider tapering course after initial treatment course – discuss this with microbiologist)
Traveller's diarrhoea CKS	**Prophylaxis is rarely, if ever, indicated. Only consider standby antimicrobial for** people at high-risk of severe illness with travellers' diarrhoea or if the person is visiting a high risk area. If standby treatment appropriate give: azithromycin 500mg once a day for 1 - 3 days (Prescribe on a private prescription). Prophylaxis/treatment: consider bismuth subsalicylate (Pepto Bismol) 2 tablets QDS for 2 days.		
Threadworm CKS threadworm	Unless patient has a listed exception, mebendazole should be bought OTC for threadworm treatment– C&SR and GP CCG Low Priority prescribing policy 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) Wash sleepwear, bed linen, dust and vacuum. Child <6 moths add perianal wet wiping or washes 3 hourly during the day. ***Avoid Mebendazole in pregnancy. Use hygiene measure alone for 6 weeks***	Patients > 6 months: Mebendazole 100mg STAT (although mebendazole is only licensed for adults and children >2 years, the BNFc gives dosing advise for children > 6 months) Child <6 months or pregnancy: use hygiene measures alone for 6 weeks.	STAT dose but repeat in 2 weeks if infestation persists

GENITAL TRACT INFECTIONS [1] Contact UKTIS for information on foetal risks if patient is pregnant

ILLNESS	PRESCRIBING NOTES AND GENERAL ADVICE	WHEN TREATMENT IS NEEDED. DRUG and ADULT DOSE (for child doses please refer to BNF for children)	DURATION OF TREATMENT
STI Screening	People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. Risk factors: < 25 years, no condom use, recent / frequent change of partner, symptomatic partner, area of high HIV.		
Chlamydia Trachomatis/ urethritis **SIGN** **BASHH** **PHE** **CKS**	Opportunistically screen all aged 16-24 years. Treat partners and refer to GUM service. Repeat test for cure in all at three months. Pregnancy or breastfeeding: Azithromycin is the most effective option. Due to lower cure rate in pregnancy, test for cure at least 3 weeks after the end of treatment	Azithromycin 1g STAT **OR** Doxycycline 100mg BD **Pregnant or breastfeeding**: Azithromycin 1g STAT **OR** Erythromycin 500mg QDS **OR** Amoxicillin 500mg TDS	Single Oral Dose 7 Days Single Oral Dose 7 Days 7 Days
Epididymitis	For information on management of epididymo-orchitis epididymo-orchitis, epididymitis, and orchitis refer to NICE CKS		
Vaginal Candidiasis RCGP sexually-transmitted-infections-in-primary-care PHE abnormal-vaginal-discharge NICE CKS candida-female-genital	All topical and oral azoles give 70% cure **Unless patient has a listed exception, clotrimazole pessaries or fluconazole capsules should be bought Over-The-Counter if treatment is indicated**–C&SR and GP CCG Low Priority prescribing policy In pregnancy: avoid oral azoles (e.g. fluconazole oral) and use intravaginal treatment. Advise that care should be taken when using an applicator to avoid physical damage to the cervix. Some women prefer to insert pessaries by hand when pregnant. The manufacturer of clotrimazole advises that pessary should be inserted without using the applicator	Clotrimazole 500mg Pessary: Insert ONE 500mg pessary into the vagina at Night for 1 night **OR** Clotrimazole 10% Intravaginal Cream: One applicatorful (5g) to be inserted into the vagina at night for 1 night. (POM) **OR** oral fluconazole 150mg stat dose (providing no contra-indications) **OR** Miconazole 2% intravaginal cream: Insert the contents of one applicatorful (5g) into the vagina OD for 14 days or BD for 7 days [23]	Single dose (at night) Single dose (at night) Single dose If OD then give for 14 days If BD then give for 7 days

BASHH	in pregnancy Recurrent (≥ 4 episodes per year) 150mg oral fluconazole every 72 hours for three doses induction , followed by one dose once a week for 6 months maintenance Systemic absorption from intravaginal miconazole may occur. Therefore use with caution, if no other alternatives available, in patients on coumarin anticoagulants and monitor INR closely	**Pregnant patients (women and girls ≥ 16 years)**: Do not prescribe Oral Azoles Clotrimazole 100mg Pessary: 100mg pessary each night (do not use the applicator) **OR** Miconazole 2% intravaginal cream: Insert the contents of one applicatorful (5g) into the vagina BD for 7 days [23] caution as this contains applicator. Manufacturers advise avoid in 1st trimester unless benefit outweigh risk **Recurrent vaginal candidiasis – non-pregnant female** Oral Fluconazole 150mg capsules (providing no contra-indications): 1 capsule every third day for a total of 3 doses (day 1, 4, 7) followed by 1 capsule Once A Week as maintenance dose for 6 months	7 nights [23] 7 days Initial induction treatment: 3 doses Followed by 6 months of maintenance dose
Bacterial vaginosis BASHH RCGP sexually-transmitted-infections-in-primary-care PHE Abnormal Vaginal Discharge NICE CKS bacterial vaginosis	Oral metronidazole is as effective as topical treatment and is cheaper. Seven days treatment results in fewer relapses than 2 gram stat dose at four weeks. Pregnant/ breastfeeding: avoid 2gram Stat dose. Treating partners does not reduce relapse	Oral metronidazole 400mg BD **OR** Oral metronidazole 2 gram STAT (If Not Pregnant/Breastfeeding) **OR** Metronidazole 0.75% Vaginal gel One applicatorful (5 gram) at night **OR** Clindamycin 2% vaginal cream One applicatorful (5g) at night	7 days Single dose 5 nights 7 nights
Gonorrhoea	Antibiotic resistance is now very high. Use IM ceftriaxone plus oral azithromycin and refer to GUM. Test of cure is essential	Ceftriaxone 500mg IM **PLUS** Azithromycin 1g oral	STAT STAT
Trichomoniasis BASHH	Oral treatment needed as extravaginal infection is common. Treat partners and refer to GUM service for other STIs. In pregnancy or breastfeeding: Avoid 2g single dose of Metronidazole. Consider clotrimazole for symptom relief	Metronidazole 400 mg BD Or 2g (If NOT Pregnant/Breastfeeding) Pregnancy for symptom relief	5-7 days STAT

PHE NICE CKS trichomoniasis RCGP sexually-transmitted-infections-in-primary-care	(not cure) if Metronidazole declined	Clotimazole 100 mg pessary at night Advise that care should be taken when using an applicator to avoid physical damage to the cervix. Some women prefer to insert pessaries by hand when pregnant. The manufacturer of clotrimazole advises that pessary should be inserted without using the applicator in pregnancy	6 nights
Pelvic inflammatory Disease (PID) BASHH NICE CKS PID RCGP - Sexually Transmitted Infections in Primary Care	Refer women and contacts to GUM SERVICE. Always culture for gonorrhoea and chlamydia. If gonococcal PID is likely (partner has it; severe symptoms; sex abroad), use the Ceftriaxone regimen as resistance to quinolones is high, or refer to GUM [8]	**If Pregnancy excluded:** Metronidazole 400mg BD PLUS Ofloxacin 400mg BD **OR** If Gonorrhoea likely or high risk of gonorrhoea: Ceftriaxone 500mg IM STAT **PLUS** Doxycycline 100mg BD **PLUS** Metronidazole 400mg BD [8] [9] **If pregnancy not excluded** discuss with GUM and Obstetrics & Gynaecology	14 days 14 days Single Dose 14 day 14 days

Useful Contact Numbers

1. Lancashire Teaching Hospitals NHS Foundation Trust: Microbiologist clinical advice (9 am to 5 pm Mon-Fri) Tel: 01772 522155. For out of hours clinical advice contact on-call Microbiologist via switchboard on 01772 716565
2. Public health England. Local Health Protection Team, Lancashire. 0344 225 0562. Option 2.
3. GUM Contacts: Office Hours: Secretary for GUM at Royal Preston Hospital: Karen McClelland. 01772 522359. Office Hours: Secretary for GUM at Blackpool Victoria Hospital: Adele Scott-Rattray 01253 956850.
   Out of Hours: Blackpool Victoria Hospital switchboard on 01253 300000 and ask for GUM on-call or contact Royal Preston Hospital switchboard on 01772 716565.
4. Anita Watson. Lead Infection Prevention and Control Nurse. Patient Safety and Quality Improvement, Lancashire County Council. Office: 01772 539806. Jane Mastin. Infection Prevention and Control Nurse. Office: 01772 539806. Mobile: 07876 844056. **For Infection Prevention and Control Advice only** – not to be used for antibiotic prescribing advice.

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Version Control: Management of Infection Guidance In Primary Care. GP and CSR CCG

Version Number	Date	Amendments made	Author	Checked By	Amendments agreed by
Version 1	September 2016	Updated as per PHE May 2016 and recommendations from consultant microbiologists at LTHTr. UTI in males and non-pregnant females: 1st, 2nd and 3rd line treatment choices specified as per microbiologists. C.A.P management: Additional advice: Doxycycline is first choice if recent treatment with a beta-lactam antibiotic or if penicillin allergic. Oral candidiasis dose amended to 4-6ml QDS for adult and child >2years as per Nystan SPC and BNF.	Suzanne Penrose	Clare Moss	JMMG
Version 2	March 2017	Updated as per PHE QP target 2017-2019 Acute Sore Throat: amended for clarity '*500mg* QDS when severe' – dose clarified by PHE Non-Pregnant UTI treatment choice altered to: 1st Line: Nitrofurantoin 2nd line: Trimethoprim (if low risk of resistance) or Pivmecillinam (if Nitrofurantoin or Trimethoprim unsuitable) UTI in pregnancy: nitrofurantoin added in as a choice and a statement regarding the use in pregnancy (following comments from GPs in CSR and in line with PHE formulary) Oral candidiasis: Nystatin oral suspension dose amended back to 1ml QDS in line with LTHTr and BNF – BNF reverted back to 1ml QDS dose in adults and children (March 2017) Warnings added: Interaction between miconazole oral gel & coumarins, fluconazole interactions.	Suzanne Penrose	Clare Moss	JMMG
Version 3	April 2017	Updated as per PHE partial update January 2017 to the May 2016 'Managing common infection in primary care'. UTI in non-pregnant females and males: management updated. Recurrent UTI in non-pregnant women: management updated and treatment choices updated as per PHE: 1st line: nitrofurantoin. Second line: Pivmecillinam. If recent culture sensitive: trimethoprim. Addition of a warning about who should not be on long term antibiotic prophylaxis for UTI as per microbiologist advice. Removal of section: 'people >65 years – do not treat if asymptomatic bacteriuria'. People >65 has been incorporated into UTI in non-pregnant females and males section.	Suzanne Penrose	Clare Moss	JMMG

Version 3.1	May 2017	Updated as per PHE May 2017. Acute sore throat guidelines changed for pregnant patients who are penicillin allergic – choice is now erythromycin for this group. Introduction page, item number 13 – antibiotics in pregnancy: updated to reflect latest guidance on avoiding clarithromycin and azithromycin.	Suzanne Penrose	Clare Moss	JMMG
Version 3.2	January 2018	Updated as per PHE September and subsequently November 2017. Introduction page: pregnancy – avoid azithromycin *'except in chlamydial infection'* has been added. Separate pregnancy section on introduction page added. Influenza management: specific antiviral drug and dose recommendations removed. Links to PHE and NICE added for more detailed information. Self-care now being the 'first line' management for many conditions and information given about which products can be bought over-the-counter in accordance with the LPP policy. New categories: Acne Vulgaris, Mastitis, Scarlet Fever and Blepharitis. Clarithromycin is now available (or erythromycin) as a choice for Acute OM for penicillin allergy. Actual dose recommendations for AOM have been removed-. Link to BNCc for child doses added. Duration of phenoxymethylpenicillin for acute sore throat has been changed to 5 – 10 days. Specific phenoxymethylpenicillin dose recommendation now for severe and less severe acute sore throat. AOM: if cellulitis extends outside the ear canal – now recommendation for which antibiotic to give – flucloxacillin. Sinusitis now replaces the previous terminology of rhinosinusitis. Acute cough and bronchitis: doxycycline now listed as penicillin allergy alternative to amoxicillin. Acute cough and bronchitis: CRP testing, levels and management has been removed as no practices currently have CRP testing facilities. Guidance changed for UTI children. Re-wording of 'Dermatophyte infection' to Fungal Nail and Fungal Skin Infection. Acute pyelonephritis section: 'If MSU MC&S report shows sensitive: Trimethoprim' – this has been removed. New addition: management option for recurrent vaginal candidiasis. Amorolfine 5% nail laquer removed from fungal nail infection section. Removed: H.Pylori regimes – link to PHE guideline given. New: management of shingles when patient doesn't present within 72 hours. Removed: recurrent UTI in non-pregnant women. Removed: specific treatment choices and duration for epididymitis – now only includes a link to NICE CKS.	Suzanne Penrose	Clare Moss	JMMG (February 2018)