NHS Lewisham

MANAGEMENT OF INFECTION GUIDANCE FOR PRIMARY CARE

This guidance is evidence based but its application must be modified by professional judgement.

PRINCIPLES OF TREATMENT

1. A dose and duration of treatment is suggested. In severe or recurrent cases consider a larger dose or longer course.
2. Prescribe an antibiotic only when there is likely to be a clear benefit.
3. Do not prescribe an antibiotic or delay prescribing for acute sore throat, common cold, acute cough and acute sinusitis.
4. Limit prescribing over the telephone to exceptional cases.
5. 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 risk of *Clostridium difficile,* MRSA and resistant UTIs. Counsel all patients given antibiotics to seek advice if persistant diarrhoea occurs during or following antibiotic use. Always review the history of antibiotic use in patients with diarrhoea. If there has been antibiotic use in recent weeks, C Difficile infection should be suspected and the following action considered: a stool sample, stopping of previously prescribed antibiotics, avoidance of the use of anti-motility drugs, and immediate treatment as if the patient had C difficile infection (see the relevant section of this guidance). Remember the onset of symptoms of C difficile infection may be delayed for several weeks after cessation of antibiotic therapy.
6. AVOID widespread use of topical antibiotics (especially those agents also available as systemic preparations)
7. In pregnancy AVOID tetracyclines, aminoglycosides, quinolones, *high dose* metronidazole, trimethoprim in first trimester (as folate antagonist) and nitrofurantoin at term (risk of neonatal haemolysis).
8. Children: AVOID tetracyclines in children under 12 (teeth mottling). Quinolones are not recommended in children and growing adolescents (risk of arthropathy)
9. Clarithromycin is an acceptable alternative in those who are unable to tolerate erythromycin because of intolerable side effects.
10. Where a best guess therapy has failed or special circumstances exist, contact duty Medical Microbiologist at University Hospital Lewisham Tel 0208 333 3262, 3265, 3264. Out of hours contact via hospital switchboard 0208 333 3000

SOURCE DOCUMENTS

This guidance is based on "Management of Infections Guidance for Primary Care", HPA (latest review March 2010) (www.hpa.org.uk); BNF 59 (March 2010); BNF for Children (2009); CKS (www.cks.nhs.uk), NICE Clinical Guidance 69 (www.nice.org.uk) ; SIGN guidance (www.sign.ac.uk); British Association for Sexual Health and HIV guidance (www.bashh.org) and advice from Antimicrobial Management Team, The Lewisham Hospital NHS Trust.

The majority of doses listed are for adults. Please refer to current BNFC (www.bnfc.org)or CKS (www.cks.nhs.uk) for children's doses.

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
UPPER RESPIRATORY TRACT INFECTIONS				
Note: Consider delayed antibiotic prescriptions.[A-] Don't prescribe antibiotics for viral sore throat, simple coughs & colds				
Influenza NICE HPA	**Annual vaccination is essential for all those at risk of influenza.** For otherwise healthy adults, antivirals are not recommended. **Treat 'at risk' patients**, only when influenza is circulating in community or in a care home where influenza is likely, within 48 hours of onset. At risk: ≥65 years, chronic respiratory disease (including COPD and asthma) significant cardiovascular disease (not hypertension), immunocompromised, diabetes mellitus, chronic neurological, renal or liver disease. Use **oseltamivir** 75 mg oral capsule BD (48hr post-exposure OD prophylaxis only for 'at risk' group who are not vaccinated AND HPA indicated that flu virus is circulating). **Zanamivir** 10mg (2 inhalations by diskhaler) BD for 5 days is recommended for children between 5-12 yrs.			
Pharyngitis/ Sore throat/ Tonsillitis CKS NICE NB: Mainly viral	**1. No antibiotics**	**Advice patients of usual illness length (1 week)**	10 days	• **Majority of sore throats are viral, most patients do not benefit from antibiotics. 90% resolve in 7 days without and pain only reduced by 16 hours.** • Patients with 3 of 4 centor criteria (i.e. history of fever, purulent tonsils, cervical adenopathy, absence of cough) consider 3-day-delayed or immediate antibiotics [A+] • Need to treat 200 patients to prevent one case of otitis media.[A+] • If antibiotics required & no response send throat swab for culture.
	2. . Phenoxymethylpenicillin (Penicillin V)	500mg QDS/ 1gram BD (QDS when severe)		
	Clarithromycin (if penicillin allergic)	250mg - 500mg BD	10 days	
Otitis media CKS NICE (child doses) NB: Mainly viral[A+]	**1. No antibiotics**	**Advise patients of usual illness length (4 days)**		• **60% resolve without antibiotics in 24 hours without antibiotics.[A+]** • Use paracetamol or NSAID.[A] Avoid aspirin in children under 16 years old. • Antibiotics only reduce pain in first at 2 days, and do not prevent deafness.[A+] • Consider 3 day delayed or immediate antibiotics if: [A+] 1. All ages if otorrhoea, or 2. <2 yrs with bilateral infection • Haemophilus is an extracellular pathogen, thus macrolides, which concentrate intracellularly, are less effective.
	2. Amoxicillin	1m-8yr: 40mg/kg daily in 3 divided doses (max.1g TDS)	5 days	
	Erythromycin (if penicillin allergic)	1m-2yr: 125mg QDS 2-8yr: 250mg QDS >8yr: 250mg-500mg QDS	5 days	
	3. Co-amoxiclav OR (if no improvement after 48hrs)	1-6yrs: 125/31mg TDS 6-12yr: 250/62mg TDS 12-18yr: 250/125mg TDS	5 days	
	Azithromycin (if penicillin allergic & if no improvement after 48hrs)	15 - 25kg: 200mg OD 26 - 35kg: 300mg OD 36 - 45kg: 400mg OD >45kg: 500mg OD	3 days	
Acute sinusitis CKS NICE NB: Mainly viral	**1. No antibiotics**	**Advise patients of usual illness length (2.5 weeks)**	All 7 days	• **Symptomatic benefit of antibiotics is small** - 80% resolve in 14 days without antibiotics; and marginal benefit only after 7 days[A+] • Use adequate analgesia • Consider 7 day delayed or immediate antibiotic when: fever >38;toothache;high ESR [A-] • If failure to respond use another first line antibiotic, before considering co-amoxiclav 625mg TDS if persistent symptoms (consult ENT / Micro if penicillin allergic).
	2. Amoxicillin [A+]	500mg TDS		
	Clarithromycin (if penicillin allergic)	250mg - 500mg BD		
	3. Doxycycline	200mg STAT then 100mg OD		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
LOWER RESPIRATORY TRACT INFECTIONS				
Note: Low doses of penicillins are more likely to select out resistance. Do not use quinolones (ciprofloxacin, ofloxacin),1st line due to poor activity against pneumococci. Reserve for PROVEN pseudomonal infections. Acute asthma exacerbation is less likely infectious and doesn't require antibiotics.				
Acute bronchitis / acute cough (<3 weeks) CKS NICE BTS	**1. No antibiotics**	**Advise patients of usual illness length (3 weeks)**	All 5 days	• **Antibiotics have marginal benefits in otherwise healthy adults.**[A+] • Consider delayed antibiotic with symptomatic advice / leaflet [B+] • For children, antibiotics are generally not effective for acute cough caused by simple 'head colds', including acute bronchitis and green coloured sputum in absence of signs of pneumonia. • Macrolide antibiotics should be given early (1-2 weeks of disease) to children with pertussis.
	2. Amoxicillin	500mg TDS		
	Clarithromycin (if penicillin allergic)	250-500mg BD		
	3. Doxycycline	200mg STAT then 100mg OD		
Infective Exacerbation of COPD CKS NICE	**1. No antibiotics** (if viral infection suspected)		All 5 days	• **Antibiotics not indicated in absence of purulent/ mucopurulent sputum.** • Use antibiotics promptly if purulent sputum AND shortness of breath AND/OR increased sputum volume[B+] • If treatment failure or resistance suspected, send sputum sample first, contact microbiology for advice and consider Co-amoxiclav 625mg TDS
	2. Amoxicillin OR	500mg TDS		
	Doxycycline (if penicillin allergic)	200mg STAT then 100mg OD		
	3. Clarithromycin	500mg BD		
Community acquired pneumonia BTS CKS	**1. Amoxicillin** OR	500mg-1g TDS	All 7 days Up to 10 days if CRB score =1	• **Start antibiotics immediately.**[B-] • Manage using clinical judgement & CRB-65 score with review. Each scores 1: Confusion (AMT<8); Respiratory rate >30/min; BP systolic <90 or diastolic ≤60. Score 0 – suitable for home treatment Score 1-2 consider hospital referral Score 3-4 urgent hospital admission IF CRB65 =1 add clarithromycin or doxycycline alone to cover Mycoplasma infection (rare in > 65s). • If delayed admission or severely ill give parenteral benzylpenicillin before admission or amoxicillin 1G po [D]
	Clarithromycin OR (if penicillin allergic)	500mg BD		
	2. Doxycycline	200mg STAT then 100mg OD		
GASTRO-INTESTINAL TRACT INFECTIONS				
Eradication of *Helicobacter pylori* NICE, HPA, CKS	**1.** Licensed PPI [A+] (e.g. **lansoprazole capsules**) PLUS **Clarithromycin** and **Amoxicillin** OR **Clarithromycin** and **Metronidazole** (if penicillin allergic)	30mg BD 500mg BD 1g BD 500mg BD 400mg BD	All for 7 days[A] (14 days in relapse or maltoma)	• See BNF or HPA quick reference guide for alternative combinations. • Triple treatment attains >85% eradication.[A+] • Avoid clarithromycin or metronidazole if used in the past year for any infection.[C] • Treatment failure – consider endoscopy for culture & susceptibility.[C] Use 14days BD PPI PLUS 2 antibiotics, PLUS tripotassium dicitrato bismuthate • Eradication is beneficial in DU, GU and low grade maltoma, but not in GORD.[A] In NUD, 8% of patients benefit.
Gastroenteritis (food poisoning)	**Antibiotics should not be used**. Use of antibiotics in the treatment of E.coli 0157 increases the risk of haemolytic uraemic syndrome. Fluid replacement is essential. Check travel, food and antibiotic history (*C. difficile* is increasing). Only initiate treatment on advice from Microbiologist, if the patient is systemically unwell or if Typhoid/ Paratyphoid suspected. Send stool samples from suspected cases of food poisoning and post antibiotic use. Food poisoning is notifiable. Notify and seek advice on exclusion from Consultant in Communicable Disease Control on 020 3049 4338			
Traveller's diarrhoea	**Limit prophylactic antibiotic prescribing for use abroad:** For people travelling to remote areas or cases where an episode of infective diarrhoea could be dangerous, use ciprofloxacin 750mg single dose. In areas of high ciprofloxacin resistance (Asia), advise prophylactic subsalicyclate (Pepto Bismol) 2 tablets QDS Seek specialist advice from Consultant Microbiologist on 0208 333 3262			
Clostridium difficile	1st/2nd episodes: **Metronidazole**	400mg oral TDS	All 10-14days	• Stop all unnecessary antibiotics and/or PPIs if possible to re-establish normal flora • 70% respond to metronidazole in 5 days; 94% in 14 days • Severe if T>38.5; low BP; WCC>15, renal impairment/ rising creatinine or signs/symptoms of severe colitis.
	3rd episode/severe: **Vancomycin**	125mg oral QDS		
Threadworms	**1. Mebendazole** (patients >6 months)	100mg	STAT	• Treat household contacts. • Advise morning shower/baths & hand hygiene. • Use piperazine in children under 6 months
	2. Piperazine (4g sachet mixed with water/ milk as instructed) (children <6m)	3-12 months:1 level 2.5ml spoonful 1-6yr: 1 level 5ml spoonful	STAT, repeat after 2 weeks	

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
MENINGITIS / SEPTICAEMIA				
Suspected meningococcal disease HPA	**1. Benzylpenicillin** IV (IM if vein cannot be found) (NOT if history of penicillin anaphylaxis)	Child <1yr: 300mg;1-9yrs: 600mg Adults/child ≥10yrs: 1200mg	STAT dose prior to admission	• **Transfer patient to hospital immediately.** • Administer benzylpenicillin, unless history of anaphylaxis,[B-] NOT allergy. • **Cefotaxime IV** (adults/ children >12 years:1g, children <12 years:50mg/kg) may be an alternative if available in patients with penicillin allergy (not anaphylaxis). • Meningitis is a notifiable disease.
Prevention of secondary case of meningitis: **Only prescribe following advice from SEL Health Protection Unit 9am-5pm, Tel:020 3049 4338** **Out of hours: contact on-call doctor via SEL Health Protection Unit, Tel: 08448222888 Quote "SELHP1"**				
URINARY TRACT INFECTIONS				
Note: Do not treat asymptomatic bacteriuria in the >65 yrs. It occurs in 25% women /10% men & is not associated with increased morbidity.[B+]				
Uncomplicated UTI (i.e. no fever or flank pain) in men & women HPA SIGN CKS	**1. Nitrofurantoin**	100mg m/r BD	Female: 3 days[A+] If recurrent: 7 days Male: 7 days	• Women - severe/≥ 3 symptoms: treat • Women - mild/≤ 2 symptoms: use urine dipstick to exclude UTI. Nitrite & blood/leucocyte 92% +ve predictive value; -ve nitrite, leucocytes & blood has 76% -ve predictive value • Med – refer for urolology opinion • Perform culture in all treatment failures. Possibility of community multi-resistant *E. coli* with Extended-Spectrum Beta-Lactamase Enzymes (ESBLs).
	2. 2nd line depends on sensitivity of MSU. ESBL remain sensitive to nitrofurantoin or fosfomycin (available on named patient basis)			
UTI in pregnancy	**Send MSU then start** **1. Cefalexin**	500mg TDS	All 7 days	• **Review treatment on results of MSU**. • Short-term use of trimethoprim or nitrofurantoin in pregnancy is unlikely to cause problems to the foetus.[C] **Avoid trimethoprim in 1st trimester & nitrofurantoin at term.** • **Avoid trimethoprim if low folate status or taking folate antagonists (eg antiepileptics, proguanil)**
	2. Nitrofurantoin OR **Trimethoprim**	100mg m/r BD 200mg BD		
Recurrent UTI in women ≥3 episodes/yr	**1. Nitrofurantoin** OR **Trimethoprim**	50-100mg 100mg	Stat post coital OR OD at night	• Post coital or nightly prophylaxis is equally effective but adverse effects.
Acute pyelonephritis CKS	**Send for MSU then start** **1. Ciprofloxacin**[A-] (NOT in pregnancy/ breastfeeding)	500mg BD	7 days[A-]	• **Send MSU for culture and treat accordingly** • If no response within 24 hours admit. • Patients > 65years at increased risk of *C. difficile* associated diarrhoea with ciprofloxacin. • If pregnant and penicillin allergic Consider cefalexin 1g BD
	2. Co-amoxiclav	625mg TDS	14 days	
UTI in patients with indwelling urinary catheters	• If asymptomatic - No antibiotic/action required. • If symptomatic - Send CSU then change catheter. Only treat if systemically unwell or pyelonephritis likely (follow pyelonephritis above pending culture results).			• **Antibiotics will not eradicate bacteriuria.** • Treat based on sensitivities. May require hospital admission.
UTI in children • **Lower UTI:** CKS, HPA	**Send MSU then start**: **1. Trimethoprim** OR	1m -12 yr: 4mg/kg (max.200mg) BD	All 3 days	• Refer children <3 months to specialist. • If ≥3 months, use positive nitrite to start antibiotics.[1A+] • Only refer children <6 months, or with atypical UTI for imaging • Double nitrofurantoin dose in 12-18 yr olds if severe chronic recurrent infection. • Double cefalexin dose if severe (max. 25mg/kg QDS or 1g QDS). • Double amoxicillin dose in severe infection.
	Nitrofurantoin OR	3m -12yr: 750mcg/kg QDS 12 -18yr: 50mg QDS		
	Cefalexin	1m -12yr:12.5mg/kg BD		
	2. If susceptible: Amoxicillin	1-12 m: 62.5mg TDS 1-5 yr: 125mg TDS 5-18 yr: 250mg TDS	3 days	
UTI in children • **Upper UTI:** CKS, HPA	**1. Co-amoxiclav**	1-12 m: 0.25mg/kg TDS 1-6 yr: 125/31mg TDS 6-12 yr: 250/62mg TDS 12-18 yr: 250/125mg TDS	7-10 days	• Dose for 1-12m: use 125/31 in 5ml suspension • Double dose in severe infection.
GENITAL TRACT INFECTIONS				
• **Refer patients with risk factors for STIs (<25y, no condom use, recent (<12mth) or frequent change of sexual partner, previous STI, symptomatic partner) to GUM clinic or general practices with level 2/3 expertise in GUM.** • **All STIs should be managed by accurate diagnosis, treatment, partner notification (and investigation as needed), follow up and offer HIV/STS/HepB test. Patient confidentiality should be strictly maintained when seeing contacts.**				
Bacterial vaginosis	**1. Metronidazole**[A+]	400mg BD orally	5 days	• A 5 day course of oral metronidazole is slightly more effective than 2 g stat.[A+] • Avoid metronidazole 2g stat dose in pregnancy and breast feeding. • Topical treatment gives similar cure rates[A+] but is more expensive. • Clindamycin cream damages latex condoms • Avoid alcohol during treatment with
	2. Metronidazole 0.75% vag gel[A+]	5g applicatorful at night	5 nights	
	3. Clindamycin 2% cream[A+]	5g applicatorful at night	7 nights	

				metronidazole and for 2 days after.
Vaginal candidiasis	**1. Clotrimazole 10%**	5g vaginal cream	All STAT doses	• All topical and oral azoles give 80-95% cure.[A-] • In pregnancy avoid oral azole.[B] • Clotrimazole may damage latex condoms. • If refractory/recurrence, send HSV for culture
	2. Clotrimazole pessary	500mg pessary		
	3. Fluconazole	150mg orally		
Gonorrhoea	**1. Cefixime**[A] (Unlicensed)	400mg	All STAT doses	• Partner notification; Test contacts and treat at initial visit or refer to sexual health clinic. • Patients with +ve GC NAAT test should have charcoal swabs for antibiotic sensitivities. Treat empirically before results return and change according to sensitivities. • If the index case's chlamydia status is +ve or unknown, treat contacts for Chlamydia as well.
	2. Ciprofloxacin[B] (NOT in pregnancy/ breastfeeding)	500mg		
Chlamydia trachomatis HPA	**1. Azithromycin** [A+] (Unlicensed)	1g 1hr before or 2hrs after food	STAT	• Partner notification; Test contacts and treat at initial visit or refer to sexual health clinic. • In pregnancy/breastfeeding: azithromycin can be used but is 'off label'. • If erythromycin used, retest after 5 weeks, as less effective
	2. Doxycycline [A+] (NOT in pregnancy/ breastfeeding)	100mg BD	7 days	
	3. Erythromycin [A-] (if patient unwilling to use off-licence treatment)	500mg BD or 500mg QDS	7 days	
Trichomoniasis	**1. Metronidazole** [A-]	400mg BD (or 2g STAT)	5 days	• Test for chlamydia and gonorrhoea (dual NAATs test) • Treat partners simultaneously. • Avoid metronidazole 2g stat in pregnancy/ breastfeeding. • Topical clotrimazole gives symptomatic relief (not cure). • Avoid alcohol during treatment with metronidazole and for 2 days after.
	2. Clotrimazole	100mg pessary	6 days	
Acute Pelvic Inflammatory Disease (PID)	**1. Cefixime** PLUS **Metronidazole** PLUS **Doxycycline**	400mg stat 400mg BD 100mg BD	stat 5 days 14 days	• Test and treat for *N. gonorrhoea* and chlamydia. • Test contacts and treat with azithromycin 1g stat at first visit or refer to sexual health clinic. • Microbiological and clinical cure are greater with doxycycline than with erythromycin • Consider Gynaecology referral
	2. Cefixime PLUS **Metronidazole** PLUS **Erythromycin**	400mg stat 400mg BD 500mg BD	stat 5 days 14 days	
Acute prostatitis	**1. Ciprofloxacin** OR **Ofloxacin**	500mg BD 200mg BD	28 days	• 4 weeks treatment may prevent chronicity. • Quinolones are more effective but have risk of *C. difficile* associated diarrhoea in over 65s.
	2. Trimethoprim	200mg BD	28 days	

SKIN / SOFT TISSUE INFECTIONS

Notes: 1.Send swabs for culture if persistent recurrent pustules and carbuncles or cellulitis to exclude Panton-Valentine Leukocidin (PVL; toxin produced by *Staph. aureas)*. Risk factors include: nursing homes, contact sports, sharing equipment, poor hygiene and eczema. See HPA guidelines for advice on management and treatment at www.hpa.org.uk and seek advice from local microbiologist.
2. When treating infections, consideration should be given to if the patient has had a positive MRSA culture in the past, and if so, advice on agent choice should be sought from microbiology.

Impetigo CKS	**1. Flucloxacillin** **2. Clarithromycin** (if penicillin allergic)	500mg QDS 250-500mg BD	All 7 days	• Resistance to topical antibiotics is increasing. Reserve for very localised lesions.[C or D] • Reserve mupirocin for MRSA only.
Eczema CKS	**No antibiotics** - do not improve healing unless visible signs of infection. If infected use treatment as in impetigo.			
Cellulitis CKS	**1. Flucloxacillin**	500mg QDS	All 7-14 days	• If patient afebrile and healthy other than cellulitis, use flucloxacillin alone. If water exposure, discuss with microbiologist. • If febrile and ill, admit for IV treatment.
	2. Clarithromycin (if penicillin allergic)	500mg BD		
Facial cellulitis	**1. Co-amoxiclav**[C]	625mg TDS	7-14 days	
Leg ulcers CKS	No antibiotics. Bacteria will always be present. **Antibiotics do not improve healing.**[A+] Culture swabs and antibiotics are only indicated if there is evidence of clinical cellulitis; increased pain; purulent exudate; enlarging ulcer or pyrexia. If antibiotic indicated, treat as for cellulitis. Seek specialist opinion if severe.			
Diabetic leg ulcers CKS	**1. Flucloxicillin** plus **Metronidazole**	1 gram QDS 400mg TDS	7 days, then review	• Always send swab to microbiology before starting antibiotics. • Antibiotics to be prescribed if clinical signs of infection are present at initial presentation. • Review antibiotics after culture results. • Refer for specialist opinion if moderate or severe infection, or wound probing to bone. • If febrile and ill, admit for IV treatment.
	2. Cefalexin plus **Metronidazole** (if penicillin allergic)	1 gram QDS 400mg TDS		

ILLNESS	DRUG OPTION	DOSE	DURATION	COMMENTS
Animal and human bite prophylaxis & treatment CKS	**1. Co-amoxiclav** [B-]	625mg TDS	All 7 days and review at 24 & 48 hrs	• Thorough irrigation is most important. • Assess tetanus, rabies (animal), HIV/hepatitis B & C risk (human). • Human: Antibiotic prophylaxis advised • Animal: Antibiotic prophylaxis advised for– puncture wound; bite involving hand /foot ,/face/joint/tendon/ligament; diabetics,immuno-compromised, elderly, asplenic/cirrhotic. • If severe cellulitis, consider referral to hospital.
	2. If penicillin allergic: Metronidazole PLUS **Doxycycline** (animal/man) OR **Clarithromycin** (human)	200-400mg TDS 100mg BD 250-500mg QDS 250-500mg BD		
Acne CKS	**1. Oxytetracycline**	500mg BD	6 months	• Continue treatment with topical treatment • Avoid tetracycline in pregnancy/lactation
	2. Erythromycin	500mg BD		
Dermatophyte infection of the proximal fingernail or toenail CKS For children seek advice	**1. Take nail clippings and await results** (treat if confirmed infection)			• Terbinafine is not licensed for use in children. • Idiosyncratic liver reactions occur rarely with terbinafine. It is more effective than the azoles.
	2. Amorolfine 5% nail lacquer (for superficial)[B] OR **Terbinafine** [A-]	1-2 times weekly Fingers: Toes: 250mg OD Fingers: Toes:	6 months 12 months 6-12 weeks 3-6 months	
	3. Itraconazole	200mg BD Fingers: 7 days monthly Toes:	2 courses 3 courses	• Use itraconazole for infections with yeasts and non-dermatophyte moulds[C].
Dermatophyte infection of the skin (ringworm)	**1. Terbinafine cream1%** [A+]	OD-BD	1 week [A+]	• Take skin scrapings for culture if not localised. • If intractable send scrapings; if infection confirmed use oral terbinafine/itraconazole.
	2. Topical undecenoic acid OR **1% azole** [A+] (eg 1% clotrimazole OR econazole cream)	OD-BD (see instructions for individual products)	4-6 weeks [A+]	
Scalp	**1. Griseofulvin**	500mg daily Child <50kg: 10mg/kg daily	6-8 weeks	• A licensed liquid formulation of griseofulvin (125mg/5ml) is no longer available & has to be manufactured as an unlicensed special which can be expensive • Terbinifine is an off-label alternative included in the children's BNF. Tablets may only need crushing where the dosing is 62.5mg OD.
	3. Terbinafine	250mg daily <20kg: 62.5mg/day 20-40kg: 125mg/day >40kg: 250mg/day	4 weeks	
MRSA	Treatment of colonisation only usually required in primary care if admission to hospital planned – follow instructions from UHL. Treatment for colonisation consists of a 5 day course comprising: 1. **Mupirocin nasal ointment TDS * AND** 2. **Chlorhexidine 4% skin cleanser ** daily** for skin & one hair wash at start of course and whenever possible * For Mupirocin resistant MRSA, use Naseptin cream QDS for 7 days ** Octenisan can be used if patient has sensitive or broken skin. Ensure patient has aqueous cream to apply after washing to prevent over-drying of skin.			
Varicella zoster (chicken pox) & Herpes zoster (shingles) CKS	If treatment indicated: **1. Aciclovir**	1mo-2yrs: 200mg QDS 2-6yrs: 400mg QDS 2-12yrs: 800mg QDS >12 yrs: 800mg 5x/day	5 days 7 days	• Seek advice if pregnant/immunocompromised or complications • **Chicken pox**: Treat if adult or severe pain/ secondary household case/on steroids AND can start within 24hrs of rash, acyclovir [B+] • **Shingles**: Treat >50 yrs [A+] and within 72h of onset of rash, (post-herpetic neuralgia rare in <50 yrs) or if active ophthalmic or Ramsey Hunt or eczema.[+].
PARASITIC INFECTIONS				
Headlice CKS	**1. Wet combing** AND/OR	Every 3-4 days for 2 weeks		• See BNF for preparations. Choice depends on preference of individual or parent and treatment history. • All household contacts should check using wet or dry detection combing and treat is a live head louse found • Check for treatment success by detection combing on day 2-3 after completing course of treatment & again after further 7 day interval
	2. Malathion	2 applications 1 wk apart (leave on for 12 hrs)		
	3. Dimethicone (Hedrin®)	2 applications 1 wk apart (leave on for 8 hrs)		
	4. Full Marks Solution	2 applications 1 wk apart (leave on for 10min)		
	5. Lyclear Spray Away	2 applications 1 wk apart (leave on for 15min)		
Scabies CKS	**1. Permethrin** [A+]	5% cream (See BNF for preparations)	2 applications 1 week apart	• Contact SEL HPU on 020 3049 4338 for outbreak advice. • Treat whole body including scalp, face, neck ears, under nails. • Treat all contacts – 1st treatment applied at the same time as 2nd treatment of case.
	2. Malathion (if pregnant or allergic to permethrin)	0.5% aqueous liquid (See BNF for preparations)		
EYE INFECTIONS				
Conjunctivitis CKS	**1. No antibiotics** **2. Chloramphenicol 0.5% drops** (if severe:[4,5B+]) **3. Fusidic acid 1% gel** (2nd line treatment option)	2 hrly for 2 days then 4 hrly (whilst awake) BD	Continue for 48 hours after resolution	• **Most bacterial conjunctivitis self-limiting.** 65% resolve on placebo by day five [1A+] • Red eye with mucopurulent (not watery) discharge. Starts in one eye but may spread to both [2C] • Fusidic acid has less Gram-negative activity[3] Consider neomycin eye drops if no respone to 1st/2nd line choices.

Note: Level of Evidence:
A+ Good systematic review of study
B+ One or more prospective studies
C Formal combination of expert opinion
A- One or more rigorous studies; not combined
B- One or more retrospective studies
D Informal opinion, other info

Produced by Kenneth Chan & Kath Howes, June 2010
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