HERPC
Hull and East Riding Prescribing Committee

Guidelines for Treatment of Infections in Primary Care in Hull and East Riding

This document is based on the Health Protection Agency advice which can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/622637/Managing_common_infections.pdf (Public Health England Last Update May 2017)

The guidelines have been subject to consultation within primary care, public health and clinicians within the Acute Trust and have been approved by the Advisory Committee on Antimicrobial Therapy (ACAT).

Dr Gavin Barlow
Consultant in Infectious Diseases
Hull and East Yorkshire Hospitals NHS Trust

A summary table of main guidance can also be found at
http://www.hey.nhs.uk/herpc/prevention-infection.htm

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Use TARGET toolkit as a resource to optimise antibiotic prescribing within primary care settings

Aims of Guidelines

- To provide a simple, evidence based approach to the empirical treatment of common infections
- To promote the safe, effective and economic use of antibiotics
- Minimise the risk of toxicity/ adverse effects e.g. *Clostridium difficile* associated diarrhoea (CDAD)
- Delay the emergence and reduce the prevalence of bacterial resistance in the community

Principles of Treatment

- This guidance is based on the best available evidence. Professional judgement should be used and patients should be involved in the decision.
- Prescribe an antibiotic only when there is likely to be a clear clinical benefit (and where benefits outweigh risks).
- It is important to initiate antibiotics as soon as possible in severe infection
- Have a lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture and seek advice
- Do not prescribe an antibiotic for viral sore throat, simple coughs and colds.
- Consider a no, or delayed, antibiotic strategy for acute self-limiting upper respiratory tract infections.
- Limit prescribing over the telephone to exceptional cases.
- Use simple generic antibiotics first whenever possible. Avoid broad spectrum antibiotics (e.g. quinolones, cephalosporins, clindamycin, co-amoxiclav) when narrow spectrum agents remain effective, as use of broad spectrum agents increase the risk of *Clostridium difficile*, MRSA and resistant UTIs.
- Cephalosporins and quinolones should **NOT** routinely be used as first line antimicrobials except where indicated in this guidance.
- Macrolide antibiotics should be only be prescribed in preference to penicillins where the patient is ***truly hypersensitive*** (penicillin allergy is presence of rash or anaphylaxis following treatment with a penicillin).
- The recommended macrolide for general use is clarithromycin (except in pregnancy and breast feeding) due to improved tolerability, absorption and compliance compared to erythromycin.
- Avoid **widespread** use of topical antibiotics (especially those agents also available as systemic preparations) e.g. fusidic acid (Fucibet®, Fucidin®, - ophthalmic use ok).
- In **pregnancy AVOID** tetracyclines, aminoglycosides, quinolones, and ***high dose*** (> 400mg) metronidazole. Short term use of trimethoprim after the first trimester (unless low folate status or on other folate antagonists e.g. antiepileptics) is unlikely to cause harm to the foetus.
- In **children AVOID** tetracyclines and quinolones.
- Give antibiotics for the SHORTEST time possible. In most uncomplicated and non-serious/ non-severe infections 5 days of treatment or less is usually sufficient.
- When first-line antibiotic sensitivities are provided, further sensitivity results are usually available for special situations. Consultant medical microbiologists can be contacted for specialist advice by Registered Medical Practitioners on 01482 674991 during laboratory hours or out of hours (for urgent advice) via HEY switchboard 01482 875875.

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General information on prescribing recommendations

The information contained within this document is for guidance to assist in the prescribing of anti-microbials. The doses specified are recommended for use in those with normal pharmacokinetic handling of the drug. Dose adjustments may be necessary in children or those of advanced age or with co-morbidities that could affect the pharmacokinetics of the drug (e.g. liver or renal impairment, pregnancy). Certain drug interactions may also have an impact on anti-microbial drug dosing.

Before prescribing, the information contained within these guidelines should be read in conjunction with the most recent British National Formulary (www.bnf.org or www.bnfc.org) or the electronic medicines compendium www.medicines.org.uk for contraindications, cautions, use in pregnancy/ breast feeding and other disease states (e.g. renal or hepatic impairment) and drug interactions.

Unless otherwise stated the doses are for ADULT patients.

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Main risk factors for *Clostridium difficile* infection (CDI)

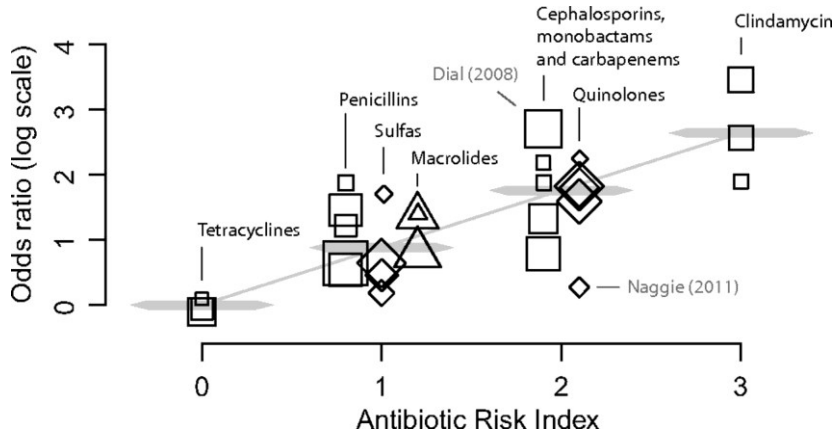
Risk factors for CDI are given below. The more of these risk factors a patient has, the higher the risk is likely to be.

- Age >65 years (especially >75 years)*
- Previous CDAD*
- Recent exposure to cephalosporins*, quinolones* or clindamycin* or other broad-spectrum antibiotics such as co-amoxiclav (Augmentin®) – see graph below
- Recent prolonged*/multiple* or IV antibiotic exposure (especially if antibiotics above)
- Nursing/residential home resident
- NG or PEG tube in-situ
- Recent hospital stay
- Extensive co-morbidity
- Gastrointestinal surgery
- Severe underlying/inter-current illness
- Low albumin/poor nutritional status
- H_2 antagonist or proton pump inhibitor therapy (*Ask, does the patient really need this? Consider stopping*)
- Immunosuppression

These are probably the most important, particularly in combination.

RISK OF COMMUNITY-ASSOCIATED CDI FOR DIFFERENT ANTIBIOTICS

Linear association between a 4-point antibiotic risk index and community-associated CDI risks.



Brown K A et al. Antimicrob. Agents Chemother. 2013;57:2326-2332
Antimicrobial Agents and Chemotherapy

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Additional guidance on sampling

Catheter Urine Specimens

By 14 days post-catheterisation, almost all urine samples from catheterised patients will yield bacterial growth. There is no evidence that giving antibiotics to asymptomatic catheterised patients will produce any clinical benefit whilst they are asymptomatic, and antibiotics do not cure catheter blockage, by-passing of catheters, peri-urethral discharge, and are not an appropriate solution to malodorous urine.

Repetitious use of antibiotics produces selection of highly-resistant strains of bacteria and culminates in colonisation with yeasts. Subsequent manipulation of the catheter may result in **bacteraemia blood stream infection** with these resistant bacteria and fungi. It is therefore inappropriate to test for the current bacteria present in the urinary system where the patient has no symptoms, except when manipulation of the urinary tract is planned i.e. a urological procedure. In those cases it is appropriate to send a pre-procedure sample, allowing sufficient time (72 hours) for the sample to arrive and for sensitivity tests to be performed.

Routine catheter replacement does not require antibiotic prophylaxis. If a patient is treated for catheter associated UTI, the catheter must be changed whilst patients is on antibiotics.

Wound Swabs, Ulcers of the Skin, Pressure sores, Surface Abrasions and Drain sites

Breaches in the skin result in fluid exudate in a considerable proportion of wounds. The fluid is highly nutritious for bacteria and the growth of a number of organisms to a high level is to be expected. Swabs of such wounds will therefore yield growth. The use of antibiotics in such circumstances will be futile in improving the patient's condition where no clinical evidence of infection is present.

Specimens from wound swabs should therefore state that redness, swelling, pain, pus or systemic infection is evident (CRP is a useful test to demonstrate systemic infection) and should state the intended antibiotics which should be started after the swab has been obtained. A swab is always a poor substitute for obtaining pus and if pus is available, this should be placed in a sterile container and sent instead of a swab. The same considerations apply to ulcers of the skin, pressure sores, surface abrasions and drain sites.

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Please see updated guidance

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LOWER RESPIRATORY TRACT INFECTIONS

Note: *Low doses of penicillins are more likely to select out resistance. Do **NOT** use quinolones (ciprofloxacin and ofloxacin) first line due to poor activity against pneumococci. However, they do have use in PROVEN pseudomonal infections. Reserve ALL quinolones for proven resistant infections.*

ILLNESS	COMMENTS	DRUG	DOSE	DURATION OF Tx
Acute cough, Bronchitis	**Antibiotic little benefit if no co-morbidity** [A+] Patient leaflets can reduce antibiotic use.[A-] Consider immediate antibiotics if > 80yr and ONE of: hospitalisation in last year, oral steroids, diabetic, CCF OR > 65 years with 2 of above	***First line*** *(where indicated)* Amoxicillin	Adult: 500mg TDS Child: see BNF for children	5 days
		Second line /penicillin allergic *(where indicated)* CHILD: Clarithromycin ADULT & CHILD over 12 years: Doxycycline	***Second line /penicillin allergic*** See BNF for children 200mg stat /100mg OD	5 days 5 days
Acute exacerbation of COPD	**Consider whether antibiotics are needed**. 30% is viral, 30-50% is bacterial (rest undetermined). BTS COPD guidelines – only prescribe if two out of three are present[A+]: • Dyspnoea • Increased sputum • Purulent sputum Consider a sputum sample in non-responders	***First line:*** Amoxicillin	500 mg TDS	5 days
		Second line/ penicillin allergic Doxycycline	200mg stat /100mg OD	5 days
Community - acquired pneumonia - treatment in the community (simplified from NICE guideline)	**Manage using clinical judgement and CRB-65 score with review**: CRB scoring: each scores 1: Confusion (AMT<8);Respiratory rate>30/min;BP systolic<90 or diastolic<=60;Age >65 years. Score 0 suitable for home treatment; 1-2 consider hospital referral and assessment **3-4 urgent hospital admission.** For guidance for assessment in children see BTS Guidelines	***First line for CRB65=0:*** Amoxicillin [A+] ***Second line or CRB65=1or2 / allergic to penicillin*** Doxycycline	500 mg TDS 100mg BD	5 days 5-7 days

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MENINGITIS

https://www.gov.uk/guidance/meningococcal-disease-clinical-and-public-health-management
In children: http://guidance.nice.org.uk/CG102/Guidance

ILLNESS	COMMENTS	DRUG	DOSE	DURATION OF Tx
Suspected meningococcal disease	**Transfer all patients to hospital immediately.** **IF time before admission**, and non blanching rash, administer benzylpenicillin (or cefotaxime) prior to admission, unless hypersensitive i.e. history of breathing difficulties, collapse, loss of consciousness or urticaria or rash within 1 hour of administration of beta lactam Ideally IV but IM if a vein cannot be found.	***First line:*** Benzylpenicillin IV or IM	Adults and children 10 years and over: 1200 mg Children 1 - 9 year: 600 mg Children <1 year: 300 mg	STAT
		If allergic to penicillin (and available): Cefotaxime IV or IM	Adult and children 12 years and over: 1g Children <12 yrs: 50mg/kg (max 1g)	STAT
Prevention of secondary case of meningitis	Only prescribe following advice from Public Health Doctor 9 am – 5 pm: 01482 638636 Out of hours: Contact on-call doctor via TENYAS switchboard 01904 666030			

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Urinary tract infection – this section has been removed. Please see separate guidance.

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GENITO- URINARY TRACT INFECTIONS – always check BASHH guidance https://www.bashh.org/guidelines

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

Refer patients with STIs, including trichomoniasis, to GUM clinic for contact tracing. If laboratory testing for test of cure in Chlamydia infection is required then it should be performed at least 3 weeks after the initiation of therapy to avoid false positive results

ILLNESS	COMMENTS	DRUG	DOSE	DURATION OF Tx
Vaginal candidiasis	All topical and oral azoles give 75% cure.[A+] If extensive, severe or unresponsive to first line treatment consider oral therapy. Add clotrimazole 1% or 2% cream, BD to TDS for symptomatic relief. **In pregnancy avoid fluconazole**[B]	**First line** Clotrimazole pessary[A+]	500mg STAT	
		Second line Fluconazole (oral)[A+]	150mg STAT	
		Pregnancy (if symptomatic) Clotrimazole pessary [A+] Or Miconazole 2% cream[A+]	100mg ON 5g Intravaginally BD	6 nights[C] 7 days
Bacterial vaginosis	Topical treatment gives similar cure rates [A+] but is more expensive. Clindamycin may damage latex condoms and diaphragms. Metronidazole vaginal gel is not recommended during menstruation.	**First Line** Metronidazole[A+]	400 mg BD	7 days[A+]
		Second Line Metronidazole 0.75% vag gel[A+] OR Clindamycin 2% cream[A+]	5 g applicator full ON	5 nights[A+] 7 nights[A+]
Uncomplicated Chlamydia trachomatis in men and women	Opportunistically screen all aged 15-25 years. **Refer patient to GUM for partner notification and follow up[B+].**	**First line** Doxycycline **[A+]or** **Second line** Azithromycin[A+] *Pregnancy or breastfeeding* **First line** Azithromycin [A+] (unlicensed) **Second line** Erythromycin [A+]	100mg BD 1 g STAT [A+] 1 g STAT [A+] 500mg QDS	7 days [A+] 1 hr before or 2 hrs after food 1 hr before or 2 hrs after food 14 days
Trichomoniasis	**Refer patients and contacts to GUM[B+].** Treat partners simultaneously Avoid 2g stat dose of metronidazole in pregnancy or breast feeding If oral treatment declined, offer clotrimazole (unlicensed) for SYMPTOMATIC relief and treat post-natally.	Metronidazole[A+] Clotrimazole[B+]	400 mg BD or 2 g in single dose [A+] 100 mg pessary ON	7 days [A+] 6 days

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Pelvic Inflammatory Disease (PID)	Test for Chlamydia & *N. gonorrhoea* **Refer patients and contacts to GUM clinic** **These regimens are not for use in pregnancy. Please discuss these cases with secondary care.** **28%of gonorrhoea isolates now resistant to quinolones[B+] so only use ofloxacin based regimens if gonococcal PID unlikely.**	**First line** Ceftriaxone IM AND Metronidazole AND Doxycycline[B] **Second line** Ofloxacin[B+] AND Metronidazole	500mg IM AND 400 mg BD AND 100 mg BD 400mg BD AND 400mg BD	STAT 14 days 14 days 14 days 14 days
Genital herpes	**Refer patients and contacts to GUM clinic** Higher doses may be required in severe infection or immunocompromised Longer courses required if new lesions appear during treatment period or if healing is incomplete	**First line** Aciclovir Aciclovir	200mg FIVE times daily OR 400mg TDS	5 days 5 days
Genital warts	**Refer patients and contacts to GUM clinic** **Treatment depends on site, character and area involved.** Cryotherapy is first line treatment for some cases (e.g. keratinised warts) Avoid podophyllotoxin in pregnancy / breast feeding Imiquimod may damage latex condoms and diaphragms.	**Treatments include:** Podophyllotoxin solution or cream Imiquimod cream	BD for three days (then 4 day break) Three times a week, at night	Repeat weekly until lesions resolve. (max of 4 weeks) Until lesions resolve (max 16 weeks)

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SKIN / SOFT TISSUE INFECTIONS				
Note: Information on the treatment of common skin conditions (including skin infections) is available in 'A guide to dermatology'. Available at http://www.hey.nhs.uk/herpc/guidelines/dermatologyAGuideTo.pdf				
ILLNESS	**COMMENTS**	**DRUG**	**DOSE**	**DURATION OF Tx**
Impetigo & other minor skin infections	As resistance is increasing topical antibacterials should be reserved for very localised skin infections [B+] For extensive, severe or bullous impetigo, use oral antibiotics[C]. If river or sea water exposure, discuss with microbiologist. Reserve mupirocin for MRSA [1C]	**For lesions suitable for topical use:** **First line** Hydrogen peroxide cream 1% (*Crystacide®*) **Second line** Fusidic acid cream **Systemic treatment** **First line** Flucloxacillin[C] **Second line/penicillin allergic** Clarithromycin[C]	 Topically TDS Topically TDS Adult: 500 mg QDS Child: see BNF for children Adult: 500mg BD Child: see BNF for children	 5 days 5 days 7 days 7 days
Cellulitis	If patient afebrile and healthy, other than cellulitis, flucloxacillin may be used as single drug treatment[C]. If febrile and ill, admit for IV treatment[C] If river or sea water exposure discuss with infection team. **Diabetic foot** **Urgent referral required** Admit if general systemic illness, spreading cellulitis, critical ischaemia, penetrating foot injury. Contact consultant / SpR in Endocrinology via switchboard for advice. If admission not required, start antibiotics and refer urgently to diabetic foot service (tel 01482 675345 or fax 01482 675370) http://www.hey.nhs.uk/herpc/guidelines/acuteDiabeticFoot.pdf	**First line** Flucloxacillin[C] **Second line /penicillin allergic:** Clarithromycin[C] **If Facial** Co-amoxiclav **Diabetic foot:** **First line** Flucloxacillin[C] **Second line /penicillin allergic:** Doxycycline	500 mg – 1G QDS 500mg BD 625mg TDS 500 mg – 1G QDS 100mg BD	7 days. If slow response a further 7 days may be required[C] 7 days If slow response a further 7 days may be required[C] As advised by specialist team As advised by specialist team
Infected wound, including post-op wound infections	For severe infections, MRSA skin/soft tissue infections or if patients not improving within 48-72 hours – refer to specialist team . For tetanus prone wound assess and treat/refer for vaccine or immunoglobulin. See BNF/Green book for details..	**First line** Flucloxacillin (+ Metronidazole , if abdominal / pelvic wound) **Second line /penicillin allergic:** Doyxcycline (+ Metronidazole , if abdominal / pelvic wound)	500mg – 1G QDS (+ 400mgs TDS) 200mg STAT then 100mg OD – BD (+ 400mgs TDS)	5 days & review 7 days & review

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MRSA / MSSA Skin colonisation	Give treatment for skin decolonisation when advised by specialist team *Naseptin* should be used (for 10 days) instead of mupirocin nasal ointment if the isolate is known to be mupirocin resistant. 48 hours after course complete patient should be re-swabbed. If patient not decolonised – seek specialist advice	mupirocin 2% nasal ointment And Octenidine (Octenisan body wash) OR Naseptin cream And Chlorhexidine 4% Aq Soln	Apply to nostrils TDS Wash DAILY (incl 2 hair washes) Apply to nostrils QDS Wash DAILY (incl 2 hair washes)	5 days 5 days 10 days 10 days
MRSA active infection	MRSA confirmed with **lab** results Seek specialist advice	doxycycline[B+] (>12yrs only) (Ensure isolate is doxycycline sensitive) Other treatment options– discuss with specialist	100mg BD	7 days
PVL producing-*Staphylococcus aureus*	Panton-Valentine Leukocidin (PVL) is a toxin produced by 4.9% of S. aureus. Can rarely cause severe invasive infections in healthy people. Send swabs if recurrent boils/ abscesses. Risk factors; Close contact in communities or sport; poor hygiene[C].			
Leg ulcers	Routine swabs are not recommended. Antibiotics are only indicated if cellulitis is present[A+], and do not improve healing. Cultures / swabs are only indicated if diabetic or there is evidence of clinical infection, e.g. inflammation or redness / cellulitis, increased pain, purulent exudates, rapid deterioration of ulcer or pyrexia. Sampling requires cleaning then vigorous curettage and aspiration. If active infection, treat as cellulitis (as above). Refer for specialist opinion if severe infection[C].			
Eczema	Using antibiotics, or adding them to steroids in eczema does not improve healing unless there are visible signs of infection[B]. Where treatment indicated treat as per Impetigo[C].			
Bites Animal bite Human bite	Thorough irrigation is important[C]. Assess tetanus and rabies risk[C]. Antibiotic prophylaxis advised for – puncture wounds, bite involving hand, face, foot,joint, tendon or ligament. It is also recommended for at risk patients e.g. diabetic, asplenic, immunosuppressed, cirrhotic, prosthetic valve or joint Antibiotic prophylaxis advised; add metronidazole if severe. Assess tetanus, HIV/hepatitis B & C risk	***First line animal & human prophylaxis and treatment*** co-amoxiclav[C] **Penicillin allergic in ADULTS:** metronidazole **plus** doxycycline **Penicillin allergic in CHILDREN:** clindamycin	***First line animal & human prophylaxis and treatment*** 625mg TDS[C] Child – see BNF for children 400mg TDS 100mg BD[C] See BNF for children	**Review at 24 & 48hrs** Treatment -7 days Prophylaxis – 5 days Treatment -7 days Prophylaxis – 5 days Treatment -7 days Prophylaxis – 5 days
Scabies	Treat whole body including scalp, face, neck, ears, under nails. Treat all household and sexual contacts within 24 hours[C].	permethrin 5% cream[A+] or malathion 0.5% aqueous solution[C]	2 applications one week apart.	
Conjunctivitis	Bacterial, usually unilateral and yellow-white mucopurulent discharge. Most bacterial infections are self limiting, 64% resolve on placebo[A+].	**1st line** chloramphenicol[B+] 0.5% drops plus 1% ointment **2nd line** fusidic acid 1% gel	2 hourly for 2 days then reduce to QDS plus at night BD	All for 48 hours after resolution

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Fungal infection of the proximal fingernail or toenail (Adults) For children seek advice	Take nail clippings: Start therapy only if infection is confirmed by laboratory[C]**.** Idiosyncratic liver reactions occur rarely with oral antifungals. If patient develops signs of liver dysfunction treatment should be stopped immediately[A+]	terbinafine[A+] *Use with caution in hepatic or renal impairment*	250 mg OD	Fingers: 6–12 weeks Toes : 3 – 6 months
	Pulsed itraconazole monthly is recommended for infections with yeasts and non-dermatophyte moulds.[C]	Itraconazole[A+]	200 mg BD	Give for 7 days repeat every month. Fingers: 2 Cycles Toes: 3 Cycles
Fungal infection of the skin	Terbinafine is fungicidal. Imidazole is fungistatic. Treatment times shorter with terbinafine. If candida possible, use imidazole[C]. If intractable, use skin scrapings and if infection confirmed, use oral therapy (as above) [B+]. Scalp infections – discuss with specialist. Patients should be given advice regarding general hygiene measures in order to improve healing and reduce the risk of spread of infection to others.	Topical terbinafine[A+] OR Topical Clotrimazole 1% Or Miconazole 2% cream[A+] *With significant inflammation* *Clotrimazole 1% + hydrocortisone 1%* *or* *Miconazole 2% + hydrocortisone 1%*	BD Apply 2-3 times / day Apply twice daily Apply twice daily	1-2 weeks 4 – 6 weeks[A+] (i.e. 1-2 weeks after healing) Max 1 week Max 1 week

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VIRAL INFECTIONS				
ILLNESS	**COMMENTS**	**DRUG**	**DOSE**	**DURATION OF Tx**
Herpes zoster / Chicken pox & Varicella zoster/ Shingles	If pregnant /immunocompromised / neonate seek urgent advice[B+] from virology dept 01482 626762 (Out of hours contact on call consultant microbiologist: 01482 875875) Chicken pox: treat **ONLY IF** > 14 years or severe pain, dense/oral rash, secondary household case, on steroids or smoker and **IF** can start within 24 hours of rash[B+]. Shingles: treat **ONLY IF** over 50 years[A+] and within 72 hours of rash[B+]; or if active ophthalmic[B+] or Ramsey Hunt[B+] or eczema[C].	***If indicated:*** aciclovir	800 mg five times a day Child – see BNF	7 days[B+]
Cold sores	Cold sores resolve after 7-10 days without treatment. Topical antivirals (such as aciclovir 5% cream 5 times a day for 5 days) applied prodromally reduce duration by 12-24 hours[B+]			

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DENTAL INFECTIONS

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 call NHS 111

ILLNESS	COMMENTS	DRUG	DOSE	DURATION OF Tx
Mucosal ulceration and inflammation (simple gingivitis)	• Temporary pain and swelling relief can be attained with saline mouthwash[1C] • Use antiseptic mouthwash: If more severe & pain limits oral hygiene to treat or prevent secondary infection.[2-8C] 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[1C] Chlorhexidine 0.12-0.2%[2-6A+] *(Do not use within 30 mins of toothpaste)* Hydrogen peroxide 1.5%[6-8A-] *(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 1 min QDS (after meals & bedtime)	Always spit out after use. Use until lesions resolve or less pain allows oral hygiene
Acute necrotising ulcerative gingivitis[C]	Commence metronidazole[1-7] and refer to dentist for scaling and oral hygiene advice[C] Use in combination with antiseptic mouthwash if pain limits oral hygiene	Metronidazole[1-7C] AND Chlorhexidine or hydrogen peroxide	400 mg TDS see above dosing in mucosal ulceration	3 days Until oral hygiene possible
Pericoronitis[1B]	Refer to dentist for irrigation & debridement.[1C] If persistent swelling or systemic symptoms use metronidazole.[1-5A] Use antiseptic mouthwash if pain and trismus limit oral hygiene	Amoxicillin AND Metronidazole[1-7C] AND Chlorhexidine or hydrogen peroxide	500 mg[6] 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;[1] 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.[2,3] • 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,[9] 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.[6,12C]			
	If pus drain by incision, tooth extraction or via root canal.[4-7B] Send pus for microbiology. *True penicillin allergy*: use clarithromycin or clindamycin[C] if severe. 1. *If spreading infection* (lymph node involvement, or systemic signs ie fever or malaise) ADD metronidazole[8-10C]	Amoxicillin[2] or Phenoxymethylpenicillin[2] *True penicillin allergy:* Clarithromycin *Severe infection add* Metronidazole[8-10] *or if allergy* Clindamycin[3,8-11]	500 mg[2] TDS 500 mg[2] – 1g QDS 500 mg BD 400 mg TDS 300mg QDS	Up to 5 days review at 3d [11] 5 days 5 days[11]

MISCELLANEOUS

Prophylaxis of infection in asplenic and hyposplenic patients

Guidance can be found at the following websites

https://www.gov.uk/government/publications/splenectomy-leaflet-and-card

***Note:* Doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.**

A+ = systematic review, A- = rigorous RCT, B+ = RCT or cohort study, B- = case-control study

C = formal combination of expert opinion.

References

The primary reference sources for these guidelines were:

Public Health England Management of Infection Guidance for Primary Care for Consultation & Local Adaptation https://www.gov.uk/government/publications/managing-common-infections-guidance-for-primary-care

Hull and East Yorkshire Hospitals NHS Trust Adult Sepsis Guidelines (Oct 2013).

Clinical Knowledge Summaries for the NHS http://cks.nice.org.uk, www.bnf.org.uk , BNF for Children www.bnfc.org.uk

Further references are listed in main text or can be found in original PHE document, listed above.

This guidance was initially developed in 1999 by practitioners in South Devon, as part of the S&W Devon Joint Formulary Initiative, and Cheltenham & Tewkesbury Prescribing Group and modified by the PHLS South West Antibiotic Guidelines Project Team, PHLS Primary Care Co-ordinators and members of the Clinical Prescribing Sub-group of the Standing Medical Advisory Committee on Antibiotic Resistance. It was further modified following comments from Internet users. If you would like to receive a copy of this guidance with the most recent changes highlighted please email the author cliodna.mcnulty@phe.gov.uk
The guidance has been updated regularly as significant research papers, systematic reviews and guidance have been published. Public Health England (previously Health Protection Agency) works closely with the authors of the Clinical Knowledge Summaries.

Grading of guidance recommendations

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

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

APPROVAL PROCESS for HERPC GUIDELINE

Written by:	Marie Miller, Interface Pharmacist; updated Jane Morgan – Acting Interface Pharmacist July 17 (UTI section and links only)
In consultation with	Dr Gavin Barlow, Consultant in Infectious Disease, Formulary SubGroup, HUTH Specialist teams – Sexual Health, ENT
Approved by:	Joint formulary Committee
Ratified by:	HERPC Sept 15 and May 19 (UTI section only)
Review Date:	September 20

Note: ***Doses are oral and for adults unless otherwise stated. Please refer to BNF for further information***.
A+ = systematic review, A- = rigorous RCT, B+ = RCT or cohort study, B- = case-control study
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