Mid and South Essex Integrated Care System

NHS

NICE National Institute for Health and Care Excellence

Public Health England

Summary of antimicrobial prescribing guidance – managing common infections

Aims of this guideline

- To provide a simple, empirical approach to the treatment of common infections based on our local community and sensitivity patterns.
- To promote the safe, cost-effective and appropriate use of antimicrobials by targeting those who may benefit most
- To minimise the emergence of antimicrobial resistance in the community

Principles of Treatment

1. This guidance is based on the best available evidence at the time of development. Its application must be modified by professional judgement, based on knowledge about individual patient co-morbidities, potential for drug interactions and involve patients in management decisions.
2. It is important to initiate antibiotic as soon as possible in severe infection or in those immunocompromised, particularly if sepsis is suspected. Refer to the NICE guideline [NG51] Sepsis: recognition, diagnosis and early management for further information.
3. This guidance should not be used in isolation; it should be supported with patient information about safety netting, back-up/delayed antibiotics, self –care, infection severity and usual duration, clinical staff education, and audits. The RCGP TARGET antibiotics toolkit is available via the RCGP website.
4. The majority of this guidance provides dose and duration of treatment for **ADULTS**. Doses may need modification for age, weight and renal function. Refer to appropriate paediatric sources for information on paediatric doses.
5. Refer to BNF for further dosing and interaction information (e.g. interaction between macrolides and statins), ALWAYS check for hypersensitivity/allergy.
6. Have a lower threshold for antibiotics in immunocompromised or in those with multiple co- morbidities; send samples for culture and seek advice.
7. Prescribe an antimicrobial only when there is likely to be a clear clinical benefit, giving alternative, non-antibiotic self –care advice where appropriate.
8. Consider a no, or delayed, antibiotic strategy for acute self-limiting upper respiratory tract infections (e.g. acute sore throat, acute cough and acute sinusitis) and mild UTI symptoms
9. 'Blind' antibiotic prescribing for unexplained pyrexia usually leads to further difficulty in establishing the diagnosis.
10. Limit prescribing over the telephone to exceptional cases.
11. Avoid broad spectrum antibiotics (e.g. co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase the risk of *Clostridiodes difficile*, MRSA and resistant Urinary Tract Infections (UTIs).
12. Avoid widespread use of topical antibiotics (especially those agents also available as systemic preparations, in most cases, topical use should be limited).
13. If diarrhoea or vomiting occurs due to an antibiotic or the illness being treated, the efficacy of hormonal contraception may be impaired and additional precautions should be recommended.
14. Clarithromycin is now recommended over erythromycin, except in pregnancy and breastfeeding. It has fewer side-effects and twice daily rather than four times daily dosing promotes compliance. **Statins should be withheld when macrolide antibiotics are prescribed.**
15. In pregnancy, take specimens to inform treatment. Penicillins, cephalosporins and erythromycin are not associated with increased risk of spontaneous abortion. If possible, avoid tetracyclines, quinolones, aminoglycosides, azithromycin (except in chlamydial infection), clarithromycin and high dose metronidazole (2g stat) unless the benefits outweigh the risks. Short-term use of nitrofurantoin is not expected to cause foetal problems (theoretical risk of neonatal haemolysis).

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- For all PHE guidance, follow PHE's principles of treatment. ***Adjustments based on local population needs are in red italics****
- See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding.

Key: Click to access doses for children Click to access NICE's printable visual summary

Jump to section on: Upper RTI | Lower RTI | UTI | Meningitis | GI | Genital | Skin | Eye | Dental

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Upper respiratory tract infections						
Acute sore throat NICE Public Health England Last updated: Jan 2018	Advise paracetamol, or if preferred and suitable, ibuprofen for pain. Medicated lozenges may help pain in adults. Use FeverPAIN or Centor to assess symptoms: **FeverPAIN 0-1 or Centor 0-2**: no antibiotic; **FeverPAIN 2-3**: no or back-up antibiotic; **FeverPAIN 4-5 or Centor 3-4:** immediate or back-up antibiotic. **Systemically very unwell or high risk of complications:** immediate antibiotic. *5 days of phenoxymethylpenicillin may be enough for symptomatic cure; but a 10-day course may increase the chance of microbiological cure. *For detailed information click the visual summary icon.*	**First choice**: phenoxymethylpenicillin	500mg QDS or 1000mg BD	BNF for children	5 to 10 days	
		Penicillin allergy: clarithromycin **OR**	250mg to 500mg BD		5 days	
		erythromycin (preferred if pregnant)	250mg to 500mg QDS or 500mg to 1000mg BD		5 days	
Influenza UK Health Security Agency Last updated: Nov 2021	**Annual vaccination is essential for all those 'at risk' of influenza.**[1D] Antivirals are not generally recommended for healthy adults, unless physician feels patient is at serious risk of developing complications Treat 'at risk' patients with 5 days oseltamivir 75mg BD, when COVID-19 testing has been done (if available) and COVID-19 infection has been ruled out or suspected or confirmed influenza is part of the differential diagnosis, when influenza is circulating in the community, and ideally within 48 hours of onset (36 hours for zanamivir treatment in children),[1D,3D] or in a care home where influenza is likely. In patients with complicated influenza, zanamivir is a second line option, but would be first choice where there is a higher risk of oseltamivir resistance Post exposure prophylaxis for 10 days may be required where 'at risk' patient not effectively protected by vaccination and within 36 hours of contact with an index case for zanamivir and within 48 hours of contact with an index case for oseltamivir. COVID-19 testing of the index case should be done if influenza suspected, unless this has been specifically discounted. In a localised outbreak (such as a care home), antiviral prophylaxis may be given regardless of vaccination status. **At risk**: pregnant (and up to 2 weeks post-partum); children under 6 months; adults 65 years or older; chronic respiratory disease (including COPD and asthma); significant cardiovascular disease (not hypertension); severe immunosuppression; chronic neurological, renal or liver disease; diabetes mellitus; morbid obesity (BMI>40).[4D] See the UKHSA Influenza guidance for the treatment of patients under 13 years.[4D] In severe immunosuppression oseltamivir PO is the first line treatment and 10 days treatment course is recommended. Use zanamivir 10mg BD in severe immunosuppression if there is a risk of oseltamivir resistance[5A+,6A+] (2 inhalations twice daily by diskhaler for up to 10 days) and seek advice.[4D] *Access supporting evidence and rationales on the UKHSA Government website*					

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Scarlet fever (GAS) Public Health England Last updated: Mar 2019	**Prompt treatment** with appropriate antibiotics significantly reduces the risk of complications.[1D] Vulnerable individuals (immunocompromised, the comorbid, or those with skin disease) are at increased risk of developing complications.[1D] In December 2022, there was increased notifications of scarlet fever and invasive group A streptococcus (iGAS) disease in children and young people. See https://www.england.nhs.uk/publication/group-a-streptococcus-communications-to-clinicians/	Phenoxymethylpenicillin[2D]	500mg QDS[2D]	BNF for children	10 days[3A+,4A+,5A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Penicillin allergy: clarithromycin[2D] erythromycin (preferred if pregnant)	250mg to 500mg BD[2D]	BNF for children	5 days[2D,5A+]	
		Optimise analgesia[2D] and give safety netting advice				
Acute otitis media NICE Public Health England Last updated: Mar 2022	Regular paracetamol or ibuprofen for pain (right dose for age or weight at the right time and maximum doses for severe pain). Consider ear drops containing an anaesthetic and an analgesic for pain if an immediate antibiotic is not given and there is no ear drum perforation or otorrhoea **Otorrhoea or under 2 years with infection in both ears**: no, back-up or immediate antibiotic. **Otherwise**: no or back-up antibiotic. **Systemically very unwell or high risk of complications**: immediate antibiotic. *For detailed information click on the visual summary.*	**First choice**: amoxicillin	-		5 to 7 days	
		Penicillin allergy: clarithromycin **OR**	-		5 to 7 days	
		erythromycin (preferred if pregnant)	-		5 to 7 days	
		Second choice or if systemically very unwell or high risk of complications: co- amoxiclav **OR** clarithromycin **AND** metronidazole	-		5 to 7 days[5A]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acute otitis externa Public Health England Last updated: Nov 2017	**First line**: analgesia for pain relief,[1D,2D] and apply localised heat (such as a warm flannel).[2D] **Second line**: topical acetic acid or topical antibiotic +/- steroid: similar cure at 7 days.[2D,3A+,4B-] **If cellulitis or disease extends outside ear canal**, or systemic signs of infection, start oral flucloxacillin and refer to exclude malignant otitis externa.[1D]	**Second line**: topical acetic acid 2%[2D,4B-] **OR**	1 spray TDS[5A-]	BNF for children	7 days	*Not available. Access supporting evidence and rationales on the PHE website*
		topical neomycin sulphate with corticosteroid[2D,5A-] (consider safety issues if perforated tympanic membrane)[6B-]	3 drops TDS[5A-]	BNF for children	7 days (min) to 14 days (max) [3A+]	
		If cellulitis: flucloxacillin[7B+]	250mg QDS[2D] If severe: 500mg QDS	BNF for children	7 days[2D]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Sinusitis NICE Public Health England Last updated: Oct 2017	Advise paracetamol or ibuprofen for pain. Little evidence that nasal saline or nasal decongestants help, but people may want to try them. **Symptoms for 10 days or less**: no antibiotic. **Symptoms with no improvement for more than 10 days**: no antibiotic or back-up antibiotic depending on likelihood of bacterial cause. Consider high-dose nasal corticosteroid (if over 12 years). **Systemically very unwell or high risk of complications**: immediate antibiotic. *For detailed information click on the visual summary.*	**First choice**: Phenoxymethylpenicillin	500mg QDS		5 days	
		Penicillin allergy: doxycycline (not in under 12s) **OR**	200mg on day 1, then 100mg OD		5 days	
		clarithromycin **OR**	500mg BD			
		erythromycin (preferred if pregnant)	250 to 500mg QDS or 500 to 1000mg BD			
		Alternative if systemically very unwell: co-amoxiclav	500/125mg TDS		5 days	
▼ Lower respiratory tract infections						
Acute exacerbation of COPD NICE Public Health England	Many exacerbations are not caused by bacterial infections so will not respond to antibiotics. Consider an antibiotic, but only after taking into account severity of symptoms (particularly sputum colour changes and increases in volume or thickness), need for hospitalisation, previous exacerbations, hospitalisations and risk of complications, previous sputum culture and susceptibility results, and risk of resistance with repeated courses. Some people at risk of exacerbations may have antibiotics to keep at home as part of their exacerbation action plan. *Note on co-amoxiclav from Southend microbiologist: Haemophilus is* significant in *COPD, and about 16% of Southend haemophilus is resistant to co-amoxiclav, as such we use doxycycline as first line and clarithromycin as second line* *For detailed information click on the visual summary. See also the NICE guideline on COPD in over 16s.*	**First choice:** doxycycline **OR**	200mg on day 1, then 100mg OD (see BNF for severe infection)	-	5 days	
		amoxicillin **OR**	500mg TDS (see BNF for severe infection)	-		
		clarithromycin	500mg BD	-		
		Second choice: use alternative first choice				
		Alternative choice (if person at higher risk of treatment failure): co-amoxiclav **OR**	500/125mg TDS	-	5 days	
		co-trimoxazole **OR**	960mg BD	-		
		levofloxacin (with specialist advice if co-amoxiclav or co-trimoxazole cannot be used; consider safety issues)	500mg OD			

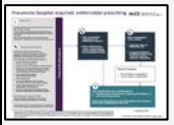
Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		IV antibiotics *(click on visual summary)*				
Rescue Pack (for initial management of exacerbation) Prescribe prednisolone 5mg tablets - Take SIX tablets in the morning for 7-14 days and Amoxicillin 500mg capsules Take ONE capsule THREE times a day for 5 days **OR** Doxycycline 200mg first day then 100mg daily total 5 days course *NB: this dosing schedule differs from the dosing schedule for acute bronchitis* **If a patient is using two or more packs in a year they need a specialist review.**						
COVID-19 NICE **Last updated: Dec 2021**	Antibiotics should not be used for preventing or treating COVID-19 unless there is clinical suspicion of additional bacterial co-infection. Do not use azithromycin to treat COVID-19. Do not use doxycycline to treat COVID-19 in the community. Do not offer an antibiotic for preventing secondary bacterial pneumonia in people with COVID-19. If a person in the community has suspected or confirmed secondary bacterial pneumonia, start antibiotic treatment as soon as possible, see community-acquired pneumonia for choices. *For detailed information, see the NICE guideline on managing COVID-19.*					

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acute exacerbation of bronchiectasis (non-cystic fibrosis) NICE Public Health England Last updated: Dec 2018	Send a sputum sample for culture and susceptibility testing. Offer an antibiotic. When choosing an antibiotic, take account of severity of symptoms and risk of treatment failure. People who may be at higher risk of treatment failure include people who've had repeated courses of antibiotics, a previous sputum culture with resistant or atypical bacteria, or a higher risk of developing complications. Course length is based on severity of broncheictasis, exacerbation history, severity of exacerbation symptoms, previous culture and susceptibility results, and response to treatment. Do not routinely offer antibiotic prophylaxis to prevent exacerbations. Seek specialist advice for preventing exacerbations in people with repeated acute exacerbations. This may include a trial of antibiotic prophylaxis after a discussion of the possible benefits and harms, and the need for regular review. *For detailed information click on the visual summary.*	**First choice empirical treatment:** amoxicillin (preferred if pregnant) **OR**	500mg TDS		7 to 14 days	
		doxycycline (not in under 12s) **OR**	200mg on day 1, then 100mg OD			
		clarithromycin	500mg BD			
		Offer erythromycin if pregnant and penicillin allergy	250-500mg QDS or 500mg-1g BD			
		Alternative choice (if person at higher risk of treatment failure) empirical treatment: co-amoxiclav **OR**	500/125mg TDS		7 to 14 days	
		levofloxacin (adults only: with specialist advice if co-amoxiclav cannot be used; consider safety issues) **OR**	500mg OD or BD			
		ciprofloxacin (children only: with specialist advice if co-amoxiclav cannot be used; consider safety issues)	-			
		IV antibiotics (*click on visual summary*)				
		When current susceptibility data available: choose antibiotics accordingly				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acute cough NICE Public Health England Last updated: Feb 2019	**Consider no or 7 day back up/delayed antibiotic with self-care and safety netting and advise that symptoms can last 3 weeks.** Some people may wish to try honey (in over 1s), the herbal medicine pelargonium (in over 12s), cough medicines containing the expectorant guaifenesin (in over 12s) or cough medicines containing cough suppressants, except codeine, (in over 12s). These self-care treatments have limited evidence for the relief of cough symptoms. **Acute cough with upper respiratory tract infection**: no antibiotic. **Acute bronchitis**: no routine antibiotic. **Acute cough and higher risk of complications (at face-to-face examination)**: immediate or back-up antibiotic. **Acute cough and systemically very unwell (at face to face examination)**: immediate antibiotic. Higher risk of complications includes people with pre-existing comorbidity; young children born prematurely; people over 65 with 2 or more of, or over 80 with 1 or more of: hospitalisation in previous year, type 1 or 2 diabetes, history of congestive heart failure, current use of oral corticosteroids. Do not offer a mucolytic, an oral or inhaled bronchodilator, or an oral or inhaled corticosteroid unless otherwise indicated. *For detailed information click on the visual summary. See also the NICE guideline on pneumonia for prescribing antibiotics in adults with acute bronchitis who have had a C-reactive protein (CRP) test (CRP<20mg/l: no routine antibiotic, CRP 20 to 100mg/l: back-up antibiotic, CRP>100mg/l: immediate antibiotic).*	**Adults first choice:** doxycycline	200mg on day 1, then 100mg OD	-	5 days	
		Adults alternative first choices: amoxicillin (preferred if pregnant) **OR**	500mg TDS	-		
		clarithromycin **OR**	250mg to 500mg BD	-		
		erythromycin (preferred if pregnant)	250mg to 500mg QDS or 500mg to 1000mg BD	-		
		Children first choice: amoxicillin	-		5 days	
		Children alternative first choices: clarithromycin **OR**	-			
		erythromycin **OR**	-			
		doxycycline (not in under 12s)	-			

Infection	Key points	Medicine	Doses		Length	Visual summar
			Adult	Child		
Community-acquired pneumonia **NICE** Public Health England Last updated: Sept 2019	Assess severity in adults based on clinical judgement guided by mortality risk score (CRB65 or CURB65). See the NICE guideline on pneumonia for full details: **low severity** – CRB65 0 or CURB65 0 or 1 **moderate severity** – CRB65 1 or 2 or CURB65 2 **high severity** – CRB65 3 or 4 or CURB65 3 to 5. 1 point for each parameter: **confusion**, (**urea** >7 mmol/l), **respiratory rate** ≥30/min, low systolic (<90 mm Hg) or diastolic (≤60 mm Hg) **blood pressure**, **age** ≥65. CRB 2 & above - consider senior medical advice/support aligned to the personalised treatment escalation goals of the patient Assess severity in children based on clinical judgement. Offer an antibiotic. Start treatment as soon as possible after diagnosis, within 4 hours (within 1 hour if sepsis suspected and person meets any high risk criteria – see the NICE guideline on sepsis). When choosing an antibiotic, take account of severity, risk of complications, local antimicrobial resistance and surveillance data, recent antibiotic use and microbiological results. * Stop antibiotics after 5 days unless microbiological results suggest a longer course is needed or the person is not clinically stable. When life threatening infection, GP should administer antibiotics. Benzylpenicillin 1.2 gram IV or amoxicillin 1 gram orally are preferred agents. *For detailed information click on the visual summary. See also the NICE guideline on pneumonia.*	**Doxycycline is preferred because it has a broader spectrum of cover than amoxicillin, particularly against Mycoplasma pneumoniae and Staphylococcus aureus, which are more likely to be secondary bacterial causes of pneumonia during the COVID-19 pandemic.**				
		First choice (low severity in adults or non-severe in children): amoxicillin	500mg TDS (higher doses can be used, see BNF)		5 days*	
		Alternative first choice (low severity in adults or non-severe in children): doxycycline (not in under 12s) **OR**	200mg on day 1, then 100mg OD			
		clarithromycin **OR**	500mg BD			
		erythromycin (in pregnancy)	500mg QDS			
		First choice (moderate severity in adults): amoxicillin **AND (if atypical pathogens suspected)**	500mg TDS (higher doses can be used, see BNF)	-	5 days*	
		clarithromycin **OR**	500mg BD	-		
		erythromycin (in pregnancy)	500mg QDS	-		
		Alternative first choice (moderate severity in adults): doxycycline **OR**	200mg on day 1, then 100mg OD	-		
		clarithromycin	500mg BD	-		
		First choice (high severity in adults or severe in children): co-amoxiclav **AND (if atypical pathogens suspected)**	500/125mg TDS		5 days*	
		clarithromycin **OR**	500mg BD			
		erythromycin (in pregnancy)	500mg QDS			

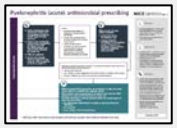
Infection	Key points	Medicine	Doses		Length	Visual summar
			Adult	Child		
		Alternative first choice (high severity in adults): levofloxacin (consider safety issues)	500mg BD	-		
		IV antibiotics *(click on visual summary)*				

Infection	Key points	Medicine	Doses		Length	Visual summar
			Adult	Child		
Hospital-acquired pneumonia **NICE** Public Health England Last updated: Sept 2019	*Mild to moderate HAP can be treated in the community if it starts following discharge, after 5 days or more of in-patient stay.* If symptoms or signs of pneumonia start within 48 hours of hospital admission, see community acquired pneumonia. Offer an antibiotic. Start treatment as soon as possible after diagnosis, within 4 hours (within 1 hour if sepsis suspected and person meets any high risk criteria – see the NICE guideline on sepsis). When choosing an antibiotic, take account of severity of symptoms or signs, number of days in hospital before onset of symptoms, risk of developing complications, local hospital and ward-based antimicrobial resistance data, recent antibiotic use and microbiological results, recent contact with a health or social care setting before current admission, and risk of adverse effects with broad spectrum antibiotics. No validated severity assessment tools are available. Assess severity of symptoms or signs based on clinical judgement. Higher risk of resistance includes relevant comorbidity (such as severe lung disease or immunosuppression), recent use of broad spectrum antibiotics, colonisation with multi-drug resistant bacteria, and recent contact with health and social care settings before current admission. If symptoms or signs of pneumonia start within days 3 to 5 of hospital admission in people not at higher risk of resistance, consider following community acquired pneumonia for choice of antibiotic. *For detailed information click on the visual summary. See also the NICE guideline on pneumonia.*	**First choice (non-severe and not higher risk of resistance):** co-amoxiclav	500/125 mg TDS		5 days then review	
		Adults alternative first choice (non-severe and not higher risk of resistance) Choice based on specialist microbiological advice and local resistance data **Options include:** doxycycline	200mg on day 1, then 100mg OD	-	5 days then review	
		cefalexin (caution in penicillin allergy)	500 mg BD or TDS (can increase to 1 to 1.5g TDS or QDS)	-		
		co-trimoxazole	960mg BD	-		
		levofloxacin (only if switching from IV levofloxacin with specialist advice; consider safety issues)	500mg OD or BD	-		
		Children alternative first choice (non-severe and not higher risk of resistance): clarithromycin Other options may be suitable based on specialist microbiological advice and local resistance data	-		-	
		For first choice IV antibiotics (severe or higher risk of resistance) and antibiotics to be added if suspected or confirmed MRSA infection see visual summary				

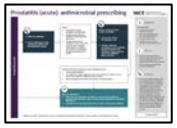
Urinary tract infections

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Lower urinary tract infection NICE Public Health England Last updated: Oct 2018	Advise paracetamol or ibuprofen for pain. **Non-pregnant women**: back up antibiotic (to use if no improvement in 48 hours or symptoms worsen at any time) or immediate antibiotic. **Pregnant women, men, children or young people**: immediate antibiotic. When considering antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. If people have symptoms of pyelonephritis (such as fever) or a complicated UTI, see acute pyelonephritis (upper urinary tract infection) for antibiotic choices *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.* **For male UTI a properly collected MSU is vital with attention given to following up results.** Nitrofurantoin is not recommended for men with suspected prostate involvement because it is unlikely to reach therapeutic levels in the prostate **People > 65 years: do not treat asymptomatic bacteriuria;** it is common but is not associated with increased morbidities	**Non-pregnant women first choice**: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	3 days	
		trimethoprim (if low risk of resistance)	200mg BD	-		
		Non-pregnant women second choice: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	3 days	
		pivmecillinam (a penicillin) **OR**	400mg initial dose, then 200mg TDS	-	3 days	
		Fosfomycin (on microbiologist advice only)	3g single dose sachet	-	single dose	
		Pregnant women first choice: nitrofurantoin (avoid at term) – if eGFR ≥45 ml/minute	100mg m/r BD (or if unavailable 50mg QDS)	-	7 days	
		Pregnant women second choice: Cefalexin* (only if culture results available and susceptible) **OR**	500mg BD	-	7 days	
		Amoxicillin	500mg TDS	-		
		Treatment of asymptomatic bacteriuria in pregnant women: choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results. **Local adjustment as about 60 % urine E.coli are resistant to amoxicillin*				
		Men first choice: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	7 days	
		trimethoprim	200mg BD	-		
		Men second choice: consider alternative diagnoses basing antibiotic choice on recent culture and susceptibility results				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		Children and young people (3 months and over) first choice: trimethoprim (if low risk of resistance) **OR**	-			
		nitrofurantoin (if eGFR ≥45 ml/minute)	-			
		Children and young people (3 months and over) second choice: nitrofurantoin (if eGFR ≥45 ml/minute and not used as first choice) **OR**	-		-	
		amoxicillin (only if culture results available and susceptible) **OR**	-			
		cefalexin	-			

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acute pyelonephritis (upper urinary tract) NICE Public Health England Last updated: Oct 2018	Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12. Offer an antibiotic. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Avoid antibiotics that don't achieve adequate levels in renal tissue, such as nitrofurantoin. *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.*	**Non-pregnant women and men first choice**: cefalexin **OR**	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	-	7 to 10 days	
		co-amoxiclav (only if culture results available and susceptible) **OR**	500/125mg TDS	-	7 to 10 days	
		trimethoprim (only if culture results available and susceptible) **OR**	200mg BD	-	14 days	
		ciprofloxacin (consider safety issues)	500mg BD	-	7 days	
		Non-pregnant women and men IV antibiotics *(click on visual summary)*				
		Pregnant women first choice: cefalexin	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	-	7 to 10 days	
		Pregnant women second choice or IV antibiotics *(click on visual summary)*				
		Children and young people (3 months and over) first choice: cefalexin **OR**	-		-	
		co-amoxiclav (only if culture results available and susceptible)	-			
		Children and young people (3 months and over) IV antibiotics *(click on visual summary)*				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Catheter-associated urinary tract infection NICE Public Health England Last updated: Nov 2018	Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter. Consider removing or, if not possible, changing the catheter if it has been in place for more than 7 days. But do not delay antibiotic treatment. Advise paracetamol for pain. Advise drinking enough fluids to avoid dehydration. **Antibiotics will not eradicate asymptomatic bacteriuria.** Only offer antibiotics if systemically unwell or pyelonephritis likely. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter. *For detailed information click on the visual summary. See also the Public Health England urinary tract infection: diagnostic tools for primary care.*	**Non-pregnant women and men first choice if no upper UTI symptoms:** nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	Check BNF	7 days	
		trimethoprim (if low risk of resistance) **OR**	200mg BD	Check BNF		
		amoxicillin (only if culture results available and susceptible)	500mg TDS	-		
		Non-pregnant women and men second choice if no upper UTI symptoms: pivmecillinam (a penicillin)	400mg initial dose, then 200mg TDS	-	7 days	
		Non-pregnant women and men first choice if upper UTI symptoms: cefalexin **OR**	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	-	7 to 10 days	
		co-amoxiclav (only if culture results available and susceptible) **OR**	500/125mg TDS	-		
		trimethoprim (only if culture results available and susceptible) **OR**	200mg BD	-	14 days	
		ciprofloxacin (consider safety issues)	500mg BD	-	7 days	
		Non-pregnant women and men IV antibiotics *(click on visual summary)*				
		Pregnant women first choice: cefalexin	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	-	7 to 10 days	
		Pregnant women second choice or IV antibiotics *(click on visual summary)*				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		Children and young people (3 months and over) first choice: trimethoprim (if low risk of resistance) **OR**	-			
		amoxicillin (only if culture results available and susceptible) **OR**	-		-	
		cefalexin **OR**	-			
		co-amoxiclav (only if culture results available and susceptible)	-			
		Children and young people (3 months and over) IV antibiotics *(click on visual summary)*				
Acute prostatitis **NICE** Public Health England Last updated: Oct 2018	Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable. Offer antibiotic. Review antibiotic treatment after 14 days and either stop antibiotics or continue for a further 14 days if needed (based on assessment of history, symptoms, clinical examination, urine and blood tests). *For detailed information click on the visual summary.*	**First choice** (guided by susceptibilities when available): ciprofloxacin (consider safety issues) **OR**	500mg BD	-	14 days then review	
		ofloxacin (consider safety issues) **OR**	200mg BD	-		
		trimethoprim (if fluoroquinolone not appropriate; seek specialist advice)	200mg BD	-		
		Second choice (after discussion with specialist): levofloxacin (consider safety issues) **OR**	500mg OD	-	14 days, then review	
		co-trimoxazole	960mg BD	-		
		IV antibiotics - Refer to specialist *(click on visual summary)*				

Infection	Key points	Medicine	Doses		Length	Visual Summary
			Adult	Child		
Recurrent urinary tract infection NICE Public Health England Last updated Oct 2018	First advise about behavioural and personal hygiene measures, and self-care (with D-mannose or cranberry products) to reduce the risk of UTI. **For recurrent infections a properly collected MSU is vital with attention given to following up results.** For postmenopausal women, if no improvement, consider vaginal oestrogen (review within 12 months). For non-pregnant women, if no improvement, consider single-dose antibiotic prophylaxis for exposure to a trigger (review within 6 months). For non-pregnant women (if no improvement or no identifiable trigger) or with specialist advice for pregnant women, men, children or young people, consider a trial of daily antibiotic prophylaxis (review within 6 months). For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.	**First choice antibiotic prophylaxis**: trimethoprim (avoid in pregnancy) **OR**	200mg single dose when exposed to a trigger or 100mg at night		-	
		nitrofurantoin (avoid at term) - if eGFR ≥45 ml/minute	100mg single dose when exposed to a trigger or 50 to 100mg at night		-	
		Second choice antibiotic prophylaxis: amoxicillin **OR**	500mg single dose when exposed to a trigger or 250mg at night		-	
		cefalexin	500mg single dose when exposed to a trigger or 125mg at night		-	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Meningitis						
Suspected meningococcal disease Public Health England Last updated: Feb 2019	**Transfer all patients to hospital immediately**.[1D] If time before hospital admission,[2D,3A+] if suspected meningococcal septicaemia or non-blanching rash,[2D,4D] give IV benzylpenicillin[1D,2D,4D] as soon as possible.[2D] Do not give IV antibiotics if there is a definite history of anaphylaxis;[1D] rash is not a contraindication.[1D]	IV or IM benzylpenicillin[1D,2D]	Child <1 year: 300mg[5D] Child 1 to 9 years: 600mg[5D] Adult/child 10+ years: 1.2g[5D]		Stat dose;[1D] give IM, if vein cannot be accessed[1D]	*Not available. Access the supporting evidence and rationales on the PHE website*
		IV chloramphenicol **when definite history of penicillin hypersensitivity**	25mg/Kg (maximum 1g)		Stat dose given as IM or a slow infusion over 10mins	*Adapted for Mid Essex guidelines*.
Prevention of secondary case of meningitis Public Health England Last updated: July 2019	Only prescribe following advice from your local health protection specialist/consultant: ☎ 0300 303 8537-OOH for Health Professional only 0160 3481 221 EastofEnglandHPT@phe.gov.uk ; phe.EoEHPT@nhs.net Out of hours: contact on-call doctor: ☎ 111 Expert advice is available for managing clusters of meningitis. Please alert the appropriate organisation to any cluster situation. Public Health England, Colindale (tel: 0208 200 4400) AWARe (all Wales Acute Response team) (tel: 0300 003 0032) *Access the supporting evidence and rationales on the PHE website.*					
▼ Gastrointestinal tract infections						
Oral candidiasis Public Health England Last updated: Oct 2018	**Topical azoles** are more effective than topical nystatin.[1A+] Oral candidiasis is rare in immunocompetent adults;[2D] consider undiagnosed risk factors, including HIV.[2D] Use 50mg fluconazole if extensive/severe candidiasis;[3D,4D] if HIV or immunocompromised, use 100mg fluconazole.[3D,4D]	Miconazole oral gel[1A+,4D,5A-]	2.5ml of 24mg/ml QDS (hold in mouth after food) [4D]	BNF for children	7 days; continue for 7 days after resolved[4D,6D]	*Not available. Access supporting evidence and rationales on the PHE website*
		If not tolerated: nystatin suspension[2D,6D,7A-]	1ml; 100,000units/ml QDS (half in each side) [2D,4D,7A-]	BNF for children	7 days; continue for 2 days after resolved[4D]	
		fluconazole capsules[6D,7A-]	50mg/100mg OD[3D,6D,8A-]	BNF for children	7 to 14 days[6D,7A-,8A-]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Helicobacter pylori Public Health England See PHE quick reference guide for diagnostic advice: PHE *H. pylori* Last updated: Feb 2019	Always test for *H.pylori* before giving antibiotics. Treat all positives, if known DU, GU,[1A+] or low-grade MALToma.[2D,3D] NNT in non-ulcer dyspepsia: 14.[4A+] Do not offer eradication for GORD.[3D] Do not use clarithromycin, metronidazole or quinolone if used in the past year for any infection.[5A+,6B+,7A+] **Penicillin allergy**: use PPI **PLUS** clarithromycin **PLUS** metronidazole.[2D] If previous clarithromycin, use PPI **PLUS** bismuth salt * **PLUS** metronidazole **PLUS** tetracycline hydrochloride.[2D,8A-,9D] **Relapse and no penicillin allergy** use PPI **PLUS** amoxicillin **PLUS** clarithromycin or metronidazole (whichever was not used first line) [2D] **Relapse and previous metronidazole and clarithromycin**: use PPI **PLUS** amoxicillin **PLUS** either tetracycline **OR** levofloxacin (if tetracycline not tolerated).[2D,7A+] **Relapse and penicillin allergy (no exposure to quinolone)**: use PPI **PLUS** metronidazole **PLUS** levofloxacin.[2D] **Relapse and penicillin allergy (with exposure to quinolone)**: use PPI **PLUS** bismuth salt * **PLUS** metronidazole **PLUS** tetracycline.[2D] **Retest for *H. pylori*:** post DU/GU, or relapse after second-line therapy,[1A+] using UBT or SAT,[10A+,11A+] consider referral for endoscopy and culture.[2D] *Please note bismuth salt may not be available until after June 2023	**Always use PPI**[2D,3D,5A+,12A+] **First line and first relapse and no penicillin allergy** PPI **PLUS** 2 antibiotics	-	BNF for children	7 days[2D] MALToma 14 days[7A+,16A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		amoxicillin[2D,6B+] **PLUS**	1000mg BD[14A+]	BNF for children		
		clarithromycin[2D,6B+] **OR**	500mg BD[8A-]	BNF for children		
		metronidazole[2D,6B+]	400mg BD[2D]	BNF for children		
		Penicillin allergy and previous clarithromycin: PPI **WITH** bismuth subsalicylate **PLUS** 2 antibiotics	-	-		
		bismuth subsalicylate *[13A+] **PLUS**	525mg QDS[15D]			
		metronidazole[2D] **PLUS**	400mg BD[2D]	BNF for children		
		tetracycline[2D]	500mg QDS[15D]			
		Relapse and previous metronidazole and clarithromycin: PPI **PLUS** 2 antibiotics	-	-		
		amoxicillin[2D,7A+] **PLUS**	1000mg BD[14A+]	BNF for children		
		tetracycline[2D,7A+] **OR**	500mg QDS[15D]			
		levofloxacin (if tetracycline cannot be used)[2D,7A+]	250mg BD[7A+]			
		Third line: Contact microbiologist	-	-	10 days	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
***Clostridiodes difficile* infection** **NICE** Public Health England Last updated: July 2021	For suspected or confirmed C. difficile infection, see Public Health England's guidance on diagnosis and reporting. **Assess:** whether it is a first or further episode, severity of infection, individual risk factors for complications or recurrence (such as age, frailty or comorbidities). **Existing antibiotics:** review and stop unless essential. If still essential, consider changing to one with a lower risk of *C. difficile* infection. Review the need to continue: proton pump inhibitors, other medicines with gastrointestinal activity or adverse effects (such as laxatives), medicines that may cause problems if people are dehydrated (such as NSAIDs). Do not offer antimotility medicines such as loperamide. Offer an oral antibiotic to treat suspected or confirmed *C. difficile* infection. For adults, consider seeking prompt specialist advice from a microbiologist or infectious diseases specialist before starting treatment. For children and young people, treatment should be started by, or after advice from, a microbiologist, paediatric infectious diseases specialist or paediatric gastroenterologist. If antibiotics have been started for suspected C. difficile infection, and subsequent stool sample tests do not confirm infection, consider stopping these antibiotics. For detailed information click on the visual summary.	**First line for first episode of mild, moderate or severe**: oral vancomycin	125mg QDS	BNF for children	10 days	
		Further episode within 12 weeks of symptom resolution (relapse): fidaxomicin	200mg BD	BNF for children -		
		Further episode more than 12 weeks after symptom resolution (recurrence): oral vancomycin	125mg QDS	BNF for children		
		For alternative antibiotics if first-line antibiotics are ineffective or for life-threatening infection seek specialist micro advice (see visual summary)				
Traveller's diarrhoea Public Health England Last updated: Oct 2018	Prophylaxis rarely, if ever, indicated.[1D] Consider **standby** antimicrobial only for patients at high risk of severe illness,[2D] or visiting high-risk areas.[1D,2D] *Please note bismuth subsalicylate may not be available until after June 2023	**Standby**: azithromycin	500mg OD[1D,3A+]	-	2 days [1D,2D,4A-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Prophylaxis/treatment: bismuth subsalicylate *	2 tablets QDS[1D,2D]	-	1 dose;[3B-] repeat in 2 weeks if persistent[3B-]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Threadworm Public Health England Last updated: Nov 2017	**Treat all household contacts at the same time**.[1D] **Advise hygiene measures for 2 weeks**[1D] (hand hygiene;[2D] pants at night; morning shower, including perianal area).1D,2D Wash sleepwear, bed linen, and dust and vacuum.1D **Child <6 months**, add perianal wet wiping or washes 3 hourly.	**Child >6 months**: mebendazole[1D,3B]	100mg stat[3B-]	BNF for children	1 dose;[3B-] repeat in 2 weeks if persistent[3B-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Child <6 months or pregnant (at least in first trimester): only hygiene measure for 6 weeks[1D]	-	-	-	
Infectious diarrhoea **Public Health England** Last updated: Oct 2018	Refer previously healthy children with acute painful or bloody diarrhoea, to exclude *E. coli* O157 infection.[1D] **Antibiotic therapy is not usually indicated unless patient is systemically unwell**.[2D] If systemically unwell and campylobacter suspected (such as undercooked meat and abdominal pain),[3D] consider clarithromycin 250mg to 500mg BD for 5 to 7 days, if treated early (within 3 days).[3D,4A+] If giardia is confirmed or suspected – tinidazole 2g single dose is the treatment of choice.[5A+] Access the supporting evidence and rationales on the PHE website					

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acute diverticulitis **NICE** Last updated: Nov 2019	**Acute diverticulitis and systemically well:** Consider no antibiotics, offer simple analgesia (for example paracetamol), advise to re-present if symptoms persist or worsen. **Acute diverticulitis and systemically unwell, immunosuppressed or significant comorbidity:** offer an antibiotic. Give oral antibiotics if person not referred to specialist for suspected complicated acute diverticulitis. Give IV antibiotics if admitted to specialist care with suspected or confirmed complicated acute diverticulitis (including diverticular abscess). If CT-confirmed uncomplicated acute diverticulitis, review the need for antibiotics. * A longer course may be needed based on clinical assessment.	**First-choice co-amoxiclav (uncomplicated acute**	500/125mg TDS		5 days*	
		Penicillin allergy or co-amoxiclav unsuitable: cefalexin *(Avoid in severe penicillin allergy)* **AND** metronidazole **OR**	cefalexin: 500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections) metronidazole: 400mg TDS		5 days*	**For IV antibiotics in complicated acute diverticulitis (including diverticular abscess) see visual summary**
		trimethoprim **AND** metronidazole **OR**	trimethoprim: 200mg BD metronidazole: 400mg TDS		5 days*	
		ciprofloxacin (only if switching from IV ciprofloxacin with specialist advice; consider safety issues) **AND** metronidazole	ciprofloxacin: 500mg BD metronidazole: 400mg TDS		5 days*	
Threadworm Public Health England Last updated: Nov 2017	**Treat all household contacts at the same time**.[1D] **Advise hygiene measures for 2 weeks**[1D] (hand hygiene;[2D] pants at night; morning shower, including perianal area).[1D,2D] Wash sleepwear, bed linen, and dust and vacuum.[1D] **Child <6 months**, add perianal wet wiping or washes 3 hourly.[1D]	**Child >6 months**: mebendazole[1D,3B-]	100mg stat[3B-]	BNF for children	1 dose;[3B-] repeat in 2 weeks if persistent[3B]	
		Child <6 months or pregnant (at least in first trimester): only hygiene measure for 6 weeks[1D]	-	-	-	*Not available. Access supporting evidence and rationales on the PHE website*

▼ Genital tract infections

STI screening Public Health England Last updated: Nov 2017	People with risk factors should be screened for chlamydia, gonorrhoea, HIV and syphilis.[1D] Refer individual and partners to GUM.[1D] **Risk factors**: <25 years; no condom use; recent/frequent change of partner; symptomatic or infected partner; area of high HIV.[2B-] *Access the supporting evidence and rationales on the PHE website.*

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Chlamydia trachomatis / urethritis Public Health England Last updated: July 2019	Opportunistically screen all sexually active patients aged 15 to 24 years for *chlamydia* annually and on change of sexual partner.[1B-] If positive, treat index case, refer to GUM and initiate partner notification, testing and treatment.[2D,3A+] As single dose azithromycin has led to increased resistance in GU infections, doxycycline should be used first line for *chlamydia* and urethritis.[4A+] Advise patient with chlamydia to abstain from sexual intercourse until doxycycline is completed or for 7 days after treatment with azithromycin (14 days after azithromycin started and until symptoms resolved if urethritis).[3A+,4A+] If chlamydia, test for reinfection at 3 to 6 months following treatment if under 25 years; or consider if over 25 years and high risk of re-infection.[1B-,3B+,5B-] **Second line, pregnant, breastfeeding, allergy, or intolerance**: azithromycin is most effective.[6A+,7D,8A+,9A+,10D] As lower cure rate in pregnancy, test for cure at least 3 weeks after end of treatment.[3A+] Consider referring all patients with symptomatic urethritis to GUM as testing should include *Mycoplasma genitalium and Gonorrhoea*.[11A-] If *M.genitalium* is proven, use doxycycline followed by azithromycin using the same dosing regimen and advise to avoid sex for 14 days after start of treatment and until symptoms have resolved.[11A-,12A+]	**First line**: doxycycline[4A+,11A-,12A+]	100mg BD[4A+,11A-,12A+]	-	7 days[4A+,11A-,12A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second line/ pregnant/breastfeeding/ allergy/intolerance: azithromycin[4A+,11A-,12A+]	1000mg[4A+,11A-,12A+] Then 500mg OD[4A+,11A,12A+]		Stat[4A+,11A-,12A+] 2 days[4A+,11A-,12A+] (total 3 days)	
Epididymitis Public Health England Last updated: Nov 2017	Usually due to Gram-negative enteric bacteria in men over 35 years with low risk of STI.[1A+,2D] If under 35 years or STI risk, refer to GUM.[1A+,2D]	Doxycycline[1A+,2D] **OR**	100mg BD[1A+,2D]	-	10 to 14 days[1A+,2D]	*Not available. Access supporting evidence and rationales on the PHE website*
		ofloxacin[1A+,2D] **OR**	200mg BD[1A+,2D]		14 days[1A+,2D]	
		ciprofloxacin[1A+,2D]	500mg BD[1A+,2D,3A+]		10 days[1A+,2D,3A+]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Vaginal candidiasis Public Health England Last updated: Oct 2018	All topical and oral azoles give over 80% cure.[1A+,2A+] **Pregnant**: avoid oral azoles, the 7 day courses are more effective than shorter ones.[1A+,3D,4A+] **Recurrent (>4 episodes per year):**[1A+] 150mg oral fluconazole every 72 hours for 3 doses induction,[1A+] followed by 1 dose once a week for 6 months maintenance.[1A+]	Clotrimazole[1A+,5D] **OR**	500mg pessary[1A+]	-	Stat[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		clotrimazole[1A+] **OR**	100mg pessary[1A+]		6 nights[1A+]	
		oral fluconazole[1A+,3D]	150mg[1A+,3D]		Stat[1A+]	
		If recurrent: fluconazole (induction/maintenance)[1A+]	150mg every 72 hours **THEN** 150mg once a week[1A+,3D]	-	3 doses 6 months[1A+]	
Bacterial vaginosis Public Health England Last updated: Nov 2017	Oral metronidazole is as effective as topical treatment,[1A+] and is cheaper.[2D] 7 days results in fewer relapses than 2g stat at 4 weeks.[1A+,2D] **Pregnant/breastfeeding**: avoid 2g dose.[3A+,4D] Treating partners does not reduce relapse.[5A+]	oral metronidazole[1A+,3A+] **OR**	400mg BD[1A+,3A+] **OR** 2000mg[1A+,2D]	-	7 days[1A+] **OR** Stat[2D]	*Not available. Access supporting evidence and rationales on the PHE website*
		metronidazole 0.75% vaginal gel[1A+,2D,3A+] **OR**	5g applicator at night[1A+,2D,3A+]		5 nights[1A+,2D,3A+]	
		clindamycin 2% cream[1A+,2D]	5g applicator at night[1A+,2D]		7 nights[1A+,2D,3A+]	
Genital herpes Public Health England Last updated: Nov 2017	**Advise**: saline bathing,[1A+] analgesia,[1A+] or topical lidocaine for pain,[1A+] and discuss transmission.[1A+] **First episode**: treat within 5 days if new lesions or systemic symptoms,[1A+,2D] and refer to GUM.[2D] **Recurrent**: self-care if mild,[2D] or immediate short course antiviral treatment,[1A+,2D] or suppressive therapy if more than 6 episodes per year.[1A+,2D]	oral aciclovir[1A+,2D,3A+,4A+] **OR**	400mg TDS[1A+,3A+]	-	5 days[1A+]	*Not available. Access supporting evidence and rationales on the PHE website*
			800mg TDS (if recurrent)[1A+]		2 days[1A+]	
		valaciclovir[1A+,3A+,4A+] **OR**	500mg BD[1A+]		5 days[1A+]	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Gonorrhoea Public Health England Last updated: Feb 2019	Antibiotic resistance is now very high.[1D,2D] Use IM ceftriaxone if susceptibility not known prior to treatment[2D]. Use Ciprofloxacin **only** If susceptibility is known prior to treatment and the isolate is sensitive to ciprofloxacin at all sites of infection[1D,2D] Refer to GUM.[3B-] Test of cure is essential.[2D]	ceftriaxone[2D] **OR**	1000mg IM[2D]	-	Stat[2D]	*Not available. Access supporting evidence and rationales on the PHE website*
		ciprofloxacin[2D] (only if known to be sensitive)	500mg[2D]		Stat[2D]	
Trichomoniasis Public Health England Last updated: Nov 2017	Oral treatment needed as extravaginal infection common.[1D] Treat partners,[1D] and refer to GUM for other STIs.[1D] **Pregnant/breastfeeding**: avoid 2g single dose metronidazole;[2A+,3D] clotrimazole for symptom relief (not cure) if metronidazole declined.[2A+,4A-,5D]	metronidazole[1A+,2A+,3D,6A+]	400mg BD[1A+,6A+] 2g (more adverse effects)[6A+]	-	5 to 7 day[1A+] Stat[1A+,6A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		Pregnancy to treat symptoms: clotrimazole[2A+,4A-,5D]	100mg pessary at night[5D]		6 nights[5D]	
Pelvic inflammatory disease Public Health England Last updated: Feb 2019	**Refer** women and sexual contacts to GUM.[1A+] **Raised CRP** supports diagnosis, absent pus cells in HVS smear good negative predictive value.[1A+] **Exclude**: ectopic pregnancy, appendicitis, endometriosis, UTI, irritable bowel, complicated ovarian cyst, functional pain. Moxifloxacin has greater activity against likely pathogens, but always test for gonorrhoea, chlamydia, and *M. genitalium* .[1A+] *If M. genitalium* tests positive use moxifloxacin[1A+]. *Mid and South Essex Trust has levofloxacin as an alternative to ofloxacin. Please continue prescribing levofloxacin as advised by hospital.*	**First line therapy**: ceftriaxone[1A+,3C,4C] **PLUS**	1000mg IM[1A+,3C]	-	Stat[1A+,3C]	*Not available. Access supporting evidence and rationales on the PHE website*
		metronidazole[1A+,5A+] **PLUS**	400mg BD[1A+]		14 days[1A+]	
		doxycycline[1A+,5A+]	100mg BD[1A+]		14 days[1A+]	
		Second line therapy: metronidazole[1A+,5A+] **PLUS**	400mg BD[1A+]		14 days[1A+]	
		Ofloxacin [1A+,2A-,5A+] **OR**	400mg BD[1A+,2A-]		14 days[1A+]	
		Levofloxacin or moxifloxacin alone[1A+] **(**first line for *M. genitalium associated PID***)**	400mg OD[1A+]		14 days[1A+]	

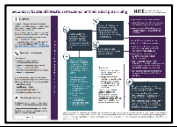
Skin and soft tissue infections

Note: Refer to RCGP Skin Infections online training.[1D] For MRSA, discuss therapy with microbiologist.[1D]

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Cold sores Public Health England Last updated: Nov 2017	**Most resolve after 5 days without treatment**.[1A-,2A-] Topical antivirals applied prodromally can reduce duration by 12 to 18 hours.[1A-,2A-,3A-] **If frequent, severe, and predictable triggers**: consider oral prophylaxis:[4D,5A+] aciclovir 400mg, twice daily, for 5 to 7 days.[5A+,6A+] *Access supporting evidence and rationales on the PHE website*					
PVL-SA Public Health England Last updated: Nov 2017	Panton-Valentine leukocidin (PVL) is a toxin produced by 20.8 to 46% of *S. aureus* from boils/abscesses.[1B+,2B+,3B-] PVL strains are rare in healthy people, but severe.[2B+] **Suppression therapy** should only be started after primary infection has resolved, as ineffective if lesions are still leaking.[4D] **Risk factors for PVL**: recurrent skin infections;[2B+] invasive infections;[2B+] MSM;[3B-] if there is more than one case in a home or close community[2B+,3B-] (school children;[3B-] military personnel;[3B-] nursing home residents;[3B-] household contacts).[3B-] *Access the supporting evidence and rationales on the PHE website.*					
Impetigo NICE Public Health England Last updated: Feb 2020	**Localised non-bullous impetigo:** Hydrogen peroxide 1% cream (other topical antiseptics are available but no evidence for impetigo). If hydrogen peroxide unsuitable or ineffective, short-course topical antibiotic. **Widespread non-bullous impetigo:** Short-course topical or oral antibiotic. Take account of person's preferences, practicalities of administration, previous use of topical antibiotics because antimicrobial resistance can develop rapidly with extended or repeated use, and local antimicrobial resistance data. **Bullous impetigo, systemically unwell, or high risk of complications:** Short-course oral antibiotic. Do not offer combination treatment with a topical and oral antibiotic to treat impetigo. *5 days is appropriate for most, can be increased to 7 days based on clinical judgement.	**Topical antiseptic:**				
		hydrogen peroxide 1%	BD or TDS		5 days*	
		Topical antibiotic:				
		First choice: fusidic acid 2%	TDS		5 days*	
		Fusidic acid resistance suspected or confirmed: mupirocin 2%	TDS			
		Oral antibiotic:				
		First choice: flucloxacillin	500mg QDS		5 days*	
		Penicillin allergy or flucloxacillin unsuitable: clarithromycin **OR**	250mg BD			
		erythromycin (in pregnancy)	250 to 500mg QDS			
		If MRSA suspected or confirmed – consult local microbiologist				

<table>
<tr><th>Infection</th><th>Key points</th><th>Medicine</th><th colspan="2">Doses
Adult / Child</th><th>Length</th><th>Visual summary</th></tr>
<tr><td rowspan="8">Eczema bacterial infection

NICE

Public Health England
Last updated: Mar 2021</td><td rowspan="8">Manage underlying eczema and flares with treatments such as emollients and topical corticosteroids, whether antibiotics are given or not.
Symptoms and signs of secondary bacterial infection can include: weeping, pustules, crusts, no response to treatment, rapidly worsening eczema, fever and malaise.
Not all flares are caused by a bacterial infection, so will not respond to antibiotics.
Eczema is often colonised with bacteria but may not be clinically infected.
Do not routinely take a skin swab.
Not systemically unwell:
Do not routinely offer either a topical or oral antibiotic.
If an antibiotic is offered, when choosing between a topical or oral antibiotic, take account of patient preferences, extent and severity of symptoms or signs, possible adverse effects, and previous use of topical antibiotics because antimicrobial resistance can develop rapidly with extended or repeated use.
Systemically unwell:
Offer an oral antibiotic.
If there are symptoms or signs of cellulitis, see cellulitis and erysipelas.
For detailed information click on the visual summary.</td><td colspan="4">If not systemically unwell, do not routinely offer either a topical or oral antibiotic</td><td rowspan="2">  </td></tr>
<tr><td colspan="4">Topical antibiotic (if a topical is appropriate). For localised infections only:</td></tr>
<tr><td>First choice:
fusidic acid 2%</td><td>TDS</td><td>  </td><td>5 to 7 days</td><td rowspan="6"></td></tr>
<tr><td colspan="4">Oral antibiotic:</td></tr>
<tr><td>First choice:
flucloxacillin</td><td>500mg QDS</td><td rowspan="3">  </td><td rowspan="3">5 to 7 days</td></tr>
<tr><td>Penicillin allergy or flucloxacillin unsuitable:
clarithromycin OR</td><td>250mg BD (can be increased to 500mg BD for severe infections)</td></tr>
<tr><td>erythromycin (in pregnancy)</td><td>250mg to 500mg QDS</td></tr>
<tr><td colspan="4">If MRSA suspected or confirmed – consult local microbiologist</td><td></td></tr>
</table>

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Acne vulgaris **NICE** Last updated: June 2021	**First-line treatment options:** offer a course of 1 of the options, taking account of severity, preferences, and advantages/disadvantages of each option. Completing the course is important because positive effects can take 6 to 8 weeks. Consider topical benzoyl peroxide monotherapy as an alternative if first-line treatment options are contraindicated, or to avoid topical retinoids or an antibiotic (topical or oral). **Do not use:** monotherapy with a topical antibiotic, monotherapy with an oral antibiotic, or a combination of a topical antibiotic and an oral antibiotic. Review first-line treatment at 12 weeks. Only continue a topical or oral antibiotic for more than 6 months in exceptional circumstances. Review at 3 monthly intervals, and stop the antibiotic as soon as possible. *For detailed information see the NICE guideline on acne vulgaris.*	**First line:** fixed combination of topical adapalene with topical benzoyl peroxide (for any acne severity, not in under 9s) **OR**	0.1% adapalene/ 2.5% benzoyl peroxide **OR** 0.3% adapalene/2.5% benzoyl peroxide OD (thinly evening)+	BNF for children	12 weeks	*Not available. See the NICE guideline on acne vulgaris.*
		fixed combination of topical tretinoin with topical clindamycin (for any acne severity, not in under 12s) **OR**	0.025% tretinoin/ 1% clindamycin OD (thinly in the evening)	BNF for children		
		fixed combination of topical benzoyl peroxide with topical clindamycin (for mild to moderate acne, not in under 12s) **OR**	3% benzoyl peroxide/1% clindamycin **OR** 5% benzoyl peroxide/1% clindamycin OD (in the evening)	BNF for children		
		fixed combination of topical adapalene with topical benzoyl peroxide **AND** either oral lymecycline or oral doxycycline (for moderate to severe acne, not in under 12s) **OR**	0.1% adapalene/ 2.5% benzoyl peroxide **OR** 0.3% adapalene/2.5% benzoyl peroxide OD (in the evening) **AND** lymecycline 408mg OD **OR** doxycycline 100mg OD	BNF for children BNF for children		
		topical azelaic acid **AND** either oral lymecycline or oral doxycycline (for moderate to severe acne, not in under 12s)	15% or 20% azelaic acid BD **AND** lymecycline 408mg OD **OR** doxycycline 100mg OD	BNF for children BNF for children		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
		Alternative: topical benzoyl peroxide	5% benzoyl peroxide OD to BD	BNF for children		
Cellulitis and erysipelas NICE Public Health England Last updated: Sept 2019	Exclude other causes of skin redness (inflammatory reactions or non-infectious causes). Consider marking extent of infection with a single-use surgical marker pen. Offer an antibiotic. Take account of severity, site of infection, risk of uncommon pathogens, any microbiological results and MRSA status. Infection around eyes or nose is more concerning because of serious intracranial complications. *A longer course (up to 14 days in total) may be needed but skin takes time to return to normal, and full resolution at 5 to 7 days is not expected. Do not routinely offer antibiotics to prevent recurrent cellulitis or erysipelas. *For detailed information click on the visual summary.* ***For alternative choice antibiotics for severe infection, suspected or confirmed MRSA infection and IV antibiotics contact microbiology***	**First choice:**				
		Flucloxacillin	500mg to 1g QDS		5 to 7 days*	
		Penicillin allergy or if flucloxacillin unsuitable:				
		clarithromycin **OR**	500mg BD		5 to 7 days*	
		erythromycin (in pregnancy) **OR**	500mg QDS			
		doxycycline (adults only) **OR**	200mg on day 1, then 100mg OD	-		
		co-amoxiclav (children only: not in penicillin allergy)	-			
		If infection near eyes or nose:				
		co-amoxiclav	500/125mg TDS		7 days*	
		If infection near eyes or nose (penicillin allergy):				
		clarithromycin **AND** metronidazole (only add in children if anaerobes suspected)	500mg BD 400mg TDS		7 days*	

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Diabetic foot infection NICE Public Health England Last updated: Oct 2019	In diabetes, all foot wounds are likely to be colonised with bacteria. Diabetic foot infection has at least 2 of: local swelling or induration; erythema; local tenderness or pain; local warmth; purulent discharge. Severity is classified as: **Mild**: local infection with 0.5 to less than 2cm erythema **Moderate**: local infection with more than 2cm erythema or involving deeper structures (such as abscess, osteomyelitis, septic arthritis or fasciitis) **Severe**: local infection with signs of a systemic inflammatory response. Start antibiotic treatment as soon as possible. Take samples for microbiological testing before, or as close as possible to, the start of treatment When choosing an antibiotic, take account of severity, risk of complications, previous microbiological results and antibiotic use, and patient preference. *A longer course (up to a further 7 days) may be needed based on clinical assessment. However, skin does take time to return to normal, and full resolution at 7 days is not expected. Do not offer antibiotics to prevent diabetic foot infection.	**Mild infection: first choice**				
		Flucloxacillin	500mg to 1g QDS	-	7 days*	
		Mild infection (penicillin allergy):				
		clarithromycin **OR**	500mg BD	-	7 days*	
		erythromycin (in pregnancy) **OR**	500mg QDS			
		doxycycline	200mg on day 1, then 100mg OD (can be increased to 200mg daily)			
		For antibiotic choices for moderate or severe infection, infections where *Pseudomonas aeruginosa* or MRSA is suspected or confirmed, and IV antibiotics click on the visual summary				
Infected wounds (including post-operative wound infections) Adapted from MID Essex formulary	For severe infections, MRSA skin/soft tissue infections, or if patients not improving within 48-72 hours – speak to microbiology. For tetanus prone wound assess and treat/refer for vaccine or immunoglobulin. See BNF/Green book for details	**First line:**		-	5 days**, then review**	
		Flucloxacillin **PLUS**	500mg to 1g QDS			
		Metronidazole **if abdominal/ pelvic wound**	400mg TDS			
		Second line:		-	7 days**, then review**	
		Doxycycline **PLUS**	200mg STAT then 100mg OD or BD			
		Metronidazole **if abdominal/ pelvic wound**	400mg TDS			

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Scabies Public Health England Last updated: Oct 2018	**First choice permethrin**: Treat whole body from ear/chin downwards,[1D,2D] and under nails.[1D,2D] **If using permethrin** and patient is under 2 years, elderly or immunosuppressed, or **if treating with malathion**: also treat face and scalp.[1D,2D] **Home/sexual contacts**: treat within 24 hours.[1D]	permethrin[1D,2D,3A+]	5% cream[1D,2D]	BNF for children	2 applications, 1 week apart[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Permethrin allergy: malathion[1D]	0.5% aqueous liquid[1D]	BNF for children		
Insect bites and stings NICE Public Health England Last updated: Sep 2020	Most insect bites or stings will not need antibiotics. Do not offer an antibiotic if there are no symptoms or signs of infection. If there are symptoms or signs of infection, see cellulitis and erysipelas.					
Tick bites (Lyme disease) Public Health England Last updated: Feb 2020	**Treatment**: Treat erythema migrans **empirically**; serology is often negative early in infection.[3D] For other suspected Lyme disease such as neuroborreliosis (CN palsy, radiculopathy) seek advice.[3D]	**Treatment**: doxycycline[2D,D]	100mg BD[2D,3D]	BNF for children	21 days[2D,3D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Alternative: amoxicillin[2D,3D]	1,000mg TDS[2D,3D]	BNF for children		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Leg ulcer infection NICE Public Health England Last updated: Feb 2020	Manage any underlying conditions to promote ulcer healing. Only offer an antibiotic when there are symptoms or signs of infection (such as redness or swelling spreading beyond the ulcer, localised warmth, increased pain or fever). Few leg ulcers are clinically infected but most are colonised by bacteria. When prescribing antibiotics, take account of severity, risk of complications and previous antibiotic use. For detailed information click on the visual summary.	**First-choice:**				
		flucloxacillin	500mg to 1g QDS	-	7 days	
		Penicillin allergy or if flucloxacillin unsuitable:				
		doxycycline **OR**	200mg on day 1, then 100mg OD (can be increased to 200mg daily)	-	7 days	
		clarithromycin **OR**	500mg BD			
		erythromycin (in pregnancy)	500mg QDS			
		Second choice:				
		co-amoxiclav **OR**	500/125mg TDS	-	7 days	
		co-trimoxazole (in penicillin allergy)	960mg BD			
		For antibiotic choices if severely unwell or MRSA suspected or confirmed, click on the visual summary				

<table>
<tr><th>Infection</th><th>Key points</th><th>Medicine</th><th colspan="2">Doses</th><th>Length</th><th>Visual summary</th></tr>
<tr><th></th><th></th><th></th><th>Adult</th><th>Child</th><th></th><th></th></tr>
<tr><td rowspan="3">Human and animal bites

NICE

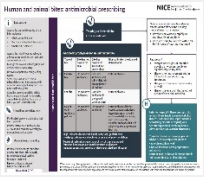
Public Health England

Last updated: Nov 2020</td><td rowspan="3">Human: thorough irrigation is important.[1A+,2D] Antibiotic prophylaxis is advised.[1A+,2D,3D] Assess risk of tetanus, rabies,[1A+] HIV, and hepatitis B and C.[3D]
Penicillin allergy: Review all at 24 and 48 hours,[3D] as not all pathogens are covered.[2D,3]

P. multocida is the most common cause of wound infections after dog or cat bites. This organism is intrinsically resistant to clindamycin and macrolides which should be avoided.

Antibiotic prophylaxis for an uninfected bite
<table><tr><th>Type of bite</th><th>Bite has not broken the skin</th><th>Bite has broken the skin but not drawn blood</th><th>Bite has broken the skin and drawn blood</th></tr><tr><td>Human bite</td><td>Do not offer antibiotics</td><td>Consider antibiotics if it is in a high-risk area or person at high risk</td><td>Offer antibiotics</td></tr><tr><td>Cat bite</td><td>Do not offer antibiotics</td><td>Consider antibiotics if the wound could be deep</td><td>Offer antibiotics</td></tr><tr><td>Dog or other traditional pet bite</td><td>Do not offer antibiotics</td><td>Do not offer antibiotics</td><td>Offer antibiotics if it has caused considerable, deep tissue damage or is visibly contaminated (for example, with dirt or a tooth)
Consider antibiotics if it is in a high-risk area or person at high risk</td></tr></table>High-risk areas include the hands, feet, face, genitals, skin overlying cartilaginous structures or an area of poor circulation
People at high risk include those at risk of a serious wound infection because of a co-morbidity (such as diabetes, immunosuppression, asplenia or decompensated liver disease)

*course length can be increased to 7 days (with review) based on clinical assessment of the wound</td><td>Prophylaxis and treatment

co-amoxiclav[2D,3D]</td><td>375mg to 625mg TDS[3D]</td><td>BNF for children</td><td>3 days for prophylaxis
5 days for treatment *</td><td rowspan="3">  </td></tr>
<tr><td>Penicillin allergy or if co-amoxiclav is unsuitable:

doxycycline[3D] AND

metronidazole [3D,4A+]</td><td>200 mg on first day, then 100 mg or 200 mg daily

400 mg three times a day</td><td>BNF for children</td><td>3 days for prophylaxis
5 days for treatment *</td></tr>
<tr><td>Alternative first-choice oral antibiotics in pregnancy for penicillin allergy or if co-amoxiclav is unsuitable</td><td>Seek specialist advice</td><td></td><td></td></tr>
</table>

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Mastitis Public Health England Last updated: Nov 2017	*S. aureus* is the most common infecting pathogen.[1D] Suspect if woman has: a painful breast;[2D] fever and/or general malaise;[2D] a tender, red breast.[2D] **Breastfeeding**: oral antibiotics are appropriate, where indicated.[2D,3A+] Women should continue feeding,[1D,2D] including from the affected breast.[2D]	flucloxacillin[2D]	500mg up to 1g QDS[2D]	-	10 to 14 days[2D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Penicillin allergy: erythromycin[2D] **OR**	250mg to 500mg QDS[2D]			
		clarithromycin[2D]	500mg BD[2D]			
Dermatophyte infection: skin Public Health England Last updated: Feb 2019	**Most cases**: use terbinafine as fungicidal, treatment time shorter and more effective than with fungistatic imidazoles or undecenoates.[1D,2A+,] If candida possible, use imidazole.[4D] **If intractable, or scalp**: send skin scrapings,[1D] and if infection confirmed: use oral terbinafine[1D,3A+,4D] or itraconazole.[2A+,3A+,5D] **Scalp**: oral therapy,[6D] and discuss with specialist.[1D]	topical terbinafine[3A+,4D] **OR**	1% OD to BD[2A+]	BNF for children	1 to 4 weeks[3A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		topical imidazole[2A+,3A+]	1% OD to BD[2A+]	BNF for children	4 to 6 weeks[2A+,3A+] Fingers: 6 weeks[1D,6D] Toes: 12 weeks[1D,6D]	
		Alternative in athlete's foot: topical undecenoates2A+ (such as Mycota®)2A+	OD to BD[2A+]	BNF for children		
Dermatophyte infection: nail Public Health England Last updated: Oct 2018	**Take nail clippings**;1D start therapy only if infection is confirmed.1D Oral terbinafine is more effective than oral azole.1D,2A+,3A+,4D Liver reactions 0.1 to 1% with oral antifungals.3A+ If candida or non-dermatophyte infection is confirmed, use oral itraconazole.[1D,3A+,4D] Topical nail lacquer is not as effective.[1D,5A+,6D] **To prevent recurrence**: apply weekly 1% topical antifungal cream to entire toe area.[6D] **Children**: seek specialist advice.[4D]	**First line**: terbinafine[1D,2A+,3A+,4D,6D]	250mg OD[1D,2A+,6D]	BNF for children	Fingers: 6 weeks[1D,6D] Toes: 12 weeks[1D,6D]	
		Second line: itraconazole[1D,3A+,4D]	200mg BD[1D,4D]	BNF for children	1 week a month[1D] Fingers: 1 courses[1D] Toes: 3 courses[1D]	
		Stop treatment when continual, new, healthy, proximal nail growth.[6D]				

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Varicella zoster/ chickenpox **Herpes zoster/ shingles** Public Health England Last updated: Oct 2018	**Pregnant/immunocompromised/ neonate**: seek urgent specialist advice.[1D] **Chickenpox**: consider aciclovir[2A+,3A+,4D] if: onset of rash <24 hours,[3A+] and 1 of the following: >14 years of age;[4D] severe pain;[4D] dense/oral rash;4D,[5B+] taking steroids;[4D] smoker.[4D,5B+] Give paracetamol for pain relief.[6C] **Shingles**: treat if >50 years[7A+,8D] (PHN rare if <50 years)[9B+] and within 72 hours of rash,[10A+] or if 1 of the following: active ophthalmic;[11D] Ramsey Hunt;[4D] eczema;[4D] non-truncal involvement;[8D] moderate or severe pain;[8D] moderate or severe rash.[5B+,8D] Shingles treatment if not within 72 hours: consider starting antiviral drug up to 1 week after rash onset,[12B+] if high risk of severe shingles[12B+] or continued vesicle formation;[4D] older age;[7A+,8D,12B+] immunocompromised;[4D] or severe pain.[7D,11B+]	**First line for chicken pox and shingles**: aciclovir[3A+,7A+,10A+,13B+,14A-,15A+]	800mg 5 times daily[16A-]	BNF for children	7 days[14A-,16A-]	*Not available. Access supporting evidence and rationales on the PHE website*
		Second line for shingles if poor compliance:		-		
		valaciclovir[8D,10A+,14A-]	1g TDS[14A-]	BNF for children		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
▼ Eye infections						
Conjunctivitis Public Health England Last updated: July 2019	**First line**: bath/clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting.[1D] **Treat only if severe**,[2A+] as most cases are viral[3D] or self-limiting.[2A+] **Bacterial conjunctivitis**: usually unilateral and also self-limiting.[2A+,3D] It is characterised by red eye with mucopurulent, not watery discharge.[3D] 65% and 74% resolve on placebo by days 5 and 7.[4A-,5A+] **Third line**: fusidic acid as it has less Gram-negative activity.[6A-,7D]	**Second line**: chloramphenicol[1D,2A+,4A-,5A+] 0.5% eye drop[1D,2A+] **OR** 1% ointment[1D,5A+]	Eye drops: 2 hourly for 2 days,[1D,2A+] then reduce frequency[1D] to 3 to 4 times daily.[1D] Eye ointment: 3 to 4 times daily or once daily at night if using antibiotic eye drops during the day.[1D]	BNF for children	48 hours after resolution[2A+,7D] 6-week trial[3D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Third line: fusidic acid 1% gel[2A+,5A+,6A-]	BD[1D,7D]	BNF for children		
Chloramphenicol eyes drops in children EMA guidance states that 'any product that would result in exposure to more than 1 mg daily of boron should be labelled as not to be used in children under 2 years Chloramphenicol eye drops contain around 3 mg boron per ml, so when used correctly **(1 drop in the affected eye QDS)** they are unlikely to result in this level of exposure. ***If both eyes are infected in a child under 2 years, ointment should be used as this would then exceed the 1mg daily if drops are used in both eyes***.						
Blepharitis Public Health England Last updated: Nov 2017	**First line**: lid hygiene[1D,2A+] for symptom control,[1D] including: warm compresses;[1D,2A+] lid massage and scrubs;[1D] gentle washing;[1D] avoiding cosmetics.[1D] **Second line**: topical antibiotics if hygiene measures are ineffective after 2 weeks.[1D,3A+] **Signs of meibomian gland dysfunction**,[3D] or acne rosacea:[3D] consider oral antibiotics.[1D]	**Second line**: topical chloramphenicol[1D,2A+,3A]	1% ointment BD[2A+,3D]	BNF for children	6-week trial[3D]	*Not available. Access supporting evidence and rationales on the PHE website*
		Third line: oral oxytetracycline[1D,3D] **OR**	500mg BD[3D] 250mg BD[3D]	BNF for children	4 weeks (initial)[3D] 8 weeks (maint)[3D]	
		oral doxycycline[1D, 2A+,3D]	100mg OD[3D] 50mg OD[3D]	BNF for children	4 weeks (initial)[3D] 8 weeks (maint)[3D]	

Infection	Key points	Medicine	Doses		Length	Visual
			Adult	Child		
▼ Suspected dental infections in primary care (outside dental settings)						
Derived from the Scottish Dental Clinical Effectiveness Programme (SDCEP) 2013 Guidelines. This guidance is not designed to be a definitive guide to oral conditions, as GPs should not be involved in dental treatment. Patients presenting to non-dental primary care services with dental problems should be directed to their regular dentist, or if this is not possible, to the NHS 111 service (in England), who will be able to provided details of how to access emergency dental care.						
Note: Antibiotics do not cure toothache.[1D] First-line treatment is with paracetamol[1D] and/or ibuprofen;[1D] codeine is not effective for toothache.[1D]						
Mucosal ulceration and inflammation (simple gingivitis) Public Health England Last updated: Nov 2017	Temporary pain and swelling relief can be attained with saline mouthwash (½ tsp salt in warm water)[1D]. Use antiseptic mouthwash if more severe,[1D] and if pain limits oral hygiene to treat or prevent secondary infection.[1D,2A-] The primary cause for mucosal ulceration or inflammation (aphthous ulcers;[1D] oral lichen planus;[1D] herpes simplex infection;[1D] oral cancer)[1D] needs to be evaluated and treated.[1D]	Chlorhexidine 0.12 0.2% **(can be purchased OTC)** Do not use within 30 minutes of toothpaste[1D] **OR**	1 minute BD with 10 ml[1D]	BNF for children	Always spit out after use.[1D] Use until lesions resolve[1D] or less pain allows for oral hygiene[1D]	*Not available. Access supporting evidence and rationales on the PHE website*
		hydrogen peroxide **(can be purchased OTC)** 6%[5A- 1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water[1D]	BNF for children		
Acute necrotising ulcerative gingivitis Public Health England Last updated: Nov 2017	Refer to dentist for scaling and hygiene advice.[1D,2D] Antiseptic mouthwash if pain limits oral hygiene.[1D] Commence metronidazole if systemic signs and symptoms.[1D,2D,3B-,4B+,5A-]	Chlorhexidine 0.12 to 0.2**%(can be purchased OTC)** (Do not use within 30 minutes of toothpaste)[1D] **OR**	1 minute BD with 10ml[1D]	BNF for children	Until pain allows for oral hygiene[6D]	*Not available. Access supporting evidence and rationales on the PHE website*
		hydrogen peroxide 6% **(can be purchased OTC)** [1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water	BNF for children		
		metronidazole[1D,3B-,4B+,5A-]	400mg TDS[1D,2D]	BNF for children	3 days[1D,2D]	
Pericoronitis Public Health England Last updated: Nov 2017	Refer to dentist for irrigation and debridement.[1D] If persistent swelling or systemic symptoms,[1D] use metronidazole[1D,2A+,3B+] or amoxicillin.[1D,3B+] Use antiseptic mouthwash if pain and trismus limit oral hygiene.[1D]	metronidazole[1D,2A+,3B+] **OR**	400mg TDS[1D]	BNF for children	3 days[1D,2A+]	*Not available. Access supporting evidence and rationales on the PHE website*
		amoxicillin[1D,3B+]	500mg TDS[1D]	BNF for children	3 days[1D]	
		chlorhexidine 0.2% (do not use within 30 minutes of toothpaste)[1D] **OR**	1 minute BD with 10ml[1D]	BNF for children	Until less pain allows for oral hygiene[1D]	
		hydrogen peroxide 6%[1D]	2 to 3 minutes BD/TDS with 15ml in ½ glass warm water[1D]	BNF for children		

Infection	Key points	Medicine	Doses		Length	Visual summary
			Adult	Child		
Dental abscess Public Health England Last updated: Oct 2018	Regular analgesia should be the first option[1A+] until a dentist can be seen for urgent drainage,[1A+,2B-,3A+] as repeated courses of antibiotics for abscesses are not appropriate.[1A+,4A+] Repeated antibiotics alone, without drainage, are ineffective in preventing the spread of infection.[1A+,5C] Antibiotics are only recommended if there are signs of severe infection,[3A+] systemic symptoms,[1A+,2B-,4A+] or a high risk of complications.[1A+] Patients with severe odontogenic infections (cellulitis,[1A+,3A+] plus signs of sepsis;[3A+,4A+] difficulty in swallowing;[6D] impending airway obstruction)6D should be referred urgently for hospital admission to protect airway,6D for surgical drainage3A+ and for IV antibiotics.[3A+] The empirical use of cephalosporins,[6D] co-amoxiclav,[6D] clarithromycin,[6D] and clindamycin[6D] do not offer any advantage for most dental patients,[6D] and should only be used if there is no response to first-line drugs.[6D]					
	If pus is present, refer for drainage,[1A+,2B-] tooth extraction,[2B-] or root canal.[2B-] Send pus for investigation.[1A+] If spreading infection[1A+] (lymph node involvement[1A+,4A+] or systemic signs,[1A+,2B-,4A+] that is, fever[1A+] or malaise)[4A+] ADD metronidazole.[6D,7B+] Use clarithromycin in true penicillin allergy[6D] and, if severe, refer to specialist.[3A+,6D]	amoxicillin[6D,8B+,9C,10B+] **OR**	500mg to 1000mg TDS[6D]	BNF for children	Up to 5 days;[6D,10B+] review at 3 days[9C,10B+]	*Not available. Access supporting evidence and rationales on the PHE website*
		phenoxymethylpenicillin[11B-]	500mg to 1000mg QDS[6D]	BNF for children		
		metronidazole[6D,8B+,9C]	400mg TDS[6D]	BNF for children		
		Penicillin allergy: clarithromycin[6D]	500mg BD[6D]	BNF for children		

▼ Abbreviations

BD, twice a day; eGFR, estimated glomerular filtration rate; IM, intramuscular; IV, intravenous; MALToma, mucosa-associated lymphoid tissue lymphoma; m/r, modified release; MRSA, methicillin-resistant *Staphylococcus aureus*; MSM, men who have sex with men; stat, given immediately; OD, once daily; TDS, 3 times a day; QDS, 4 times a day.

Acknowledgements	Mid and South Essex CCGs Medicines Management Teams
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Author	MSEMOC working group
Approved by	MSEMOC
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