Bedfordshire, Luton and Milton Keynes Health and Care Partnership

NHS Bedfordshire, Luton and Milton Keynes Integrated Care Board

Antimicrobial Prescribing

Primary care guidelines

Version 5

Last updated February 2026

These guidelines are aimed for use by suitably trained healthcare professionals working within Bedfordshire, Luton and Milton Keynes primary care sector

Contents

Introduction

Principles of treatment

1. This guidance should not be used in isolation; it should be supported with patient information about safety netting, self-care, back-up antibiotics where appropriate, infection severity and usual duration, clinical staff education, and audits. Materials are available on the **RCGP TARGET** website.
2. Prescribe an antibiotic only when there is likely to be clear clinical benefit, giving alternative, non-antibiotic self-care advice, where appropriate.
3. Always check for hypersensitivity and if a patient is genuinely allergic to penicillin, use the recommended alternative(s) listed. See below for detailed information.
4. Consider a no or delayed / back up antibiotic strategy for acute self-limiting upper respiratory tract infections and mild UTI symptoms.
5. In severe infection, or immunocompromised, it is important to initiate antibiotics as soon as possible, particularly if sepsis is suspected. If patient is not at moderate to high risk for sepsis, give information about symptom monitoring, give safety netting information.
6. Use a lower threshold for antibiotics in immunocompromised, or in those with multiple morbidities; consider culture/specimens and seek advice.
7. Where an empirical therapy has failed, or special circumstances exist contact your local microbiologist for advice.
    - Luton and Dunstable Hospital: (01582) 497318 / 497319
    - Bedford Hospital: (01234) 795913
    - Milton Keynes Hospital: 01908 995 782/779
8. Use simple, generic antibiotics if possible. Avoid broad spectrum antibiotics (for example co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase the risk of *Clostridium difficile*, MRSA and resistant UTIs.
9. Avoid widespread use of topical antibiotics, especially if those agents also available systemically (for example fusidic acid); in most cases, topical use should be limited.
10. Modify suggested adult doses / durations for age, weight, renal function. Consider a larger dose or longer course in severe or recurrent cases or if immunocompromised. Children's doses are provided when appropriate and can be accessed through the cBNF links
11. Avoid the use of fluroquinolones, prescribe only where other antibiotics are inappropriate. This is due to rare association of long term non-reversible disabling side effects. MHRA alert: Jan 24

Allergies

All patients should have an allergy history recorded including the date and nature of reaction where possible.

Penicillin allergy

Patients with a documented penicillin allergy should be reviewed to exclude a non-immunological adverse reaction, e.g. diarrhoea or vomiting.

All beta-lactams including Cephalosporins and Carbapenems should be avoided if the allergy history suggests angioedema (blistering or swelling,) bronchospasm, or urticaria (itchy rash) within minutes to hours after penicillin administration (type 1 hypersensitivity reaction), or a severe delayed reaction, e.g. serum sickness like reaction (vasculitic rash) drug rash with eosinophilia and systemic symptoms (DRESS) Stevens-Johnson syndrome / toxic epidermal necrolysis or if the allergy history is unclear.

Cephalosporins may be used with caution in other types of allergic reactions.

Co-trimoxazole – Co-trimoxazole contains trimethoprim and a sulphur-based product. Check for allergies to sulphur before prescribing.

Upper Respiratory Tract Infections

Acute Sore Throat

Advise on self-care: Sore throat can last around a week.
Consider paracetamol, or if preferred and suitable, ibuprofen for pain. Medicated lozenges may help pain in adults.

Sore throats caused by streptococcal bacteria are more likely to benefit from antibiotics.
Use FeverPAIN or Centor tools below to help identify the people in whom this is more likely:

Fever pain criteria (score 1 each)
• **F**ever (during previous 24 hours)
• **P**urulence (pus on tonsils)
• **A**ttend rapidly (within 3 days after onset)
• **I**nflamed tonsils (severe)
• **N**o cough / coryza

Centor criteria (score 1 each)
• Tonsillar exudate
• Tender anterior cervical lymphadenopathy or lymphadenitis
• History of fever (>38ºc)
• Absence of cough

Interpretation of score	
Fever PAIN 0-1 or Centor 0-2	**No antibiotics**
Fever PAIN 2-3	No / back up antibiotic
Fever PAIN 4-5 or Centor 3-4	Immediate / back up antibiotic

For systemically unwell or high risk of complications: immediate antibiotic.

Always give **self-care advice** and **safety net**.

	Drug	Adult dose	Child dose	Duration
1st line	Phenoxymethylpenicillin (penicillin V)	500mg QDS or 1g BD	BNF for Children	5-10 days*
2nd line (penicillin allergy)	Clarithromycin **OR**	250 - 500mg BD	BNF for Children	5 days
	Erythromycin (in pregnancy)	250 - 500mg QDS or 500mg – 1g BD	BNF for Children	5 days

* 5 days for symptomatic cure, 10 days may increase the chance of microbiological cure.

Reference: NICE (NG84) sore throat (acute): antimicrobial prescribing visual summary Last updated Feb 23.

Influenza

Annual vaccination is essential for all those 'at risk' of influenza.

Antivirals are not recommended for healthy adults.

For management guidance please refer to UKHSA guidance on treatment of influenza: treatment and prophylaxis, as below.

Reference: Influenza: treatment and prophylaxis using anti-viral agents - GOV.UK Last updated Nov 25.

Scarlet fever

Scarlet fever is caused by *Streptococcus pyogenes,* also known as group A streptococcus (GAS).
Prompt treatment with appropriate antibiotics significantly reduces the risk of complications.
See NICE CKS link for details on those at higher risk of invasive (iGAS) infection and complications, and for further management details.

	Drug	Adult dose	Child dose	Duration
1st line	Phenoxymethylpenicillin (Penicillin V)	500mg QDS	BNF for Children	10 days
2nd line (penicillin allergy) Non-pregnant adults and children >6 months **OR**	Azithromycin	500mg OD	BNF for Children	5 days
2nd line (Non-pregnant adults and children birth to 17yrs) **OR**	Clarithromycin	250-500mg BD	BNF for Children	10 days
2nd line Pregnancy & up to 28 days postpartum	Erythromycin	250-500mg QDS	-	10 days

Reference: NICE Clinical Knowledge summaries: Scarlet fever Last updated Sept 24.

Acute Otitis Media

Advise: acute otitis media lasts about 3 days but can last up to 1 week.
Manage symptoms with **self-care**. **Regular analgesia for pain and avoid antibiotics.**
(Those with otorrhea or those aged <2 years are most likely to benefit from antibiotics, as below.)

Presentation	**Recommendation**
Otorrhea or <2 years with bilateral infection	No, back-up or immediate antibiotic
Otherwise	No or back-up antibiotic
Systemically unwell / high risk of complications	Immediate antibiotic

Always give **self-care advice** and **safety net**.

If no oral antibiotic given, consider a prescription for eardrops containing anaesthetic and analgesia

	Drug	Child dose	Duration
If NO oral antibiotic given consider eardrops – ONLY if no eardrum perforation or otorrhoea	Phenazone (40mg/g) with lidocaine (10mg/g) (Otigo ®)	Apply 4 drops two or three times a day	Up to 7 days
1st line	Amoxicillin	BNF for Children	5-7 days (7 days for more severe / recurrent infection)
2nd line (due to penicillin allergy)	Clarithromycin **OR**	BNF for Children	
	Erythromycin (in pregnancy)	BNF for Children	
2nd line (worsening symptoms on 1st choice taken for at least 2-3 days)	Co-amoxiclav	BNF for Children	

Reference: NICE (NG91) Otitis media (acute): antimicrobial prescribing visual summary Last updated March 22.

Acute Otitis Externa				
Use one of the choices below.				
		Drug	Dose	Duration
1st line		Avoid antibiotic. Analgesia, self-care advice and apply localised heat, eg. hot flannel. See Otitis Externa Patient information leaflet		
2nd Line **(OTC)** for Adults & Children >12 yrs	Astringent	Acetic acid (2%) (EarCalm®) spray	2 sprays TDS and after swimming / showering / bathing. Max. frequency every 2-3 hours.	7 days max. (Excessive use may result in fungal infection)
	Antifungal	Clotrimazole 1% solution (Canestan®)	1 drop BD to TDS	Till resolution and for 14 days afterwards.
Adults & Children (choice should be guided by personal preference, risk of adverse effects and whether the tympanic membrane is intact)	Steroid	Prednisolone (Predsol®) or	3 drops 2-3 hourly	7-14 days
		Betamethasone (Betnesol®)		
	Antibiotic	Ciprofloxacin ear drops (Cetraxal®)	Apply 0.25ml twice a day	7 days
	Antibiotic & Steroid	*Betamethasone sodium phosphate 0.1% & neomycin sulphate 0.5% (Betnesol N® ear, eye, nose drops)	3 drops TDS / QDS	7-14 days
		*Dexamethasone 0.1%, neomycin sulphate 3250 units/mL, glacial acetic acid 2% (Otomize® spray)	1 spray TDS	7 days max.
		Ciprofloxacin & Dexamethasone (Cilodex®)	4 drops BD	7 days
		Ciprofloxacin & Fluocinolone (Cetraxal Plus®)	Apply 0.25ml BD	7 days
		*Hydrocortisone, Neomycin & Polymyxin (Otosporin®)	3 drops TDS-QDS	7 days
		*Framycetin0.5%,Dexamethasone 0.05%, Gramicidin 0.005% (Sofradex®	3 drops TDS-QDS	7 days max.
	Antifungal/ Antibiotic & Steroid	Flumetasone 0.02% & Clioquinol 1%	3 drops BD	7-10 days

If cellulitis or disease extending outside ear canal, or systemic signs of infection start treatment for cellulitis and refer to ENT to exclude malignant otitis externa.

*Aminoglycoside containing preparations contraindicated if tympanic membrane perforated.

Reference: NICE Clinical Knowledge summaries: Acute otitis externa Last updated August 25

Acute Sinusitis

Self-care

- Consider paracetamol or ibuprofen for pain or fever
- Little evidence that nasal saline / nasal decongestants help but people may want to try

Sinusitis usually lasts 2-3 weeks. Antibiotics make little difference to how long symptoms last or the number of people whose symptoms improve.

Presentation	Recommendation
Symptoms ≤10 days	No antibiotic.
Symptoms & no improvement for >10 days	No antibiotic or back-up depending on likelihood of bacterial cause*. Consider a high dose nasal corticosteroid (if ≥12years) (off-label use)
Systemically unwell / high risk of complications	Immediate antibiotic

Give **safety net** advice.

*Bacterial cause may be more likely if several of the following are present: symptoms >10 days, discoloured or purulent nasal discharge, severe localised unilateral pain (particularly pain over the teeth and jaw,) fever, marked deterioration after an initial milder phase.

	Drug	Adult dose	Child dose	Duration
1st line	Phenoxymethylpenicillin (Penicillin V)	500mg QDS	BNF for Children	5 days
2nd line (penicillin allergy)	Doxycycline (not for < 12 years or pregnancy) **OR**	200mg on first day, then 100mg OD	BNF for Children	
	Clarithromycin **OR**	500mg BD	BNF for Children	
	Erythromycin (in pregnancy)	250-500mg QDS or 500mg-1g BD	BNF for Children	
Alternative (or 1st line if systemically very unwell or high risk of complications)	Co-amoxiclav	500/125 TDS	BNF for Children	

Reference: NICE (NG79): Sinusitis (acute): antimicrobial prescribing visual summary Last updated Oct 17.

Lower Respiratory Tract Infections

Acute cough

Acute coughs are usually self-limiting but can last up to 3 to 4 weeks. Usually caused by a viral uRTI, eg cold & flu. But may also be caused by bronchitis (LRTI) which may be viral or bacterial. NICE suggest:

uRTI, **not** systemically very unwell or at higher risk of complications	**No antibiotics**
Acute bronchitis, **not** systemically very unwell or at higher risk of complications	**No routine antibiotics**
Higher risk of complications at face-to-face examination	Back-up or immediate antibiotics
Systemically very unwell at face-to-face examination	Immediate antibiotics

Patients at higher risk of complications include:

- People with a pre-existing co-morbidity
- Young children born prematurely
- >80years and 1 of the following or >65 years with 2 of the following:
  - hospitalisation in the past year
  - taking oral corticosteroids
  - type 1 or 2 diabetic
  - congestive heart failure

Counsel on **self-care** & provide **safety netting**

Patients may wish to try the following, with limited evidence:
Honey (over 1s,) the herbal medicine pelargonium (in over 12s,) OTC cough medicine containing the expectorant guaifenesin (in over 12s,) OTC cough medicines containing cough suppressants, except codeine (in over 12s.)

Do not offer a mucolytic, oral or inhaled bronchodilator, oral or inhaled corticosteroid unless otherwise indicated.

	Drug	Adult dose	Child dose	Duration
1st line (Adults) (Alternate 2nd line choice in children)	Doxycycline (not to be used in children under 12 or pregnancy)	200mg on first day, then 100mg OD	BNF for Children	5 days
1st line (Children) (Alternate 2nd line in Adults)	Amoxicillin (preferred in pregnancy) **OR**	500mg TDS	BNF for Children	
2nd line (All)	Clarithromycin **OR**	250-500mg BD	BNF for Children	
	Erythromycin (preferred in pregnancy)	250-500mg QDS or 500mg-1g BD	BNF for Children	

Reference: NICE(NG120): Cough (acute): antimicrobial prescribing visual summary Last updated Feb 19

Acute exacerbation of bronchiectasis (non-cystic fibrosis)

An acute exacerbation of bronchiectasis is a sustained worsening of symptoms from a person's stable state.

1. Send a sputum sample for culture and susceptibility testing
2. Offer an antibiotic – take account of:
    - the severity of symptoms
    - previous sputum culture and susceptibility results (previous resistant or atypical bacteria are associated with a higher risk of treatment failure.)
    - previous exacerbations, hospitalisations and risk of complications.

    Give oral first line if possible, (if IV required refer to hospital / local IV at home pathway if appropriate.) Course length is based on severity of bronchiectasis, exacerbation history, severity of symptoms, previous culture and susceptibility results, and response to treatment. Give safety net advice.
3. Review choice of antibiotic
    - Only change antibiotic according to susceptibility results if bacteria are resistant and symptoms are not already improving, use narrower spectrum antibiotics where possible

- Reassess at any time if symptoms worsen rapidly or significantly, taking account of:
    - Other possible diagnosis, eg pneumonia
    - Symptoms or signs of something more serious such as cardiorespiratory failure or sepsis
    - Previous antibiotic use, which may have led to resistant bacteria
- Seek specialist advice if:
    - Symptoms do not improve with repeated courses of antibiotics
    - Bacteria are resistant to oral antibiotics
- Do not routinely offer antibiotic prophylaxis to prevent exacerbations. Seek specialist advice for management of repeated exacerbations.

	Drug	Adult dose	Child dose	Duration
	Be guided by recent culture and susceptibility where possible			
1st line	Amoxicillin (preferred if pregnant) **OR**	500mg TDS	BNF for Children	7-14 days
	Doxycycline (not to be used in children under 12 or pregnancy) **OR**	200mg on first day, then 100mg OD	BNF for Children	
	Clarithromycin	500mg BD	BNF for Children	
Alternative choice (if person at higher risk of treatment failure)*	Co-amoxiclav **OR**	500/125mg TDS	BNF for Children	
	Levofloxacin (Adults only; only if Co-amoxiclav is unsuitable; on specialist advice) **OR**	500mg OD or BD	-	
	Ciprofloxacin (Children only; only if Co-amoxiclav unsuitable; on specialist advice.)	-	BNF for Children	

*Higher risk of failure if: repeated courses of antibiotics, previous sputum culture with resistant or atypical bacteria, or have a higher risk of developing complications.

Reference: NICE (NG117) Bronchiectasis (acute exacerbation): antimicrobial prescribing visual summary

Last updated Apr 19.

Chronic Obstructive Pulmonary Disease (COPD) Exacerbation

COPD is frequently exacerbated by causes other than bacteria. Consider an antibiotic **ONLY** after taking into account the severity of symptoms including:

- Sputum colour changes and increases in volume or thickness from usual
- Need for hospitalisation
- Previous exacerbations, hospitalisations and risk of complications
- Previous sputum culture and susceptibility results
- Risk of resistance with repeated courses

Consider that some patients may have antibiotic rescue packs at home as part of their exacerbation action plan.

Provide **safety netting** advice.

If sputum sample sent, **review antibiotic choice** based on the results.

	Drug	Adult dose	Duration
1st line (Empirical treatment or be guided by recent sputum C&S)	Amoxicillin **OR**	500mg TDS (increased in severe infection to 1g TDS)	5 days
	Doxycycline **OR**	200mg on first day, then 100mg OD (see BNF for severe infection)	
	Clarithromycin	500mg BD	
2nd line	Use alternate first choice, as above.		
Alternative choice if patient at higher risk of treatment failure* (Be guided by susceptibilities where available)	Co-amoxiclav **OR**	500/125mg TDS	5 days
	Co-trimoxazole **OR**	960mg BD	
	Levofloxacin (Only if other antibiotic choices are unsuitable; on specialist advice, consider safety issues)	500mg OD	

*Repeated courses of antibiotics / previous or current sputum culture with resistant bacteria / at higher risk of developing complications.

Reference: NICE(NG114): COPD (acute exacerbation): antimicrobial prescribing visual summary

Last updated Apr 19

Covid-19

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.

Community Acquired Pneumonia (CAP)

Assess severity in adults based on clinical judgement and guided by a mortality risk score, CRB65.

Low severity	CRB65 0
Moderate severity	CRB65 1 or 2
High severity	CRB65 3 or 4 – Urgent hospital admission.

Each CRB65 parameter scores one:

Confusion (AMT<8, or new disorientation in person, place or time)

Respiratory rate >30/min
BP systolic <90mmHg or diastolic ≤ 60mmHg
Age > 65

In **children and young people** severity is based on clinical judgement. For children under 1 month, refer to paediatric specialist.
Start treatment as soon as possible after diagnosis, within 4 hours (within 1 hour if sepsis suspected.) When choosing an antibiotic, take account of severity, risk of complications, local antimicrobial resistance and surveillance data, recent antibiotic use and microbiological results.

Give **safety net** advice.

	Drug	Adult dose	Child dose	Duration
Adult low severity (CRB 65 = 0) or Children Non- severe				
1st line	Amoxicillin	500mg TDS	BNF for Children	5 days
2nd line (penicillin allergy / atypical suspected)	Doxycycline (not for < 12 years or pregnancy) **OR**	200mg on first day, then 100mg OD	BNF for Children	For children 3m-11yrs: 3 days
	Clarithromycin **OR**	500mg BD	BNF for Children	
	Erythromycin (in pregnancy)	500mg QDS	BNF for Children	
Adult moderate severity (CRB65 = 1-2)				
1st line	Amoxicillin **PLUS** (if atypical pathogen suspected)	500mg TDS (higher doses can be used, see BNF)	-	5 days
	Clarithromycin **OR**	500mg BD		
	Erythromycin (if pregnant)	500mg QDS		
2nd line (penicillin allergy)	Doxycycline **OR**	200mg on first day, then 100mg OD		
	Clarithromycin	500mg BD		
Adult high severity (CRB = 3-4) or Children severe				
1st line (alternatively IV in hospital: details via the link below)	Co-amoxiclav **PLUS** (if atypical pathogen suspected)	625mg TDS	BNF for Children	5 days
	Clarithromycin **OR**	500mg BD	BNF for Children	
	Erythromycin (in pregnancy)	500mg QDS	BNF for Children	
2nd line (penicillin allergy) Adults	Levofloxacin	500mg BD	-	

Reference: Update information | Pneumonia: diagnosis and management | Guidance | NICE

Last updated Sept 25

Urinary Tract infections

Lower UTI

Advise paracetamol or ibuprofen for pain and drinking enough fluid to avoid dehydration.

Antibiotic prescribing strategy

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
- previous urine C&S
- previous antibiotic use which may have led to resistant bacteria
- risk of complications
- local antimicrobial resistance data.

Send midstream urine for C&S for pregnant women and men.

For under 16s, send urine for C&S or dipstick in line with NICE guideline on urinary tract infection in under 16s: diagnosis and management

Guidance on the diagnosis of UTI in different patient groups produced by UKHSA is available at

UKHSA: urinary tract infection: diagnostic tools for primary care

If people have symptoms of pyelonephritis (such as fever) or a complicated UTI, refer to acute pyelonephritis for antibiotic choices.

Safety net / reassess at any time if symptoms worsen rapidly or significantly or do not improve in 48 hours of taking antibiotics. Send a urine sample if not already done so.

Asymptomatic bacteriuria: is significant levels of bacteria in urine with no UTI symptoms

- Screened for and treated in pregnant women because risk factor for pyelonephritis and premature delivery
- Not screened for or treated in non-pregnant women, men, children or young people

For detailed information see useful links below.

NON-PREGNANT WOMEN (≥ 16 years)

	Drug	Adult dose	Duration
1st line	Nitrofurantoin (if eGFR ≥45ml/min) (May be used with caution if eGFR 30-44ml/min to treat uncomplicated lower UTI caused by suspected or proven MDR bacteria and only if potential benefit outweighs risk) **OR**	100mg m/r BD (or 50mg QDS if unavailable)	3 days
	Pivmecillinam (a penicillin)	400mg initial dose, then 200mg TDS	
2nd line (if no improvement in symptoms on 1st line after ≥48 hours / 1st line inappropriate)	Nitrofurantoin (if eGFR ≥45ml/min) **OR**	100mg m/r BD (or 50mg QDS if unavailable)	3 days
	Pivmecillinam **OR**	400mg initial dose, then 200mg TDS	
	Trimethoprim – if low risk of resistance*	200mg BD	
	Fosfomycin	3g	Single dose

*A lower risk of resistance may be more likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in younger people in areas where local epidemiology data suggest resistance is low. A higher risk of resistance may be more likely with recent use and in older people in residential facilities

References: NICE: UTI (lower): antimicrobial prescribing visual summary Updated Oct 18

UKHSA: urinary tract infection: diagnostic tools for primary care Updated May 24

Lower UTI			
MEN (≥ 16 years)			
	Drug	Adult dose	Duration
1st line	Nitrofurantoin (Use if eGFR ≥45ml/min)	100mg M/R BD (or 50mg QDS if unavailable)	7 days
2nd line	Trimethoprim	200mg BD	
3rd line	Consider alternative diagnoses and follow recommendations in the NICE antimicrobial prescribing guidelines on acute pyelonephritis or acute prostatitis, basing antibiotic choice on recent culture and susceptibility results.		
PREGNANT WOMEN (≥ 12 years)			
	Drug	Adult dose	Duration
1st line	Nitrofurantoin (Avoid at term. Use if eGFR ≥45ml/min)	100mg m/r BD (or 50mg QDS if unavailable)	7 days
2nd line	Amoxicillin (only if culture results available and susceptible) **OR**	500mg TDS	
	Cefalexin	500mg BD	
Treatment of asymptomatic bacteriuria in pregnant women: choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results			
CHILDREN (≥3 MONTHS) & YOUNG PEOPLE (under 16 years)			
Refer children <3months to paediatric specialist			
	Drug	Child dose	Duration
1st line	Trimethoprim (if low risk of resistance*) **OR**	BNF for Children	3 days
	Nitrofurantoin (if eGFR ≥45ml/min) Use tablets or capsules where possible, (cost pressure.)	BNF for Children	
2nd line (if worsening symptoms on 1st line after ≥48 hours / 1st line inappropriate)	Nitrofurantoin (if eGFR ≥45ml/min) (if not used 1st) **OR**	BNF for Children	
	Amoxicillin (only if culture results available and susceptible) **OR**	BNF for Children	
	Cefalexin	BNF for Children	
*A lower risk of resistance may be more likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in younger people in areas where local epidemiology data suggest resistance is low. A higher risk of resistance may be more likely with recent use and in older people in residential facilities			
References: NICE: UTI (lower): antimicrobial prescribing visual summary Updated Oct 19 UKHSA: urinary tract infection: diagnostic tools for primary care Updated May 24 NICE (NG224) Urinary tract infection in under 16s: diagnosis and management Updated July 22			

Catheter associated urinary tract infection

- **Do NOT give antibiotics routinely in the absence of symptomatic infection**. (Most catheters are colonised with organisms therefore the use of urine dipsticks is not routinely recommended.)
- 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 drinking enough fluids to avoid dehydration and self-care, paracetamol for pain.
- 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.

Safety net: Seek medical help if symptoms worsen or do not start to improve within 48 hours.
For detailed information click on the links below.

	Drug	Adult dose	Duration
NON-PREGNANT WOMEN / MEN			
1st line, if no upper UTI symptoms	Nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	7 days
	Trimethoprim (if low risk of resistance*) **OR**	200mg BD	
	Amoxicillin (only if culture results available and susceptible)	500mg TDS	
2nd choice if no upper UTI symptoms	Pivmecillinam	400mg initial dose, then 200mg TDS	
1st choice if upper UTI symptoms (for 1st line IV options refer to the visual summary – useful link)	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 (only if other 1st choices are unsuitable.)	500mg BD	7 days
PREGNANT WOMEN			
1st line oral (for 2nd line refer to microbiologist or for IV options refer to the link.)	Cefalexin	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	7 to 10 days

*A lower risk of resistance may be more likely if not used in the past 3 months, previous urine culture suggests susceptibility (but this was not used), and in younger people in areas where local epidemiology data suggest resistance is low. A higher risk of resistance may be more likely with recent use and in older people in residential facilities

References: NICE (NG113) CAUTI: antimicrobial prescribing visual summary Last updated Apr 19
UKHSA: urinary tract infection: diagnostic tools for primary care Last updated May 24

Catheter associated urinary tract infection			
CHILDREN (≥3 MONTHS) & YOUNG PEOPLE			
Refer children <3months to paediatric specialist			
	Drug	Child dose	Duration
1st line oral (for 1st line IV options refer to the visual summary – useful link)	Trimethoprim (if low risk of resistance) **OR**	BNF for Children	7-10 days
	Amoxicillin (only if culture results available and susceptible) **OR**	BNF for Children	
	Cefalexin **OR**	BNF for Children	
	Co-amoxiclav (only if culture results available and susceptible)	BNF for Children	
References: NICE (NG113) CAUTI: antimicrobial prescribing visual summary Last updated Apr 19 UKHSA: urinary tract infection: diagnostic tools for primary care Last updated May 24			

Recurrent UTI				
For flow chart on process, please refer to Summary of Management of Recurrent lower UTIs in Adults – BLMKICB Medicines Optimisation For review of prophylaxis refer to the above.				
	Drug	Adult dose	Child dose	Duration
Antiseptic prophylaxis				
	Methenamine Hippurate	1g BD	6-15yrs on specialist advice. BNF for Children	Review at 6 months
Antibiotic choices				
1st line	Nitrofurantoin (avoid at term) – if eGFR ≥45ml/min **OR**	100mg single dose when exposed to trigger or 50 to 100mg at night.	BNF for Children	Review at 6 months
	Trimethoprim (avoid in pregnancy)	200mg single dose when exposed to a trigger or 100mg at night	BNF for Children	
2nd line	Amoxicillin **OR**	500mg single dose when exposed to a trigger or 250mg at night	BNF for Children	
	Cefalexin	500mg single dose when exposed to a trigger or 125mg at night	BNF for Children	
References: NICE (NG112) Prevention of recurent UTI visual-summary Last updated Dec 24 UKHSA: urinary tract infection: diagnostic tools for primary care Last updated May 24				

Acute Pyelonephritis (upper urinary tract)

Send a midstream urine for culture and susceptibility testing.

Advise drinking enough fluid, paracetamol (+/- low-dose weak opioid) for pain for those 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.

If patient has had an ESBL organism cultured in the last 12 months, you may consider discussing with a Microbiologist for suitable antibiotic choice.

People at higher risk of complications include those with abnormalities of the genitourinary tract or underlying disease (such as diabetes or immunosuppression.)

Avoid antibiotics that don't achieve adequate levels in renal tissue, such as nitrofurantoin.

Safety net: Seek medical help if symptoms worsen or do not start to improve within 48 hours.

For detailed information see useful links below.

NON-PREGNANT WOMEN / MEN

	Drug	Adult dose	Duration
1st line oral antibiotics (for 1st line IV options refer to the visual summary – useful link)	Cefalexin **OR**	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	7-10 days
	Co-amoxiclav (only if culture results available and susceptible) **OR**	500/125 TDS	
	Trimethoprim (only if culture results available and susceptible) **OR**	200mg BD	14 days
	Ciprofloxacin (only if other 1st choice antibiotics unsuitable.)	500mg BD	7 days

PREGNANT WOMEN (≥12yrs)

1st line oral (for 1st line IV options refer to the visual summary – useful link)	Cefalexin	500mg BD or TDS (up to 1g to 1.5g TDS or QDS for severe infections)	7-10 days

CHILDREN (≥3 MONTHS) & YOUNG PEOPLE

Refer children <3months to paediatric specialist

	Drug	Child dose	Duration
1st line oral (for 1st line IV options refer to the visual summary – useful link)	Cefalexin **OR**	BNF for Children	7-10 days
	Co-amoxiclav (only if culture results available and susceptible)	BNF for Children	

References: NICE: Pyelonephritis (acute): antimicrobial prescribing Last updated Oct 18
UKHSA: urinary tract infection: diagnostic tools for primary care Last updated May 24
NICE (NG224) Urinary tract infection in under 16s: diagnosis and management Updated July 22

Acute Prostatitis

Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable.

Send a midstream urine sample for culture and susceptibility testing and offer an antibiotic.

Review results and adjust treatment as appropriate.

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 useful link below.

	Drug	Adult dose	Duration
1st line. **Be guided by susceptibilities when available**.	Ciprofloxacin (Guided by C&S when available. Consider safety issues) **OR**	500mg BD	14 days and then review
	Ofloxacin (consider safety issues) **OR**	200mg BD	
	Trimethoprim (Seek specialist advice, guided by susceptibilities)	200mg BD	
2nd line (After discussion with a specialist)	levofloxacin (consider safety issues) **OR**	500mg OD	
	co-trimoxazole	960mg BD	

Reference: NICE: Prostatitis (acute): antimicrobial prescribing visual summary Last updated April 19

Gastrointestinal infections

Oral candidiasis

Topical azoles are more effective than topical nystatin.

Oral candidiasis is rare in immunocompetent adults, consider undiagnosed risk factors, including HIV.

	Drug	Adult dose	Child dose	Duration
1st line	Miconazole gel	2.5ml of 24mg/ml QDS (hold in mouth after food	BNF for Children	7 days. Continue for 7 days after resolution.
Note there is currently a long term manufacturing problem with Miconazole gel. Use 2nd line treatment option if unavailable.				
2nd line (if not tolerated)	Nystatin suspension	1ml of 100,000units/ml QDS (half in each side)	As per adult	7 days. Continue for 2 days after resolved.
Alternative if extensive / severe infection	Fluconazole	200 – 400mg stat then 100-200mg OD	BNF for Children	7-21 days

For patients with HIV see the below link for treatment.

Reference: NICE CKS: Management | Candida - oral Last updated Mar 25.

Infectious Diarrhoea

Viruses account for the **majority** of cases. Both viral and bacterial infections are **self-limiting**.

Antibiotic therapy is not usually indicated unless patient is systemically unwell.

If systemically unwell and campylobacter suspected (such as undercooked meat and abdominal pain), consider clarithromycin 250mg to 500mg BD for 5 to 7 days, if treated early (within 3 days.)

Otherwise consult Microbiology.

Please notify suspected cases of food poisoning / infectious bloody diarrhoea to UKHSA.

For management guidance refer to NICE CKS: Management | Gastroenteritis Last updated May 24

Traveller's diarrhoea

- Do not routinely offer prophylactic treatment for prevention of travellers' diarrhoea.
- Do not routinely prescribe 'stand-by' (to be used if affected) treatments for travellers' diarrhoea.
- Seek specialist advice if considering prophylactic antibiotic treatment or a 'stand-by antibiotic'.
- The National Travel Health Network and Centre (NaTHNaC) provides a telephone advice line for health professionals advising travellers with complex itineraries or specialist health needs. For more information, see the NaTHNaC website (NaTHNaC)
- For management guidance please refer to NICE CKS: Management | Diarrhoea - prevention and advice for travellers Last updated Sept 23.

Clostridioides difficile infection

Take a stool sample and treat based on a positive result or pending the test result with a clinical suspicion.

Two tests are run: GDH antigen test and toxin test. Patients found to be GDH positive and toxin negative are carriers. (They may also require treatment if symptomatic.)

Do not take repeat stool samples following diagnosis or after treatment (C difficile can remain in the stools for long periods. When the patient is asymptomatic it is not significant.)

For children and young people, treatment should be started by, or after advice from, a microbiologist or paediatrician.

For adults, consider seeking specialist advice before starting treatment.

When commencing treatment:

Assess:

- Whether it is a first or further episode
- Severity of infection
- Individual risk factors for complications or recurrence, eg. age, frailty, or comorbidities.

Review:

- Any **existing antibiotics**: stop unless essential. If essential, consider changing to one with a lower risk of *C. difficile* infection.
- Any 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 & diuretics.)

Advise:

- Drinking enough fluids
- Good hygiene measures & environmental cleaning
- Safety netting if symptoms get worse.

Do not offer antimotility medicines such as loperamide.

Offer treatment as below**.** If antibiotics have been started for suspected *C. difficile* infection, and subsequent stool sample tests do not confirm infection, consider stopping these antibiotics.

	Drug	Adult dose	Duration
1st line for 1st episode of mild, moderate or severe	Vancomycin	125mg QDS	10 days
2nd line	Discuss with microbiologist any patient not improving with Vancomycin.		
For further episode within 12 weeks of symptom resolution **(relapse)**	Fidaxomicin **(Discuss first with a microbiologist)**	200mg BD	10 days
For further episode >12 weeks after symptom resolution **(recurrence)**	Vancomycin	125mg QDS	
For any further advice discuss with a microbiologist.			

Reference: NICE, Clostridioides difficile infection: antimicrobial prescribing visual summary Last updated July 21.

Threadworm

Treat ALL household contacts at the same time, unless contraindicated.

Advise thorough hygiene measures for 2 weeks if treated with Mebendazole, (hand hygiene; cut fingernails regularly; morning shower, including perianal area). Wash sleepwear, bed linen, and dust and vacuum.

Children under 6 months and pregnant / breastfeeding – hygiene measures only for 6 weeks.

	Drug	Adult dose	Child dose	Duration
Adult / Child >6 months	Mebendazole (available OTC for children > 2 years and adults)	100mg stat	BNF for Children	1 dose. Repeat in 2 weeks if persistent
Child <6 months or pregnant / breastfeeding	Hygiene measures only for 6 weeks.			

Useful link: NICE CKS: Threadworm Management Last updated Feb 25.

Acute diverticulitis

If systemically well:

- Consider no antibiotics. Simple analgesia & provide safety netting advice.

If systemically unwell / immunosuppressed / significant co-morbidity:

- Give oral antibiotics if patient does not meet the criteria for referral for suspected complicated acute diverticulitis.

	Drug	Adult dose	Duration
1st line	Co-amoxiclav	500/125mg TDS	*5 days
Penicillin allergy (Cefalosporins not suitable if allergy history is of angioedema, blistering or swelling, bronchospasm or urticaria or if allergy history is unclear)	Cefalexin **PLUS**	500mg TDS (up to 1g to 1.5g TDS or QDS for severe infections)	
	Metronidazole	400mg TDS	
Alternative	Trimethoprim **PLUS**	200mg BD	
	Metronidazole	400mg TDS	

*A longer course may be needed on clinical assessment

Reference: NICE (NG147): Diverticular disease: diagnosis and management Last updated Nov 19.

Helicobacter pylori

Refer to NICE / CKS for treatment summaries.

Genital tract infections

Local GUM services

Local services include iCaSH (integrated Contraception and Sexual Health) for Bedfordshire and Milton Keynes Home (icash.nhs.uk) and Luton Sexual Health for Luton Luton Sexual Health – Providing sexual health advice and guidance to the town

See iCaSH for patient information leaflets.
Both services offer free STI screening postal kits.

Chlamydia trachomatis / urethritis

The national Chlamydia Screening Programme is focussed on reducing the harms of untreated chlamydia infection. As such, opportunistic screening of young people without symptoms in GP practices should focus on young women. Services provided by sexual health providers remain the same.

- If positive, treat, **refer to GUM** and initiate partner notification, testing and treatment.
- Advise patient with chlamydia to abstain from sexual intercourse until doxycycline is completed or for 7 days after treatment with azithromycin.
- If chlamydia, test for reinfection at 3 to 6 months if under 25 years or consider if over 25 years and high risk.
- As lower cure rate in pregnancy, test for cure, at least 3 weeks after end of treatment.

Vulvo vaginal swabs are the specimen of choice for women. First catch urine is the sample of choice for urethral chlamydia in men.

	Drug	Adult dose	Duration
1st line	Doxycycline (not in pregnancy)	100mg BD	7 days
1st line in pregnancy / allergy or intolerance to tetracyclines	Azithomycin	1g stat on day one then 500mg OD for 2 days	3 days
2nd line if doxycycline or Azithromycin is contraindicated:	Erythromycin **OR**	500mg BD	10-14 days
	Ofloxacin (not in pregnancy / breastfeeding)	200mg BD or 400mg OD	7 days
Reference: BASHH Guideline Chlamydia 2015 (last update 2018)			

Gonorrhoea

- **Refer to GUM for management**.
- Antibiotic resistance is high. For uncomplicated ano-genital and pharyngeal infections BASHH recommend as below. Oral alternatives to 1st line with sensitivity results.
- Advise patients to abstain from sexual intercourse until seven days after they and their partner(s) have completed treatment.
- **Test of cure (TOC) is essential**. A positive TOC should be discussed with the Sexual Health team for advice.

Treatment from GUM	Drug	Adult dose	Duration
1st line	Ceftriaxone injection	1g via deep IM injection. Reconstitute with Lidocaine 1%. See SPC for full details.	Single dose
Alternatives Consider alternatives if severe allergy / needle phobia	Cefixime (only with sensitivity results) Plus	400mg PO stat +_400mg dose 6-12hrs later	
	Azithromycin OR	2g PO (can be split into 2 x 1g doses 6-12 hours apart.)	Single dose
	Azithromycin (only with sensitivity results) OR	2g PO	Single dose
	Ciprofloxacin (only with sensitivity results Consider safety issue)	500mg PO	Single dose

Reference: Gonorrhoea 2025: Updated Guideline | BASHH

Genital herpes

Advise: saline bathing, analgesia, or topical lidocaine for pain, and discuss transmission.

First episode: treat within 5 days if new lesions or if any systemic symptoms and **refer to GUM**.

Recurrent: self-care if mild, or immediate short course antiviral treatment, or suppressive therapy if more than 6 episodes per year.

	Drug	Adult dose	Duration
1st line	Aciclovir **OR**	400mg TDS	5 days
2nd line	Valaciclovir	500mg BD	5 days
If recurrent	Aciclovir	800mg TDS	2 days

For more details please see: BASHH Guideline: Anogenital Herpes 2024

Bacterial vaginosis

Oral metronidazole is as effective as topical treatment and is cheaper.

7 days results in fewer relapses than 2g stat at 4 weeks.

Pregnant/breastfeeding: avoid 2g dose.

	Drug	Adult dose	Duration
1st line	Metronidazole PO	400mg BD or 2g stat	5 to 7 days or Single dose
2nd line	Metronidazole 0.75% vaginal gel **OR**	5g applicator at night	5 nights
	Clindamycin 2% vaginal cream	5g applicator at night	7 nights

For more details please see: BASHH guideline Bacterial Vaginosis 2012

Trichomoniasis

Oral treatment needed as extra-vaginal infection common.
Treat partners and **refer to GUM** for other STIs.
Pregnant/breastfeeding: avoid 2g single dose Metronidazole, use 400mg BD. If this is declined / contraindicated seek advice from GUM.

	Drug	Adult dose	Duration
1st line	Metronidazole	400mg BD Or 2g (more adverse effects)	7 days or Single dose

For more details please see: BASHH: Trichomonas Vaginalis 2021

Vaginal candidiasis

All topical and oral azoles give over 80% cure.

Advise on self-management.

Pregnancy: **avoid oral azoles.** If 1st line not tolerated / contraindicated use alternate regimes (see links below and for recurrent infection.)

	Drug	Adult dose	Duration
1st line (non-pregnant)	Fluconazole **OR**	150mg PO	Single dose (available OTC)
	Clotrimazole	500mg PV pessary	Single dose (available OTC)
1st line (pregnant & ≥16yrs)	Clotrimazole	500mg PV pessary	Up to 7 days (unlicensed)
Recurrent (>4 episodes per year)	Fluconazole	150mg every 72 hours for 3 doses, followed by 1 dose once a week for 6 months	6 months

For more details please see: BASHH: Vulvovaginal Candidiasis 2019
NICE CKS: Management | Candida - female genital Updated Oct 23.

Epididymitis

For infection probably due to a sexually transmitted pathogen (eg. under 35 years, new sexual partner or more than 1 sexual partner in the last year, lack of consistent condom use and a contact of an STI): **Refer to GUM**

For infection probably due to an enteric organism (eg. Older than 35years, not sexually active, recent instrumentation, men who practice insertive anal intercourse, men with known abnormalities of the urinary tract or positive urine dipstick for leucocytes and nitrates.) Treat as below:

	Drug	Adult dose	Duration
1st line	Ofloxacin **OR**	200mg BD	14 days
	Levofloxacin	500mg OD	10 days
	If quinolones are contraindicated: Co-amoxicalv	625mg TDS	10 days

For more details please see: BASHH: Epididymo-orchitis 2020

Pelvic inflammatory disease (PID)

Refer women and sexual contacts to GUM.

PID may be symptomatic or asymptomatic.

A positive test for gonorrhea, chlamydia, or *M. genitalium* supports diagnosis but the absence of infection does not exclude PID. Testing for all three organisms is recommended.

Absent pus cells in HVS smear good negative predictive value but their presence is non-specific.

Differential diagnoses include: ectopic pregnancy, appendicitis, endometriosis, UTI, ovarian cyst torsion or rupture, functional pain.

If M. genitalium tests positive use moxifloxacin.

	Drug	Adult dose	Duration
1st line	Ceftriaxone **PLUS**	1g IM	Single dose
	Metronidazole **PLUS**	400mg BD	14 days
	Doxycycline	100mg BD	
2nd line	Metronidazole **PLUS**	400mg BD	14 days
	Ofloxacin **OR**	400mg BD	
	Moxifloxacin alone	400mg OD	14 days

For more details: BASHH guidelines PID 2019

CNS infection

Suspected meningococcal disease

Transfer all patients to hospital as an emergency.

Do not delay transfer to hospital to give antibiotics. If there is likely to be a clinically significant delay in transfer to hospital for people with strongly suspected bacterial meningitis give antibiotics as soon as possible.

Do not give IV antibiotics if there is a definite history of anaphylaxis to penicillins; rash is not a contraindication.

References:
UKHSA: Guidance for public health management of meningococcal disease in the UK Updated Nov 24
Overview | Meningitis (bacterial) and meningococcal disease: recognition, diagnosis and management | Guidance | NICE Updated March 24.

	Drug	Adult dose	Child dose
Either	Benzylpenicillin IV or IM	1.2g stat	<1 year: 300mg stat 1 to 9 years: 600mg stat ≥10 years: 1.2g stat
OR	Ceftriaxone IV or IM	2g stat	≥9 years or ≥50kg: 2g stat <9 years or <50kg: 80-100mg/kg OD, (up to a maximum of 4g.)

Prevention of secondary case of meningitis

Only prescribe following advice from the UKHSA health protection team (East of England):

☎ 0300 3038537. Contacts: UKHSA health protection teams - GOV.UK (www.gov.uk)

Skin & Soft tissue infections

Cold sores

For patients with primary infection **a**dvise on pain relief if needed with paracetamol and / or ibuprofen. Topical antivirals are available OTC, which some people may find helpful.

In healthy patients if frequent, persistent or severe lesions: consider oral prophylaxis on clinical judgement: Aciclovir 200mg 5 times a day for 5 days.

For further management guidance, including immunocompromised patients please refer to NICE Clinical Knowledge Summaries. NICE CKS: Herpes simplex - oral Last updated May 24.

PVL-Staphylococcus Aureus

For management guidance refer to UKHSA PVL-Staphylococcus aureus infections: diagnosis and management

Impetigo

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.

	Drug	Adult dose	Child dose	Duration
Topical antiseptic	Hydrogen peroxide 1%	BD or TDS	BNF for Children	*5 days
Topical antibiotic 1st choice	Fusidic acid 2%	TDS	BNF for Children	
2nd line if fusidic acid resistance suspected or confirmed	Mupirocin 2%	TDS	BNF for Children	
Oral antibiotic 1st line	Flucloxacillin	500mg QDS	BNF for Children	
Penicillin allergy	Clarithromycin **OR**	250mg BD	BNF for Children	
	Erythromycin (in pregnancy)	250-500mg QDS	BNF for Children	

*5 days is appropriate for most, can be increased to 7 days based on clinical judgement.

Reference: NICE: Impetigo: antimicrobial prescribing visual summary Last updated Feb 20.

Eczema (secondary bacterial infections)

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.

If MRSA suspected or confirmed – consult microbiologist.

Presentation	Recommendation
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	Oral antibiotic. See cellulitis section if appropriate.

	Drug	Adult dose	Child dose	Duration
Topical antibiotic (If topical is appropriate.) For localised infections only	Fusidic acid 2%	TDS	BNF for Children	5 to 7 days
Oral antibiotic 1st line	Flucloxacillin	500mg QDS	BNF for Children	
Penicillin allergy	Clarithromycin **OR**	250mg BD (500mg in severe)	BNF for Children	
	Erythromycin (in pregnancy)	250-500mg QDS	BNF for Children	

Reference: NICE: Secondary bacterial infection of eczema: antimicrobial prescribing visual summary Last updated March 21

Mastitis (lactational)

Mastitis is painful inflammation of the breast which may or may not be associated with lactation.

Suspect if woman has: a painful breast; fever and/or general malaise; a tender, red breast.

In lactating women *S. aureus* is the most common infecting pathogen.

Advise on simple analgesics +/- cold compress if appropriate.

Advise the woman to continue breastfeeding**,** including from the affected breast.

Prescribe antibiotics as below if a woman has nipple fissure that is infected, symptoms have not improved (or are worsening) after 12-24 hours despite effective milk removal, and / or breast milk culture is positive.

Identify and manage any pre-disposing factors and safety net.

See CKS link below for further details and management of breast abscess.

	Drug	Adult dose (≥14yrs)	Duration
1st line	Flucloxacillin	500mg QDS	10-14 days
Penicillin allergy	Erythromycin **OR**	250-500mg QDS	
	Clarithromycin	500mg BD	
Treatment failure / recurrence	Co-amoxiclav	625mg TDS	10-14 days

Reference: NICE Clinical Knowledge summaries NICE CKS Mastitis and breast abscess Last updated Mar 25.

Mastitis (non-lactational)

Advise on simple analgesics +/- warm compress if appropriate.

Identify and manage pre-disposing factors.

Prescribe an antibiotic for all patients and **safety net**.

See link below for further details

	Drug	Adult dose (≥14yrs)	Duration
1st line	Co-amoxiclav	625mg TDS	10-14 days
Penicillin allergy	Metronidazole **PLUS**	400mg TDS	
	Either Clarithromycin	500mg BD	
	Or Erythromycin	250-500mg QDS	
Treatment failure / recurrence	Guided by further investigation / work up. See link below.		

Reference: NICE Clinical Knowledge summaries NICE CKS Mastitis and breast abscess Last updated Mar 25.

Cellulitis and erysipelas

- 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. Consider 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.

Advise:

- Skin will take time to return to normal after finishing antibiotics. Full resolution at 5-7 days is not expected.
- Safety netting

For alternative choice antibiotics for severe infection or suspected or confirmed MRSA infection discuss with a Microbiologist. See also useful link to NICE visual summary at the foot of the table.

Do not routinely offer antibiotics to prevent recurrent cellulitis or erysipelas.

	Drug	Adult dose	Child dose	Duration
1st line	Flucloxacillin	500mg to 1g QDS	BNF for Children	5 to 7 days*
Penicillin allergy or flucloxacillin unsuitable	Clarithromycin **OR**	500mg BD	BNF for Children	
	Erythromycin (in pregnancy) **OR**	500mg QDS	BNF for Children	
	Doxycycline (adults only) **OR**	200mg on day 1, then 100mg OD	-	
	Co-amoxiclav (children only, not in penicillin allergy)	-	BNF for Children	
If infection near eyes or nose:	Co-amoxiclav	500/125mg TDS	BNF for Children	7 days*
If infection near eyes or nose (penicillin allergy)	Clarithromycin **AND**	500mg BD	BNF for Children	
	Metronidazole (in children only if anaerobes suspected)	400mg TDS	BNF for Children	

*A longer course (up to 14 days in total) may be needed but skin takes time to return to normal after finishing antibiotics. Full resolution at 5 to 7 days is not expected.

Reference: NICE (NG141): Cellulitis and erysipelas: antimicrobial prescribing visual summary Last updated Sept 19.

Diabetic foot infection

In diabetes, all foot wounds are likely to be colonised with bacteria.

Diabetic foot infection has **≥ 2 of:** local swelling or induration; erythema; local tenderness or pain; local warmth; purulent discharge.

Severity classification	
Mild	local infection with 0.5 to <2cm erythema
Moderate	local infection with >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.

Do not offer antibiotics to prevent diabetic foot infection.

	Drug	Adult dose	Duration
Mild infection 1st line	Flucloxacillin	500mg to 1g QDS	7 days*
Penicillin allergy	Clarithromycin **OR**	500mg BD	
	Erythromycin (in pregnancy) **OR**	500mg QDS	
	Doxycycline	200mg on day 1, then 100mg OD (can be increased, see BNF)	

For antibiotic choices for moderate or severe infection, infections where *Pseudomonas aeruginosa* or MRSA is suspected or confirmed, and IV antibiotics refer to the NICE guidelines via useful link below.

*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.

Reference: NICE: Diabetic foot infection: antimicrobial prescribing visual summary Updated Oct 19.

Leg ulcer infection

Manage any underlying conditions to promote ulcer healing.

Offer an antibiotic **only** 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.

Be aware that it will take time for the infection to resolve (full resolution would not be expected until **after** the antibiotic course is completed.)

	Drug	Adult dose	Duration
1st line	Flucloxacillin	500mg-1g QDS	7 days
Penicillin allergy / Flucloxacillin unsuitable	Doxycycline **OR**	200mg on day 1, then 100mg OD, (can be increased to 200mg OD.)	
	Clarithromycin **OR**	500mg BD	
	Erythromycin (in pregnancy)	500mg QDS	
2nd line (guided by C&S when available)	Co-amoxiclav **OR**	500/125 TDS	7 days
	Co-trimoxazole	960mg BD	

For IV antibiotic choices **if severely unwell or MRSA suspected or confirmed,** refer to link below.

Reference: NICE: Leg ulcer infection: antimicrobial prescribing visual summary Updated Feb 20.

Scabies

Permethrin & Malathion: Treat whole body including face, scalp and under nails.

Home/sexual contacts: treat within 24 hours.

	Drug	Adult dose	Child dose	Duration
1st line	Permethrin 5% cream	As above	BNF for Children	2 applications, 1 week apart.
Permethrin allergy	Malathion 0.5% aqueous liquid	As above	BNF for Children	
Treatment failure	Advise re-treatment with topical. If symptoms persist after re-treatment consider PO Ivermectin / discussion with dermatology.			

Reference: NICE CKS: Scabies Last updated May 24

Insect bites and stings

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.

Human and animal bites

Offer an antibiotic for a human or animal bite if there are symptoms or signs of infection, such as increased pain, inflammation, fever, discharge or an unpleasant smell. Take a swab for microbiological testing if there is discharge (purulent or non-purulent) from the wound.

Do not offer antibiotic prophylaxis if a human or animal bite has not broken the skin.

Human bite:

Offer antibiotic prophylaxis if the human bite has broken the skin and drawn blood.

Consider antibiotic prophylaxis if the human bite has broken the skin but not drawn blood if it is in a high-risk area or person at high risk.

Cat bite:

Offer antibiotic prophylaxis if the cat bite has broken the skin and drawn blood.

Consider antibiotic prophylaxis if the cat bite has broken the skin but not drawn blood if the wound could be deep.

Dog or another traditional pet bite (excluding cat bite)

Do not offer antibiotic prophylaxis if the bite has broken the skin but not drawn blood.

Offer antibiotic prophylaxis if the bite has broken the skin and drawn blood if it has caused considerable, deep tissue damage or is visibly contaminated (for example, with dirt or a tooth).

Consider antibiotic prophylaxis if the bite has broken the skin and drawn blood if it is in a high-risk area or person at high risk.

	Drug	Adult dose	Child dose	Duration
1st line	Co-amoxiclav	250/125 or 500/125 TDS	BNF for Children	3 days for prophylaxis. 5 days* for treatment.
Penicillin allergy	Doxycycline (not to be used in children under 12 or pregnancy) **PLUS**	200mg on day 1, then 100mg or 200mg OD	BNF for Children	
	Metronidazole	400mg TDS	BNF for Children	
Pregnancy	Seek specialist advice			

*course length can increase to 7 days (with review) based on clinical assessment of the wound.

Reference: NICE: Human and animal bites: antimicrobial prescribing visual summary Last update Nov 20.

Tick bites (Lyme disease)

Treat erythema migrans **empirically**; serology is often negative early in infection.

For other suspected Lyme disease such as neuroborreliosis (CN palsy, radiculopathy) seek advice.

For management guidance please refer to NICE (NG95): Lyme disease Last updated Oct 18.

	Drug	Adult dose	Child dose	Duration
1st line (without focal symptoms but with erythema migrans and / or non-focal symptoms)	Doxycycline (not to be used in children under 12 or pregnancy)	100mg BD	BNF for Children	21 days
Alternative	Amoxicillin	1g TDS	BNF for Children	
Alternative if both above are unsuitable	Azithromycin	500mg OD	BNF for Children	17 days

Dermatophyte infection: nail

Advise on self-care management strategies. Treatment is not necessarily needed if the person is not troubled by the appearance of the nail and / or infection is asymptomatic.

For primary infection: (Bedfordshire) Take nail clippings;

In Milton Keynes:(As part of the Oxfordshire pathology network,) only send clippings where there is:

1. Failure of empiric antifungal therapy or
2. Unusual animal or environmental exposure
3. Immunocompromise, including diabetes, HIV or immunosuppressive therapy.

(The implementation of selective testing pathways is due to low diagnostic yield and the time intensive process. The approach is being shared for consideration in other areas.)

Start oral therapy as below, only if fungal infection is confirmed. If candida or non-dermatophyte infection is confirmed, use oral itraconazole 1st line.

Note: topical nail lacquer (OTC) is only recommended in adults for dermatophyte / candida infection, which is very early with distal superficial nail involvement / superficial white onychomycosis. Cure rates are very low.

Monitor subsequent nail growth 3-6 months after the start of treatment.

For children: seek specialist advice.

For detailed management refer to NICE CKS: NICE CKS: Fungal nail infection Last updated Aug 23

	Drug	Adult dose	Child dose	Duration
1st line	Terbinafine	250mg OD	BNF for Children	Fingers: 6 weeks Toes: 12 weeks
2nd line	Itraconazole (consider safety issues)	200mg BD	-	Pulsed therapy for 1 week, with subsequent courses repeated after 21 days. Fingers: 2 courses. Toes: 3 courses

Dermatophyte infection: skin (body & groin)

For mild, non-extensive disease advise treatment with a topical antifungal. Advise on self-care.

If an adult has severe or extensive disease, send skin scrapings, and if infection confirmed; use oral antifungal (terbinafine 1st line.) Can also be started if clinical features very suggestive of infection based on clinical judgement.

For detailed management guidance refer to NICE CKS: NICE CKS: Fungal skin infection - body and groin Last updated July 23.

	Drug	Adult dose	Child dose	Duration
1st line	Topical Terbinafine **OR**	1% OD to BD	BNF for Children	1 to 4 weeks
	Topical Clotrimazole OR	1% BD	BNF for Children	4 to 6 weeks
	Topical Miconazole	2% BD	BNF for Children	Continue for 10 days after lesions healed
Consider topical corticosteroid if associated marked inflammation: Hydrocortisone 1% OD for up to 7 days				

Acne vulgaris

Severity	
Mild to Moderate	1 or more of: • Any number of non-inflammatory lesions (comedones) • Up to 34 inflammatory lesions (with or without non-inflammatory lesions) • Up to 2 nodules
Moderate to Severe	Either or both of: • ≥ 35 inflammatory lesions (with or without non-inflammatory lesions) • 3 or more nodules

First-line treatment options: offer a 12 week course of one of the options below, taking account of severity, preferences, etc. Completing the course is important because positive effects can take 6 to 8 weeks. **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 at 12 weeks. See detailed information on review / relapse overleaf.

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 more information see the NICE guideline on acne vulgaris Last updated Dec 23.

1st Line	Drug	Adult dose	Child dose	Duration
Any Severity OR	Adapalene (0.1% or 0.3%)/ 2.5% Benzoyl peroxide gel (Epiduo®)	OD (thinly in the evening)	9-17years: As adult	12 weeks
Any Severity OR	Tretinoin 0.025%/ Clindamycin 1% gel (Treclin®)	OD (thinly in the evening)	12-17 years: As adult	
Mild to Moderate: OR	Topical Benzoyl peroxide (3% or 5%) / Clindamycin 1% gel (eg. Duac®)	OD (in the evening)	12-17 years: As adult	
Moderate to Severe: OR	Adapalene (0.1% or 0.3%)/ / 2.5% Benzoyl peroxide gel (Epiduo®)	OD (in the evening)	9-17years: As adult	
	AND Lymecycline **OR** Doxycycline	408mg OD **OR** 100mg OD	12-17 years: As adult	

Moderate to Severe:	15% or 20% Azelaic acid (Finacea® 15% gel or Skinoren® 20% cream) **AND**	BD	12-17 years: As adult	
	Lymecycline **OR** Doxycycline	408mg OD OR 100mg OD	12-17 years: As adult	
Moderate to Severe:	For patients unable to tolerate / have contraindications to oral Lymecycline and Doxycycline, consider oral Trimethoprim / Erythromycin in combination with topical treatment.			
Alternative: (if 1st line contraindicated, or to avoid topical retinoids or an antibiotic.)	Topical Benzoyl peroxide 5% gel / wash (Acnecide®) (Also available OTC)	OD to BD	12-17 years: As adult	

Acne vulgaris

12 week review

If acne has failed to respond:

- Mild-moderate – offer another treatment option.
- Moderate-severe – if not previously taking an oral antibiotic, offer an option that includes Lymecycline or Doxycycline plus a topical treatment.
- Moderate-severe- been taking an oral antibiotic – consider referral to dermatology

If improving but not cleared completely: Continue treatment for 12 more weeks.
If completely cleared: Stop any oral antibiotic, continue topical treatment.

24 weeks review

- **Mild to moderate** – failure to respond adequately to 2 different 12-week courses of treatment options, consider dermatology referral.

Relapse

If relapses after responding adequately to an appropriate first-line therapy consider either another 12 weeks of the same treatment or an alternative 12 week treatment.

Varicella zoster (chickenpox)

Pregnant / immunocompromised / neonate: *seek urgent specialist advice*.

Consider symptom relief with paracetamol / chlorpheniramine / topical calamine.

Consider oral Aciclovir in an immunocompetent adult / adolescent (≥14 years) who presents within 24 hours of onset of rash, particularly with severe chickenpox / risk of complications.

For further detailed information see NICE CKS: Child or adult | Management | Chickenpox . Last updated Nov 23

	Drug	Adult dose	Child dose	Duration
1st line	Aciclovir	800mg 5 times a day	BNF for Children	7 days

Herpes zoster (shingles)

Admit / seek specialist advice if; serious complications suspected, head and neck, ophthalmic, visceral or CNS involvement, severely immunocompromised, immunocompromised child, unusual lesions.

See NICE / CKS link for further details. NICE CKS | Management | Shingles Last updated May 25.

For other patients manage pain and:

Treat with oral antiviral if **≤72 hours of rash onset** and 1 of:
• Immunocompromised (non-severe, based on judgement. If severe refer to hospital.)
• Age ≥50 (post-herpetic neuralgia more likely)
• Non-truncal involvement (excluding head and neck)
• moderate / severe pain or moderate / severe rash
• people with pre-disposing skin conditions
Consider offering antivirals to others <50yrs with shingles of the extremities or trunk depending on clinical judgement.

If > 72 hours: consider starting antiviral up to 1 week after rash onset if:
High risk of severe shingles or complications, eg.
• continued vesicle formation
• Immunocompromised / older age
• signs of visceral, cutaneous or neurological dissemination
• severe pain

	Drug	Adult dose	Child dose	Duration
1st line	Aciclovir	800mg 5 times a day	BNF for Children	7 days
2nd line	Valaciclovir	1g TDS	BNF for Children	

For immunocompromised, 7 days and continue for 2 days after the lesions have crusted.

Dose adjust in patients with reduced renal function.

Eye infections

Conjunctivitis

Treat only if severe, as most cases are viral or self-limiting.

Advise on bathing / cleaning eyelids with cotton wool soaked in boiled and cooled water, cool compresses and lubricating agents.

Bacterial conjunctivitis: usually self-limiting. It is characterised by red eye with mucopurulent, not watery discharge.

	Drug	Adult dose	Child dose	Duration
1st line	Bathe / clean eyelids with cotton wool dipped in sterile saline or boiled (cooled) water, to remove crusting			
2nd line	Chloramphenicol 0.5% eye drops **OR**	2 hourly for 2 days, then reduce to 3 to 4 times daily.	BNF for Children	48 hours after resolution
	Chloramphenicol 1% eye ointment	3 or 4 times daily or once daily at night if using antibiotic eye drops during the day.		
3rd line (has less gram-negative cover)	Fusidic acid 1% gel	BD	BNF for Children	

Reference: NICE CKS: Conjunctivitis management in primary care Last updated Oct 22

Blepharitis				
Use 2nd line topical antibiotic if hygiene measures are ineffective after 2 weeks. If signs of meibomian gland dysfunction or acne rosacea, consider oral antibiotics.				
	Drug	Adult dose	Child dose	Duration
1st line	Eyelid hygiene: Wiping the lid margins twice daily then reduce to once daily Warm compress: Apply to closed eyelids for 5-10 mins once or twice daily Eyelid massage (with those with posterior blepharitis) Avoid eye makeup. Safety net.			
2nd line	For those with anterior blepharitis: consider topical antibiotic to be rubbed onto the lid margin, see Conjunctivitis. For those with posterior blepharitis associated with meibomian gland dysfunction and rosacea, consider oral antibiotics, as per NICE CKS: Rosacea			
Reference: NICE CKS: Blepharitis Management Last updated Sept 24.				

Suspected dental infections in primary care

Refer to the dentist for treatment. GP prescribing in Primary Care is **not recommended**.
See BMA advice.

References

As given throughout plus:

NICE, UKHSA, Summary of antimicrobial prescribing guidance – managing common infections, V1.2 April 25. Available via https://elearning.rcgp.org.uk/mod/book/view.php?id=14887 Accessed 14.1.26.