



NHS
in Greater Manchester
Strategic Medicines Optimisation
Greater Manchester Joint
Commissioning Team

Greater Manchester Antimicrobial Guidelines

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Revision history

The latest and master version of this document is held by Greater Manchester Health and Care Commissioning Medicines Optimisation team:

REVISION DATE	ACTIONED BY	SUMMARY OF CHANGES	VERSION
26/04/2019	S Woods	Finalised document for submission to website	4.0
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02/05/2019	S Woods	Formatting and removal of abbreviations	4.3
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31/05/2019	S Woods	Final format after FMESG approval, with requested amendment	5.0

Approvals

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NAME	DATE OF ISSUE	VERSION
FMESG	28/05/2019	5.0
GMMMG	01/06/2019	5.0

Acute cough bronchitis	See section. Additional advice given for children under 12 years and with regard to the use of mucolytic, oral or inhaled bronchodilators and corticosteroids. Included a definition of persons at higher risk of complications.	Updated in line with NICE guidance NG 120 (February 2019). This follows the decision by NICE to place doxycycline as the preferred choice, which is unsuitable for children under 12 years. The rest forms part of NICE guidance. Taken from NICE guidance to aid clinicians.
Acute exacerbation of COPD	Re-formatted but includes the same information.	
Acute exacerbation of COPD - PROPHYLAXIS	New section added. Contains no antibiotic recommendation as should come from a specialist.	Intended to guide clinicians and ensure appropriate initial assessments and ongoing reviews have taken place.
Acute exacerbation of Bronchiectasis (non-cystic fibrosis)	New section added. In line with NICE guidance NG117 (December 2018).	Additional guidance to aid clinicians.
Community acquired pneumonia treatment in the community (Adults)	Re-named for adults. Antibiotic choice updated in line with NICE guidance out for consultation February 2019.	CRB65 score is not suitable for children. It was considered unlikely that the antibiotic choices would change after the consultation period and it was appropriate to update at this time. This will be reviewed once the guideline is issued.
Community acquired pneumonia treatment in the community (Children and young people under 18 years)	New section added. Reflects the NICE Pneumonia (community-acquired): antimicrobial prescribing out for consultation February 2019.	The use of CRB65 is inappropriate in children and diagnosis is based on symptoms and clinical judgement.
Suspected meningococcal disease	Removed Cefotaxime.	This is in line with NICE/PHE guidance. It was agreed that cefotaxime was not often carried in emergency cases.
Lower UTI in Non-pregnant Women	Under 'Good Practice Points' removed: Always safety net.	This is detailed in the 'Principles of Treatment'.
Catheter associated UTI	More detailed section added covering lower and upper UTI symptoms and pregnant women.	Follows NICE guidance NG113 (November 2018).
Lower UTI in pregnancy	Under 'Preferred Choice' added: After 34 weeks use alternative	Clarifies choice after 34 weeks.
Recurrent UTI in non-pregnant women having 3 or more UTIs/ per year	Under 'Good Practice Points' added additional advice to give to patients started on prophylaxis. Antibiotic choice updated in line with NICE guidance NG112 (October 2018). Single dose and continuous prophylaxis separated out. Added reference to monitoring for long term use.	Added to remind clinicians of advice to be shared with patients. Expands choice in line with NICE guidance. To reduce the risk of errors. As a reminder top clinicians that there are monitoring requirements.

Acute pyelonephritis in children (Upper UTI)	Updated antibiotic choice. Updated Good Practice Points	Follows NICE guidance NG111 (October 2018).
Bacterial vaginosis	Under Preferred Choice separated 7 day and stat dose for metronidazole.	Reduce risk of misunderstanding.
Gonorrhoea	Emphasised refer to GUM for treatment. Amended antibiotic choice.	Makes it clear to refer for treatment. In line with updated guidance from BASHH (January 2019).
Trichomoniasis	Under Preferred choice separated 7 day and stat dose for metronidazole.	Reduce risk of misunderstanding.
Pelvic inflammatory disease	Good Practice Points and antibiotic choices updated.	In line with updated guidance from BASHH (January 2019).
Bites - Cat or dog	Added 'For children under 12 years of age, who are penicillin allergic, consult microbiology.'	Microbiology input needed so as to assess the most appropriate treatment.

Aims

- to provide a simple, empirical approach to the treatment of common infections
- to promote the safe and effective use of antibiotics
- to minimise the emergence of bacterial resistance in the community

Principles of Treatment

1. This guidance is based on the best available evidence, but use professional judgement and involve patients in decisions.
2. Please ensure you are using the most up to date version. The latest version will be held on the GMMM website.
3. Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
4. When recommending analgesia or treatment with products available from pharmacies please follow the guidance issued by NHS England ([Conditions for which over the counter items should not routinely be prescribed in primary care: Guidance for CCGs \[Gateway approval number: 07851\]](#)). See the guidance for exceptions to recommending self-care.
5. Consider a no, or delayed, antibiotic strategy for acute self-limiting infections e.g. upper respiratory tract infections.
6. When prescribing an antibiotic it should be based on the severity of symptoms, risk of developing complications, previous laboratory tests and any previous antibiotic use.
7. Limit prescribing over the telephone to exceptional cases.
8. A dose and duration of treatment for adults is usually suggested, but may need modification for age, weight and renal function. In severe or recurrent cases consider a larger dose or longer course.
9. Unless treatment choice is listed separately for children, then choices given are considered appropriate for adults and children; bearing in mind any specific age limitations for use listed in the BNF for Children.
10. Lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture and seek advice.
11. Use simple generic antibiotics if possible. Avoid broad spectrum antibiotics (eg co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase risk of *Clostridium difficile*, MRSA and resistant UTIs.
12. Avoid widespread use of topical antibiotics (especially those agents also available as systemic preparations, e.g. fusidic acid).
13. In pregnancy AVOID tetracyclines, aminoglycosides, quinolones and high dose metronidazole.
14. We recommend clarithromycin as the preferred macrolide as it has less side-effects than erythromycin, greater compliance as twice rather than four times daily & generic tablets are similar cost. The syrup formulation of clarithromycin is only slightly more expensive than erythromycin and could also be considered for children.
15. Always advise to seek medical help if symptoms worsen at any time or do not improve within 48 hours of starting an antibiotic or the person becomes systemically unwell.
16. Review antibiotic choice once culture and susceptibility results are available.
17. **Where an empirical therapy has failed or special circumstances exist, microbiological advice can be obtained from your local hospital microbiology department.**
18. This guidance should not be used in isolation; it should be supported with patient information about back-up/delayed antibiotics, infection severity and usual duration, clinical staff education, and audits. Materials are available on the RCGP TARGET website.
19. This guidance is developed alongside the NHS England Antibiotic Quality Premium (QP). In 2017/19 QP expects: at least a 10% reduction in the number of *E. coli* blood stream infections across the whole health economy; at least a 10% reduction in trimethoprim:nitrofurantoin prescribing ratio for UTI in primary care, and at least a 10% reduction in trimethoprim items in patients > 70 years, based on CCG baseline data from 2015/16; and sustained reduction in antimicrobial items per STAR-PU.
20. This guidance should be facilitated by the adoption of Antibiotic Stewards from front line to board level within organisations, in line with [NICE NG15: Antimicrobial stewardship, August 2015](#). This sets out key activities and responsibilities for individuals and organisations in responding to the concern of antimicrobial resistance.
21. Please note MHRA safety alert (issued 21 March 2019): Fluoroquinolone antibiotics: ciprofloxacin, levofloxacin, moxifloxacin, ofloxacin: New restrictions and precautions due to very rare reports of disabling and potentially long-lasting or irreversible side effects. Key details are below and referenced where the relevant antimicrobials are advised in the guideline. Full letter can be viewed at [DDL fluoroquinolones March-2019 final.pdf](#).

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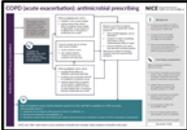
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UPPER RESPIRATORY TRACT INFECTIONS			
Influenza treatment	Annual vaccination is essential for all those at risk of influenza. For otherwise healthy adults antivirals not recommended. Treat 'at risk' patients, when influenza is circulating in the community and ideally within 48 hours of onset (do not wait for lab report) or in a care home where influenza is likely. At risk: pregnant (including up to two weeks post-partum), 65 years or over, chronic respiratory disease (including COPD and asthma) significant cardiovascular disease (not hypertension), immunocompromised, diabetes mellitus, chronic neurological, renal or liver disease, morbid obesity (BMI 40 or greater). See PHE seasonal influenza guidance for current treatment advice and: GMMMG: GP guide - Influenza outbreak in an adult care homes, January 2019		
ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Acute sore throat  NICE Visual Summary	Avoid antibiotics as 90% resolve in 7 days without, and pain only reduced by 16 hours. Advise self-care in line with NHS England guidance.		
	Use FeverPAIN Score (this has replaced CENTOR): <ul style="list-style-type: none"> ▪ Fever in last 24 hours ▪ Purulence ▪ Attend rapidly under 3days ▪ severely Inflamed tonsils ▪ No cough or coryza Score: 0 to 1: 13 to 18% streptococci. Do not offer an antibiotic. 2 to 3: 34 to 40% streptococci. Consider* no antibiotic or a back-up antibiotic prescription. Greater than 4: 62 to 65% streptococci. Consider* an immediate antibiotic or a back-up antibiotic prescription. See NICE NG84 (Sore throat (acute): antimicrobial prescribing).	Phenoxyethylpenicillin 500mg four times a day or 1g twice a day Duration: 10 days Phenoxyethylpenicillin is first choice due to a significantly lower rate of resistance in Group A streptococcus compared with clarithromycin.	Penicillin Allergy: Clarithromycin 500mg twice a day Duration: 5 days
Acute otitis media  NICE Visual Summary	No antibiotics – 80% resolve without antibiotics. Advise self-care in line with NHS England guidance.		
	Recommend appropriate analgesia. 60% are better in 24hrs without antibiotics, which only reduce pain at 2 days and do not prevent deafness. Consider 2 or 3-day delayed or immediate antibiotics for pain relief if: <ul style="list-style-type: none"> ➢ Less than 2 years AND bilateral acute otitis media or ➢ any age with otorrhoea See NICE NG91 (Otitis media (acute): antimicrobial prescribing).	Amoxicillin 500mg to 1g three times a day Duration: 5 days	Penicillin Allergy: Clarithromycin 500mg twice a day Duration: 5 days
Acute otitis externa	Mild infection: No antibiotics. Advise self-care in line with NHS England guidance.		
	First recommend analgesia. Cure rates similar at 7 days for topical acetic acid or antibiotic plus or minus a steroid.	Moderate infection: Acetic acid 2% 1 spray three times a day Duration: 7 days	Moderate infection: Neomycin sulphate with corticosteroid 3 drops three times a day Duration: 7 to 14 days
	If cellulitis or disease extends outside ear canal, or systemic signs of infection.	Severe infection: Flucloxacillin 250mg/ 500mg four times a day Duration: 7 days	

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
<p>Acute Sinusitis</p>  <p>NICE Visual summary</p>	<p>No antibiotics – 80% resolve in 14 days and only 2% are complicated by bacterial infection. Advise self-care in line with NHS England guidance.</p> <p>Symptoms less than 10 days: No antibiotics. Recommend self-care. Paracetamol / ibuprofen for pain / fever. Nasal decongestant may help.</p> <p>Symptoms greater than 10days: Only consider back-up antibiotics if no improvement in symptoms.</p> <p>Consider* high dose nasal steroid if older than 12 years.</p> <p>At any time if the person is:</p> <ul style="list-style-type: none"> ▪ systemically very unwell, ▪ or has symptoms and signs of a more serious illness or condition, ▪ or has high risk of complications <p>Offer* immediate antibiotic or investigate and manage in line with NICE guidance on respiratory tract infections (self-limiting)</p> <p>See NICE NG79 (Sinusitis (acute): antimicrobial prescribing)</p>	<p>Amoxicillin 500mg to 1g three times a day Duration: 5 days</p> <p><i>Mometasone 200microgram nasal spray twice a day for 14 days (off-label use)</i></p> <p>Preferred choice if systemically very unwell, symptoms and signs of a more serious illness or condition, or at high risk of complications:</p> <p>Co-amoxiclav 625mg three times a day Duration: 5 days</p>	<p>Penicillin allergy: Doxycycline (not for under 12 years) 200mg stat then 100mg daily Duration: 5 days</p> <p>For children under 12 years: Clarithromycin Duration 5 days</p>
LOWER RESPIRATORY TRACT INFECTIONS			
<i>Low doses of penicillins are more likely to select out resistance, we recommend at least 500mg of amoxicillin. Do not use quinolone (ciprofloxacin, ofloxacin) first line due to poor pneumococcal activity. Reserve all quinolones for proven resistant organisms.</i>			
<p>Acute cough bronchitis</p>  <p>NICE Visual summary</p>	<p>Only offer* / consider* treatment if: Acute cough and higher risk of complications[§] (at face-to-face examination): consider* immediate or back-up antibiotic. Acute cough and systemically very unwell (at face to face examination): offer* immediate antibiotic.</p> <p>Acute cough with upper respiratory tract infection: no antibiotic. Acute bronchitis: no routine antibiotic. Advise self-care in line with NHS England guidance. Do not offer a mucolytic, an oral or inhaled bronchodilator, or an oral or inhaled corticosteroid unless otherwise indicated.</p>	<p>Doxycycline 200mg stat then 100mg daily Duration: 5 days</p> <p>Preferred choice for children less than 12 years:</p> <p>Amoxicillin Duration 5 days</p>	<p>Amoxicillin 500mg three times a day. Duration: 5 days</p> <p>For children less than 12 years with Penicillin allergy: Clarithromycin Duration 5 days</p>
<p>[§]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.</p>			

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
<p>Acute exacerbation of COPD</p>  <p>NICE Visual summary</p>	<p>Many exacerbations (including some severe exacerbations) are not caused by bacterial infections so will not respond to antibiotics.</p> <p>Sending sputum samples for culture is not recommended in routine practice. Consider* an antibiotic:</p> <ul style="list-style-type: none"> Based on the severity of symptoms, particularly sputum colour changes and increases in volume or thickness from the patient's normal. Previous exacerbations and hospital admission history, and the risk of developing complications Previous sputum culture and susceptibility results where available. The risk of AMR with repeated courses of antibiotics. 	<p>Doxycycline 200mg stat, then 100mg daily</p> <p>or</p> <p>Amoxicillin 500mg three times a day</p> <p>Duration: 5 days.</p>	<p>In severe infection:</p> <p>Doxycycline 200mg stat, then 100mg twice a day</p> <p>or</p> <p>Amoxicillin 1g three times a day</p> <p>Duration 5 days</p>
<p>Acute exacerbation of COPD - PROPHYLAXIS</p>	<p>Refer to a respiratory specialist for a decision to prescribe oral prophylactic antibiotic therapy in patients with COPD.</p> <p>Consider* treatment only for people if they:</p> <ul style="list-style-type: none"> do not smoke and have optimised non-pharmacological management and inhaled therapies, relevant vaccinations and (if appropriate) have been referred for pulmonary rehabilitation and continue to have 1 or more of the following, particularly if they have significant daily sputum production: <ul style="list-style-type: none"> frequent (typically 4 or more per year) exacerbations with sputum production prolonged exacerbations with sputum production exacerbations resulting in hospitalisation. <p>NICE guidance - Chronic obstructive pulmonary disease in over 16s: diagnosis and management (NG115)</p>	<p>Duration: Review treatment after the first 3 months and then at least every 6 months. Only continue treatment if continued benefits outweigh the risks.</p> <p>Before starting prophylactic antibiotics, ensure that the person has had:</p> <ul style="list-style-type: none"> sputum culture and sensitivity (including tuberculosis culture), to identify other possible causes of persistent or recurrent infection that may need specific treatment training in airway clearance techniques to optimise sputum clearance a CT scan of the thorax to rule out bronchiectasis and other lung pathologies. <p>Also carry out the following:</p> <ul style="list-style-type: none"> an electrocardiogram (ECG) to rule out prolonged QT interval and baseline liver function tests. <p>For people who are still at risk of exacerbations, provide an antibiotic from a different class. to keep at home as part of their 'rescue pack'</p> <p>Be aware that it is not necessary to stop prophylactic treatment during an acute exacerbation of COPD.</p> <p>Monitoring for long-term therapy: See BNF</p>	
<p>Acute exacerbation of Bronchiectasis (non-cystic fibrosis)</p>	<p>An acute exacerbation of bronchiectasis is sustained worsening of symptoms from a person's stable state.</p> <p>Send a sputum sample for culture and susceptibility testing. When results available, review choice of antibiotic.</p> <p>Offer* an antibiotic</p> <p>When choosing antibiotics, take account of:</p> <ul style="list-style-type: none"> the severity of symptoms previous exacerbations, hospitalisations and risk of complications previous sputum culture and susceptibility results 	<p>Amoxicillin 500mg three times a day</p> <p>Duration#: 7 to 14 days</p>	<p>Doxycycline 200mg stat, then 100mg daily</p> <p>OR</p> <p>Clarithromycin 500mg twice a day</p> <p>Duration#: 7 to 14 days</p> <p>#Course length based on an assessment of the person's severity of bronchiectasis, exacerbation history, severity of exacerbation symptoms, previous culture and susceptibility results, and response to treatment.</p> <p>Where a person is receiving antibiotic prophylaxis, treatment should be with an antibiotic from a different class.</p> <p>Prophylaxis should only be offered on specialist advice.</p>

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Community acquired pneumonia treatment in the community (Adults)	<p>Use clinical judgement and CRB65 score to guide mortality risk, place of care & antibiotics.</p> <p>Each CRB65 parameter scores 1:</p> <p>Confusion – abbreviated Mental Test score less than 8;</p> <p>Respiratory rate – 30 breaths per minute or more;</p> <p>Blood pressure – diastolic 60 mmHg or less, or systolic less than 90 mmHg;</p> <p>Age – 65 years or greater.</p> <p>Score 0 low risk: consider home based care;</p> <p>Score 1 to 2 intermediate risk: consider hospital assessment;</p> <p>Score 3 to 4: urgent hospital admission.</p>	<p>IF CRB65 = 0</p> <p>Amoxicillin 500mg three times a day</p> <p>Duration: 5 days</p> <p>If CRB65 = 1 or 2 & at home:</p> <p>Amoxicillin 500mg three times a day AND (if atypical pneumonia suspected) Clarithromycin 500mg twice a day</p> <p>Duration: 5 days</p>	<p>IF CRB65 = 0</p> <p>Clarithromycin 500mg twice a day</p> <p>Duration: 5 days</p> <p>OR</p> <p>Doxycycline 200mg stat then 100mg daily</p> <p>Duration: 5 days</p> <p>If CRB65 = 1 or 2 & at home:</p> <p>Clarithromycin 500mg twice a day</p> <p>Duration: 5 days</p> <p>OR</p> <p>Azithromycin 500mg daily.</p> <p>Duration: 3 days</p>
Community acquired pneumonia treatment in the community (Children and young people under 18 years)	Children under 3 months - Refer to paediatric specialist for treatment.		
	<p>Offer* an antibiotic(s) within 4 hours of establishing a diagnosis.</p> <p>Give advice about:</p> <ul style="list-style-type: none"> ▪ possible adverse effects of antibiotics ▪ seeking medical help if symptoms worsen rapidly or significantly, or do not improve within 3 days, or the person becomes 	<p>Children aged 3 months and over - if non-severe symptoms or signs (based on clinical judgement)</p> <p>Amoxicillin</p> <p>Duration: 5 days</p> <p>If severe symptoms or signs (based on clinical judgement); guided by microbiological results when available:</p> <p>Co-amoxiclav <i>PLUS (if atypical pneumonia suspected)</i></p> <p>Clarithromycin</p> <p>Duration: 5 days</p>	<p>Children aged 3 months and over - if non-severe symptoms or signs (based on clinical judgement)</p> <p>Clarithromycin</p> <p>Duration: 5 days</p>
MENINGITIS			
Suspected meningococcal disease	<p>Transfer all patients to hospital immediately.</p> <p>If time before hospital admission and if suspected meningococcal septicaemia or non-blanching rash, give intravenous or intramuscular benzylpenicillin as soon as possible.</p> <p>Do not give antibiotics if there is a definite history of anaphylaxis; rash is not a contraindication.</p>	<p>Benzylpenicillin by intravenous or intramuscular injection</p> <p>Age 10 plus years: 1200mg Children 1 to 9 years: 600mg Children less than 1 years: 300mg</p> <p>Stat doses</p> <p>Give by intramuscular injection if vein cannot be found.</p>	
<p>Prevention of secondary case of meningitis.</p> <p>Only prescribe following advice from Public Health England North West: ☎ 03442250562 option 3 (9 to 5 Mon to Fri)</p> <p>Out of hours contact ☎ 0151 434 4819 and ask for PHE on call.</p>			

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE										
URINARY TRACT INFECTIONS													
<i>As antimicrobial resistance and E. coli bacteraemia is increasing use nitrofurantoin first line. Always give safety net and self-care advice and consider risks for resistance. Give the appropriate TARGET Treat Your Infection UTI leaflet.</i>													
<p>Lower UTI in Non-pregnant Women</p>  <p>NICE Visual summary</p>	<p>Treat women with severe/or 3 or more symptoms.</p> <p>Women mild/or 2 or less symptoms advise self-care in line with NHS England guidance and consider* back up / delayed prescription.</p> <p>People over 65 years: do not treat asymptomatic bacteriuria; it is common but is not associated with increased morbidity. Treat if fever AND dysuria OR 2 or more other symptoms.</p> <p>In treatment failure: always perform culture.</p>	<p>Nitrofurantoin MR (if eGFR 45 ml/minute or greater) 100mg twice a day</p> <p>Duration: 3 days</p> <p>If low risk⁺ of resistance and preferably if susceptibility demonstrated & no risk factors[‡] (below):</p> <p>Trimethoprim 200mg twice a day</p> <p>Duration: 3 days</p>	<p>If preferred choice unsuitable:</p> <p>Pivmecillinam 400mg initial dose then 200mg three times a day</p> <p>Duration: 3 days</p>										
	<p>Symptoms:</p> <p>Increased need to urinate. Pain or discomfort when urinating. Sudden urges to urinate. Feeling unable to empty bladder fully. Pain low down in your tummy. Urine is cloudy, foul-smelling or contains blood. Feeling unwell, achy and tired.</p>	<p>+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 women.</p> <p>‡Risk factors for increased resistance include: care home resident, recurrent UTI, hospitalisation for greater than 7 days in the last 6 months, unresolving urinary symptoms, recent travel to a country with increased resistance, previous known UTI resistant to trimethoprim, cephalosporins or quinolones.</p> <p>If risk of resistance send urine for culture for susceptibility testing & give safety net advice.</p>											
<p>Catheter associated UTI</p>  <p>NICE Visual summary</p>	<p>DO NOT DIPSTICK</p> <p>Do not treat asymptomatic bacteriuria in people with a catheter.</p> <p>Advise paracetamol for pain.</p> <p>Advise drinking enough fluids to avoid dehydration.</p> <p>Advise seeking medical help if symptoms worsen at any time or do not start to improve within 48 hours, or the person becomes systemically very unwell</p> <p>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 if considered appropriate.</p> <p>Send a urine sample for culture and susceptibility testing.</p> <p>When results of urine culture are available:</p> <ul style="list-style-type: none"> review choice of antibiotic <p>change antibiotic according to susceptibility results if bacteria are resistant, using narrow spectrum antibiotics when possible</p>	<p style="text-align: center;">Lower UTI symptoms</p> <p>Nitrofurantoin MR (if eGFR 45 ml/minute or greater) 100mg twice a day</p> <p>Duration: 7 days</p> <p>OR</p> <p>Trimethoprim (if low risk[▼] of resistance) 200mg twice a day</p> <p>Duration: 7 days</p> <p style="text-align: center;">Upper UTI symptoms</p> <table border="1" data-bbox="847 1451 1201 1648"> <tr> <td>Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)</td> <td>Ciprofloxacin 500mg twice a day</td> </tr> <tr> <td>Duration: 7 to 10 days</td> <td>Duration: 7 days</td> </tr> <tr> <td colspan="2">(See MHRA Safety Alert - note 21 page 6)</td> </tr> </table> <p style="text-align: center;">Pregnant women aged 12 years and over</p> <table border="1" data-bbox="847 1697 1201 1895"> <tr> <td>Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)</td> <td>If vomiting, unable to take oral antibiotics or severely unwell refer to hospital.</td> </tr> <tr> <td>Duration: 7 to 10 days</td> <td></td> </tr> </table>	Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)	Ciprofloxacin 500mg twice a day	Duration: 7 to 10 days	Duration: 7 days	(See MHRA Safety Alert - note 21 page 6)		Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)	If vomiting, unable to take oral antibiotics or severely unwell refer to hospital.	Duration: 7 to 10 days		<p>Pivmecillinam 400mg initial dose, then 200mg three times a day</p> <p>Duration: 7 days</p>
Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)	Ciprofloxacin 500mg twice a day												
Duration: 7 to 10 days	Duration: 7 days												
(See MHRA Safety Alert - note 21 page 6)													
Cefalexin 500mg twice or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)	If vomiting, unable to take oral antibiotics or severely unwell refer to hospital.												
Duration: 7 to 10 days													
			<p>▼Low risk of resistance is likely if not used in the past 3 months and previous urine culture suggests susceptibility (but this was not used). Higher risk of resistance is likely with recent use.</p>										

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
<p>Lower UTI in pregnancy</p>  <p>NICE Visual summary</p>	<p>Send MSU for culture and start antibiotics.</p> <p>Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus but avoid at term (from 34 weeks onwards).</p> <p>Treatment of asymptomatic bacteriuria in pregnant women: choose from nitrofurantoin (avoid at term), amoxicillin or cefalexin based on recent culture and susceptibility results.</p>	<p>Up to 34 weeks Nitrofurantoin MR (if eGFR 45 ml/minute or greater) 100mg twice a day</p> <p>Duration: 7 days</p> <p>After 34 weeks use alternative</p>	<p>Amoxicillin (only if culture results available and susceptible) 500mg to 1g three times a day</p> <p>OR</p> <p>Cefalexin 500mg twice a day</p> <p>Duration: All for 7 days</p>
<p>Lower UTI in Men</p>  <p>NICE Visual summary</p>	<p>Consider prostatitis and send pre-treatment MSU</p> <p>Consider STIs.</p>	<p>Trimethoprim 200mg twice a day</p> <p>Duration: 7 days</p> <p>Or</p> <p>Nitrofurantoin MR (if eGFR 45 ml/minute or greater and no prostate involvement) 100mg twice a day</p> <p>Duration: 7 days</p>	<p>Consider alternative diagnoses basing antibiotic choice on recent culture and susceptibility results</p>
<p>Recurrent UTI in non pregnant women having 3 or more UTIs per year</p>  <p>NICE Visual summary</p>	<p>First advise about behavioural and personal hygiene measures, and self-care (with D-mannose or cranberry products) to reduce the risk of UTI.</p> <p>For postmenopausal women, if no improvement, consider vaginal oestrogen (review within 12 months).</p> <p>If no improvement, consider single-dose antibiotic prophylaxis for exposure to a trigger (review within 6 months).</p> <p>If no improvement or no identifiable trigger consider a trial of daily antibiotic prophylaxis (review within 6 months).</p> <p>Advice to be given:</p> <ul style="list-style-type: none"> ▪ how to use (in particular for single dose prophylaxis) ▪ possible adverse effects of antibiotics, particularly diarrhoea and nausea ▪ returning for review within 3 to 6 months ▪ seeking medical help if symptoms of an acute UTI develop 	<p>Choice should be based on culture and susceptibility results.</p> <p><i>Single dose when exposed to a trigger</i> Trimethoprim 200mg (off label)</p> <p>Or</p> <p>Nitrofurantoin MR (if eGFR 45 ml/minute or greater) 100mg (off label)</p> <p><i>Continuous prophylaxis</i> Trimethoprim 100mg at night</p> <p>Or</p> <p>Nitrofurantoin MR (if eGFR 45 ml/minute or greater) 50mg to 100mg at night</p> <p>Duration for all: 3 to 6 months then review</p> <p>Monitoring for long-term therapy: See BNF</p>	<p><i>Single dose when exposed to a trigger</i> Amoxicillin 500 mg (off label)</p> <p>Or</p> <p>Cefalexin 500 mg (off label)</p> <p><i>Continuous prophylaxis</i> Amoxicillin 250mg at night (off label)</p> <p>Or</p> <p>Cefalexin 125mg at night (off label)</p> <p>Duration for all: 3 to 6 months then review</p>
<p>Acute prostatitis</p>  <p>NICE Visual summary</p>	<p>Send MSU for culture and start antibiotics.</p> <p>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).</p>	<p>Ciprofloxacin (See MHRA Safety Alert – note 21 page 6) 500mg twice a day</p> <p>Duration: up to 28 days</p>	<p>If unable to take quinolone: Trimethoprim 200mg twice a day</p> <p>Duration: up to 28 days</p>

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
<p>Acute pyelonephritis in adults (Upper UTI)</p>  <p>NICE Visual summary</p>	<p>Send MSU for culture & susceptibility. Offer an antibiotic.</p> <p>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.</p> <p>If no response within 24 hours, admit for IV antibiotics.</p>	<p>Cefalexin 500mg twice a day or three times a day (up to 1g to 1.5g three times a day or four times a day for severe infections)</p> <p>Duration: 7 to 10 days</p> <p>If known ESBL positive in urine, please discuss with microbiologist.</p> <p>Pregnant women: Consider referral. If cefalexin contraindicated or not tolerated consult microbiologist.</p>	<p>Co-amoxiclav (only if culture results available and susceptible) 500/125mg three times a day</p> <p>Duration: 7 to 10 days</p> <p>Or</p> <p>Trimethoprim (only if culture results available and susceptible) 200mg twice a day</p> <p>Duration: 14 days</p> <p>Or</p> <p>Ciprofloxacin (See MHRA Safety Alert – note 21 page 6) 500mg twice a day</p> <p>Duration: 7 days</p>
<p>Lower UTI in children</p>  <p>NICE Visual summary</p>	Child under 3 mths: refer urgently for assessment.		
	<p>Child ≥ 3 mths: use positive nitrite to guide. Start antibiotics, <u>also</u> send pre-treatment MSU.</p> <p>If recurrent UTI, refer to paediatrics. If antibiotics required in recurrent UTI, seek specialist advice.</p>	<p>3 months and over</p> <p>Nitrofurantoin (if eGFR 45 ml/minute or greater)</p> <p>[Where children can swallow them, 100mg M/R capsules (older than 12yrs) should be used in preference to the liquid formulation. 50mg tablets can be considered for lower doses. Do not crush tablets or open capsules]</p> <p>OR</p> <p>Trimethoprim (if low risk of resistance^Ω)</p> <p>Duration: 3 days</p>	<p>3 months and over</p> <p>Amoxicillin (only if culture results available and susceptible)</p> <p>OR</p> <p>Cefalexin</p> <p>Duration: 3 days</p>
<p>^ΩA lower risk of resistance may be more likely if not used in the past 3 months and previous urine culture suggests susceptibility (but this was not used). A higher risk of resistance may be more likely with recent use.</p>			
<p>Acute pyelonephritis in children under 16 years (Upper UTI)</p>  <p>NICE Visual summary</p>	Refer children under 3 months to paediatric specialist		
	<p>Send a urine sample for culture and susceptibility testing in line with the NICE guideline, Urinary tract infection in under 16s: diagnosis and management (CG54).</p> <p>Offer* an antibiotic.</p> <p>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.</p> <p>If no response within 24 hours, admit for intravenous antibiotics.</p>	<p>Cefalexin</p> <p>Duration: 7 to 10 days</p>	<p>Co-amoxiclav (only if culture results available and susceptible)</p> <p>Duration: 7 to 10 days</p>
		<p>Assess and manage fever in under 5s in line with NICE guidance - Fever in under 5s: assessment and initial management (CG160)</p>	

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
GASTRO INTESTINAL TRACT INFECTIONS			
Oral candidiasis	Oral candidiasis is a minor condition that can be treated without the need for a GP consultation or prescription in the first instance. Advise self-care in line with NHS England guidance.		
	<p>Topical azoles are more effective than topical nystatin.</p> <p>Oral candidiasis rare in immunocompetent adults.</p>	<p>Fluconazole capsules 50mg to 100mg daily</p> <p>Duration: 7 days & further 7 days if persistent</p> <p>Or</p> <p>Miconazole oral gel 2.5ml four times a day after meals</p> <p>Duration: 7 days or until 2 days after symptoms.</p>	<p>If miconazole not tolerated: Nystatin suspension 100,000 units four times a day after meals</p> <p>Duration: 7 days or until 2 days after symptoms</p>
Eradication of Helicobacter pylori	<p>Refer to BNF or GMMMG</p> <p>Do not offer eradication for GORD. (PPI for 4 weeks).</p> <p>Do not use clarithromycin, metronidazole or quinolone if used in past year for any infection.</p> <p>Retest for <i>H. pylori</i> post DU/GU or relapse after second line therapy: using breath or stool test OR consider endoscopy for culture and susceptibility.</p>		
Infectious diarrhoea	<p>Refer previously healthy children with acute painful or bloody diarrhoea to exclude <i>E. coli</i> 0157 infection.</p> <p>Antibiotic therapy usually not indicated unless systemically unwell.</p> <p>If systemically unwell and campylobacter suspected consider Clarithromycin 250 to 500mg twice a day for 7 days, if treated within 3 days of onset.</p>		
Clostridium difficile	<p>Consult microbiology for all cases.</p> <p>Stop unnecessary antibiotics and/or PPIs.</p> <p>If severe symptoms or signs (below) should treat, review progress closely and/or consider hospital referral.</p> <p>Definition of severe: Temperature less than 38.5°C, or WCC greater than 15, or rising creatinine or signs/symptoms of severe colitis.</p>	<p>First episode:</p> <p>Metronidazole 400mg three times a day</p> <p>Duration: 10 to 14 days</p> <p>or</p> <p>Vancomycin 125mg four times a day</p> <p>Duration: 10 to 14 days</p>	<p>If recurrent or severe then seek microbiology advice.</p>
Acute Diverticulitis	<p>Consider watchful waiting if person:</p> <ul style="list-style-type: none"> ▪ Systemically well ▪ No co-morbidities ▪ No suspected infection. <p>Advise analgesia (avoid NSAIDs and opioids), clear liquids with gradual reintroduction of solid food if symptoms improve. Consider checking for raised white cell count and CRP, which may suggest infection.</p> <p>Review in 48 hours or sooner if symptoms worsen.</p> <p>Urgent hospital admission is advised if symptoms persist or deteriorate, despite management.</p> <p>Arrange immediate urgent hospital admission for those with:</p> <p>Rectal bleeding Unmanageable abdominal pain Dehydrated or at risk of dehydration Unable to take or tolerate oral antibiotics (if needed) at home Frail / significant co-morbidities and or / is immunocompromised.</p>	<p>For patients who do not require urgent hospital admission and infection is suspected:</p> <p>Co-amoxiclav 625mg three times a day</p> <p>Duration: 7 days</p> <p>Patients should be reviewed after 72 hours and if there is no improvement, and/or fever and leukocytosis persist, urgent hospital admission is advised.</p>	<p>Ciprofloxacin (See MHRA Safety Alert – note 21 page 6) 500mg twice a day</p> <p>PLUS</p> <p>Metronidazole 400mg three times a day</p> <p>Duration: 7days</p>

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Traveller's diarrhoea	Prophylaxis rarely, if ever indicated. Only consider standby antibiotics for high risk areas for people at high-risk of severe illness.	If standby treatment appropriate give azithromycin 500mg each day for 3 days on a private prescription .	If prophylaxis / treatment consider bismuth subsalicylate (Pepto Bismol) (Private purchase) 2 tablets four times a day for 2 days.
Threadworms	A prescription should not be routinely offered as this condition is appropriate for self-care. All household contacts should be advised to treat at the same time PLUS advise hygiene measures for 2 weeks (hand hygiene, pants at night, morning shower (include perianal area) PLUS wash sleepwear & bed linen, dust and vacuum.	All patients over 6 months: Mebendazole 100mg stat (off-label if less than 2yrs) Pregnant women and children under 6 months: Use hygiene measures alone for 6 weeks and perianal wet wiping or washes 3 hourly during the day.	
GENITAL TRACT INFECTIONS			
STI screening	People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. Risk factors: less than 25 years, no condom use, recent (less than 12months)/frequent change of partner, symptomatic partner, area of high HIV.		
Chlamydia trachomatis/ urethritis	Opportunistically screen all aged 15 to 25 years Treat partners and refer to GUM service Pregnancy or breastfeeding: <ul style="list-style-type: none"> Azithromycin is the most effective option. Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment. Where azithromycin is used to treat a rectal infection a test of cure is recommended between 3 to 6 weeks.	Doxycycline 100mg twice a day Duration: 7 days	Azithromycin 1g stat, then 500mg daily for the following 2 days.
		<i>Pregnant, breastfeeding</i> Azithromycin 1g stat, then 500mg daily for the following 2 days.	
Epididymitis	For suspected epididymitis in men over 35 years with low risk of STI. (High risk, refer to GUM)	Ofloxacin 200mg twice a day (See MHRA Safety Alert – note 21 page 6) Duration : 14 days	Doxycycline 100mg twice a day Duration: 14 days
Vaginal candidiasis	All topical and oral azoles give 75% cure. In pregnancy: avoid oral azoles and use intravaginal treatment for 7 days.	Clotrimazole 500mg pessary or 10% cream stat Pregnant: Clotrimazole 100mg pessary at night Duration: 6 nights	Fluconazole 150mg orally stat Pregnant: Miconazole 2% cream, 5g intravaginally twice a day Duration: 7 days
Bacterial vaginosis	Oral metronidazole is as effective as topical treatment and is cheaper. Less relapse with 7 day than 2g stat. Pregnant/breastfeeding: avoid 2g stat. Treating partners does not reduce relapse.	Metronidazole 400mg twice a day Duration: 7 days Or Metronidazole 2g stat (use 5 x 400mg tablets)	Metronidazole 0.75% vaginal gel 5g applicator at night Duration: 5 nights or Clindamycin 2% cream 5g applicator at night. Duration: 7 nights
Gonorrhoea	Refer to GUM for treatment.		
	Antibiotic resistance is now very high.	Ceftriaxone 1g stat, by intramuscular injection	Ciprofloxacin 500mg stat [ONLY IF KNOWN TO BE SENSITIVE] (See MHRA Safety Alert – note 21 page 6)

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Trichomoniasis	<p>Treat partners and refer to GUM service.</p> <p>In pregnancy or breastfeeding: avoid 2g single dose metronidazole.</p> <p>Consider clotrimazole for symptom relief (not cure) if metronidazole declined.</p>	<p>Metronidazole 400mg twice a day</p> <p>Duration: 7 days</p> <p>or</p> <p>Metronidazole 2g stat (use 5 x 400mg tablets)</p>	<p>Clotrimazole 100mg pessary at night</p> <p>Duration: 6 nights</p>
Pelvic inflammatory disease	Children under 12 years must be referred to a paediatrician.		
	<p>Refer woman and contacts to GUM service for treatment.</p> <p>Raised CRP supports diagnosis, absent pus cells in HVS smear good negative predictive value.</p> <p>Exclude: ectopic pregnancy, appendicitis, endometriosis, UTI, irritable bowel, complicated ovarian cyst, functional pain.</p> <p>Moxifloxacin has greater activity against likely pathogens, but always test for gonorrhoea, chlamydia, and M. genitalium.</p> <p>Ofloxacin and moxifloxacin should be avoided in patients who are at high risk of gonococcal PID.</p>	<p>Ceftriaxone 1g stat by intramuscular injection [This is an essential part of treatment]</p> <p>PLUS</p> <p>Metronidazole 400mg twice a day</p> <p>PLUS</p> <p>Doxycycline 100mg twice a day</p> <p>Duration : 14 days</p>	<p>Metronidazole 400mg twice a day</p> <p>PLUS</p> <p>Ofloxacin 400mg twice a day</p> <p>Or</p> <p>Moxifloxacin 400mg daily (If M. genitalium tests positive use moxifloxacin as an alternative.)</p> <p>(See MHRA Safety Alert – note 21 page 6)</p> <p>Duration : 14 days</p>
SKIN INFECTIONS			
MRSA	<p>For active MRSA infection, refer to microbiology and only treat according to antibiotic susceptibilities confirmed by lab results.</p> <p>If identified as part of pre-op screening, treatment should be provided at that time by secondary care.</p>		
Impetigo	<p>For mild or small area. Keep area clean with warm soapy water and remove crusts.</p>	<p>Fusidic acid cream</p> <p>Apply thinly three times a day</p> <p>Duration: 5 days.</p>	
	<p>For severe, widespread or bullous impetigo use oral antibiotics.</p> <p>Do not prescribe mupirocin (reserved for MRSA).</p>	<p>Flucloxacillin 500mg four times a day</p> <p>Duration: 7 days</p>	<p>Penicillin allergy:</p> <p>Clarithromycin 500mg twice a day</p> <p>Duration: 7 days</p>
Eczema	<p>If no visible signs of infection, do not use antibiotics (alone or with steroids) as this encourages resistance and does not improve healing.</p> <p>If visible signs of infection, treat as for impetigo.</p>		
Cellulitis	<p>Class I: patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone.</p> <p>Refer patients with Class II and III.</p> <p>Class II febrile & ill, or comorbidity, admit for intravenous treatment, or use outpatient parenteral antimicrobial team (if service available).</p> <p>Class III toxic appearance: admit.</p> <p>If river or sea water exposure, discuss with specialist.</p> <p>If concerned that oral treatment may not be sufficient (or first line treatment has failed), discuss alternative oral or intravenous treatments with microbiologist.</p>	<p>Flucloxacillin 500mg four times a day</p> <p>If facial:</p> <p>Co-amoxiclav 625mg three times a day</p> <p>Duration: All 7 days.</p> <p>If slow response continue for a further 7 days.</p>	<p>If penicillin allergic:</p> <p>Clarithromycin 500mg twice a day</p> <p>or</p> <p>Doxycycline 200mg stat then 100mg twice a day</p> <p>If unresolving: Clindamycin 300-450mg four times a day</p> <p>Duration: All 7 days.</p> <p>If slow response continue for a further 7 days.</p>
Leg ulcer	<p>Do not treat unless there are clinical signs of infections.</p> <p>Antibiotics do not improve healing unless active infection.</p> <p>Review antibiotics after results.</p>	If active infection	
		<p>Flucloxacillin 500mg four times a day</p> <p>Duration: 7 days</p> <p>If slow response continue for a further 7 days.</p>	<p>Clarithromycin 500mg twice a day</p> <p>Duration: 7 days.</p> <p>If slow response continue for a further 7 days.</p>

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Mastitis	<p>Most cases of mastitis are not caused by an infection and do not require antibiotics.</p> <p>Advice is to take paracetamol or ibuprofen to reduce pain and fever, drink plenty of fluids, rest and apply a warm compress.</p> <p>Breastfeeding: oral antibiotics are safe and appropriate, where indicated. Women should continue feeding, including from the affected breast and be advised to monitor the child for adverse drug reactions e.g. diarrhoea and thrush.</p>	<p>Flucloxacillin 500mg to 1g four times a day</p> <p>Duration: 7 to 14 days</p>	<p>If penicillin allergic:</p> <p>Clarithromycin* 500mg twice a day</p> <p>Duration: 7 to 14 days</p>
		<p>*Epidemiologic evidence indicates that the risk of hypertrophic pyloric stenosis in infants might be increased by use of maternal macrolides, especially in infants exposed in the first 2 weeks after birth. The risk may be greater with erythromycin, which is why clarithromycin is recommended here.</p>	
Bites - Human	<p>Thorough irrigation is important.</p> <p>Assess risk of tetanus, rabies, HIV, hepatitis B/C.</p> <p>Antibiotic prophylaxis is advised.</p>	<p>Prophylaxis or treatment:</p> <p>Co-amoxiclav 625mg three times a day</p> <p>Duration: 7 days</p>	<p>If penicillin allergic:</p> <p>Metronidazole 400mg three times a day</p> <p>PLUS</p> <p>Clarithromycin 500mg twice a day</p> <p>Duration: 7 days</p> <p>AND review at 24 and 48 hours, as not all pathogens covered</p>
Bites - Cat or dog	For children under 12 years of age, who are penicillin allergic, consult microbiology.		
	<p>Cat: always give prophylaxis.</p> <p>Dog: give prophylaxis if: puncture wound; bite to hand, foot, face, joint, tendon, or ligament; immunocompromised; cirrhotic; asplenic; or presence of prosthetic valve/joint.</p>	<p>Prophylaxis or treatment:</p> <p>Co-amoxiclav 625mg three times a day</p> <p>Duration: 7 days</p>	<p>If penicillin allergic:</p> <p>Metronidazole 400mg three times a day</p> <p>PLUS</p> <p>Doxycycline 100mg twice a day</p> <p>Duration: 7 days</p> <p>AND review at 24 and 48 hours, as not all pathogens covered.</p>
Dermatophyte infection - skin	Athlete's foot and ringworm are not serious fungal infections and are usually easily treated with over the counter treatments. Advise self-care and good hygiene in line with NHS England guidance.		
	<p>Most cases: use terbinafine as fungicidal, so treatment time shorter and more effective than with fungistatic imidazoles or undecanoates.</p> <p>If candida possible, use imidazole.</p> <p>If intractable or scalp: send skin scrapings and if infection confirmed, use oral terbinafine/itraconazole.</p> <p>Scalp: discuss with specialist, oral therapy indicated.</p>	<p>Terbinafine cream 1% twice a day</p> <p>Duration: 1 to 2 weeks plus 2 weeks after healing</p>	<p>Imidazole:</p> <p>Clotrimazole cream 1% or Miconazole cream 2% twice a day</p> <p>or (athlete's foot only): topical undecanoates twice a day (Mycota[®])</p> <p>Duration: 1 to 2 wks plus 2 weeks after healing</p>
Dermatophyte infection - nail	<p>Take nail clippings: start therapy only if infection is confirmed by laboratory.</p> <p>Oral terbinafine is more effective than oral azole.</p> <p>Liver reactions rare with oral antifungals.</p> <p>If candida or non-dermatophyte infection confirmed, use oral itraconazole.</p> <p>For children, seek specialist advice.</p> <p>Do not prescribe amorolfine 5% nail lacquer as very limited evidence of effectiveness.</p>	<p>First line:</p> <p>Terbinafine 250mg daily</p> <p>Duration:</p> <p>Fingers: 6 to 12 weeks</p> <p>Toes: 3 to 6 months</p>	<p>Second line:</p> <p>Itraconazole 200mg twice a day</p> <p>Duration: 7 days per month</p> <p>Fingers: 2 courses</p> <p>Toes: 3 courses</p>

ILLNESS	GOOD PRACTICE POINTS	PREFERRED CHOICE	ALTERNATIVE
Varicella zoster/chicken pox	Most patients do not require treatment		
	Pregnant/immunocompromised/neonate: seek urgent specialist advice If onset of rash less than 24hrs & older than 14 years or severe pain or dense/oral rash or secondary household case or steroids or smoker consider aciclovir.	If indicated: Aciclovir 800mg 5 times a day Duration: 7 days	
Herpes zoster/shingles	Treat if older than 50 years and within 72 hours of rash (PHN rare if less than 50 years); or if active ophthalmic or Ramsey Hunt or eczema.	If indicated: Aciclovir 800mg five times a day Duration: 7 days	Second line for shingles only if compliance a problem (as high cost): Valaciclovir 1g three times a day Duration: 7 days
Cold sores	Cold sores resolve after 7 to 10 days without treatment. Topical antivirals applied prodromally reduce duration by 12 to 24hours. For infrequent cold sores of the lip advise self-care in line with NHS England guidance.		
Acne & Rosacea	GMMMG guidance Topical antibiotics and oral antibiotics should not be combined together, as this combination is unlikely to confer additional benefit and may encourage the development of bacterial resistance. For acne, recommend non-antibiotic topical bactericidal products (e.g. benzyl peroxide first line for up to 2 months. Patients should be encouraged to manage mild acne in line with NHS England self-care guidance.		
PARASITES			
Scabies	Treat whole body from ear/chin downwards and under nails. If under 2 or elderly, also face/scalp. Treat all home and sexual contacts within 24 hours.	Permethrin 5% cream Duration: 2 applications 1 week apart	If allergy: Malathion 0.5% liquid Duration: 2 applications 1 week apart
Head lice	Chemical treatment is only recommended in exceptional circumstances and self-care should be advised in line with NHS England guidance.		
	Head lice can be removed by combing wet hair meticulously with a plastic detection comb.	Dimeticone 4% lotion Duration: 2 applications 1 week apart	Malathion 0.5% liquid Duration: 2 applications 1 week apart
EYE INFECTIONS			
Conjunctivitis	No antibiotics – most are viral or self-limiting. Advise self-care in line with NHS England guidance.		
	Only treat if severe. Bacterial conjunctivitis is usually unilateral and also self-limiting. 65% resolve by day five. Fusidic acid has less Gram-negative activity.	If severe: Chloramphenicol eye drops 0.5% One drop every 2 hours for 2 days then reduce to 4 hourly and / or eye ointment 1% Apply at night if used with drops or 3 -4 times a day if used alone. Duration: for 48 hours after healing.	Second line: Fusidic acid 1% gel twice a day Duration: for 48 hours after healing.

Adapted from NICE / PHE – Summary of antimicrobial prescribing guidance - managing common infections: February 2019

To discuss treatment options or any concerns, please discuss with local microbiologist.

For training resources and patient information leaflets please see [RCGP Target antibiotics toolkit](#).