

Antimicrobial Guidelines for Primary and Community Care Organisations

For use in:
Calderdale
Greater Huddersfield
North Kirklees
Wakefield

Approved by South West Yorkshire Area Prescribing Committee: September 2013

Review date: September 2015

Aims

- To provide a simple approach to the treatment of common infections.
- To promote the safe, effective and economic use of antimicrobials.
- To minimise the emergence of bacterial resistance in the community.
- To recommend antimicrobials with consideration to local susceptibility.

Microbiological advice can be obtained from the duty Microbiologist via switchboard at the Calderdale and Huddersfield NHS Foundation Trust

Calderdale Royal Hospital: 01422 357171 or Huddersfield Royal Infirmary: 01484 342000

Mid Yorkshire Hospitals NHS Trust

0844 8118110, Microbiologists via Secretaries Ext 57028, 57029 and 57032
Microbiology Laboratory - ext 57144

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- Mrs Helen Foster, Calderdale CCG representative.

Acute sinusitis	
1 st line	2 nd Line
No Antibiotic	Amoxicillin or doxycycline

7 days

Acute otitis media: uncomplicated	
1 st Line	2 nd Line
No Antibiotic	Amoxicillin or clarithromycin

5 days

Sore throat, pharyngitis, tonsillitis	
1 st line	2 nd Line
No Antibiotic	Phenoxymethylpenicillin or clarithromycin

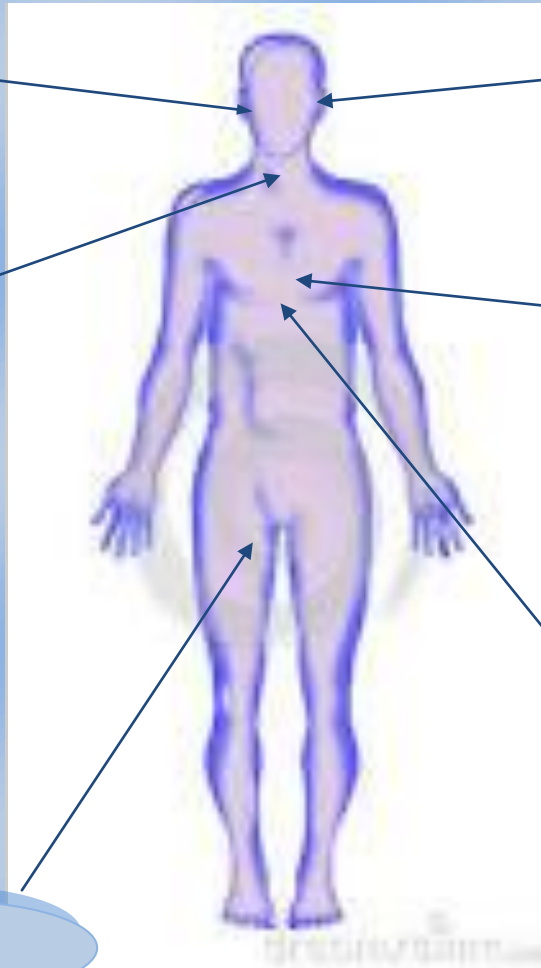
10 days

Antibiotic recommended if one or more of the following:

- History of rheumatic fever
- Scarlet fever
- Pronounced systemic infection
- Immunosuppressed

Cystitis: women, uncomplicated, not pregnant	
1 st Line	2 nd Line
Trimethoprim or nitrofurantoin	Depends on sensitivity of organism isolated

3 days*



Community acquired pneumonia	
1 st Line	
Amoxicillin or clarithromycin	

7 days

* Clarithromycin should be added if no response to amoxicillin (Use as first choice if atypical organism suspected).

Acute exacerbation of COPD	
1 st Line	2 nd Line
Amoxicillin or clarithromycin or doxycycline	Try an alternative first line agent

5-10 days

* Standing Medical Advisory Committee recommended 3-day course. Longer courses of 5-7 days may be needed to prevent relapse.

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Advice on dosage

Unless otherwise stated the doses recommended are for adult patients. Where a range is given, the higher dose should only be prescribed for severe infections.

The dose may also need to be varied according to age, weight and renal function. Further advice is given in the British National Formulary (BNF), or can be obtained from an Antibiotic Pharmacist.

Pregnancy: refer to the BNF and UK Teratology Information Service (reference www.uktis.org; tel 0844 8920909).

Presentation by Medicines Information Centre, Calderdale and Huddersfield NHS Trust

Principles of Treatment

1. General information

- a. Always consult the latest BNF or summary of product characteristics for full prescribing details.
- b. This guidance is based on the best available evidence, but its application must be modified by professional judgement.
- c. Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
- d. Don't forget the potential usefulness of delayed prescriptions for certain conditions, e.g. otitis media, acute sinusitis, acute infective conjunctivitis and acute bronchitis.
- e. Limit prescribing over the telephone to exceptional cases.
- f. Do not prescribe an antibiotic for viral sore throat or simple coughs and colds.
- g. High levels of prescribing quinolones can increase the incidence of *meticillin resistant Staphylococcus aureus* (MRSA).

- h. High antibiotic prescribing can select for resistant bacteria, e.g. MRSA and extended spectrum β -lactamase producing bacteria (ESBLs).
- i. Quinolones and second and third generation cephalosporins are associated with a higher risk of *Clostridium difficile* Infection (CDI), especially in the elderly.

2. Where appropriate send samples for microbiological testing.

3. Drug interactions

Remember potential drug interactions between antibiotics and long-term medication, e.g. theophylline, warfarin, and statins with erythromycin, etc. Further information can be found in the BNF Appendix 1.

4. Which antibiotics to prescribe

- a. Use simple generic antibiotics first whenever possible.

- b. The use of quinolones and cephalosporins is not recommended due to their association with healthcare associated infections.
- c. Avoid widespread use of topical antibiotics (especially those agents also available systemically e.g. fusidic acid).
- d. Clarithromycin is now an acceptable alternative to erythromycin in most places due to similar cost and less GI side effects. Pregnancy is one notable exception to this.

5. Children

In children avoid the use of quinolones and tetracyclines.

6. Pregnancy and Lactation

- a. In pregnancy avoid tetracyclines, aminoglycosides, quinolones, *high dose* metronidazole.
- b. Tetracyclines and quinolones should be avoided in breast-feeding.

7. Optimal Dosing

Optimal dosing of antibiotic is encouraged to hasten bacteriological (and clinical) cure, reduce relapses and shorten length of treatment. Inappropriate treatment, e.g. long term or low dose is associated with selection of resistance leading to treatment failure.

8. Course Lengths

Keep course lengths as short as possible, e.g. 3 days for simple UTIs in women under 65 years of age.

Healthcare Associated Infections – MRSA and *Clostridium Difficile*

Antibiotic prescriptions in patients with a history of MRSA

Patients with a history of MRSA (infection or colonisation) may not respond to the usual empirical antibiotics treatment (e.g. amoxicillin, flucloxacillin). You may wish to consider previous results and sensitivities to support prescribing decisions and take clinical samples to confirm the causative organism and sensitivities. If your patient is not responding to treatment as expected, consult microbiology for antibiotic advice.

Cephalosporins and quinolones

The risks of *C.difficile* infection (CDI) increases with age > 65 years and the use of broad spectrum antibiotics. Whilst it is of greatest importance to limit the prescription of all antibiotics, some antibiotics are associated with a higher risk of CDI than others; these are 2nd and 3rd generation cephalosporins (e.g. cefaclor, cefuroxime, cefixime and cefpodoxime), fluoroquinolones (e.g. ciprofloxacin, levofloxacin, moxifloxacin, ofloxacin, norfloxacin) and clindamycin. These antibiotics should be restricted, especially in the elderly and patients with a history of CDI unless prescribed according to antibiotic guidelines or following microbiology advice. Refer to CDI infections under GI Tract Page 15.

Proton pump inhibitors and CDI

There is increasing evidence that acid-suppressing medications, in particular proton pump inhibitors (PPIs) may be a risk factor for CDI. Consideration should be given to stopping/reviewing the need for PPIs in patients with or at high risk of CDI (Updated guidance on the management and treatment of *Clostridium difficile* infection. Public Health England (PHE), May 2013).

Outpatient parenteral antimicrobial therapy

Outpatient parenteral antimicrobial therapy (OPAT) is a method for delivering intravenous antimicrobials in the community or outpatient setting as an alternative to inpatient care. It is useful for patients who require parenteral therapy for moderate to severe infections but are otherwise well enough to be at home. The benefits of OPAT include admission avoidance and reduced length of stay in hospital. This means there is an increase in inpatient capacity, significant cost savings compared with inpatient care, reduction in the risk of healthcare-associated infection and improved patient choice.

At Calderdale and Huddersfield NHS Foundation Trust, OPAT pathways for cellulitis, bronchiectasis, diabetic foot infections, multi-drug resistant tuberculosis and urinary tract infections due to multi-resistant organisms have been approved at the time of revising this guideline. The Trust's OPAT group is currently looking at expanding the provision of OPAT to other infective conditions like bone and joint infections and endocarditis. For further information please follow the OPAT icon on the CHFT intranet homepage under the "Quick links: Clinical tools" section.

Antimicrobial Allergy e.g. Penicillin

1. Obtain an accurate allergy status from the patient.
2. Ensure that all patients' allergies and adverse side effects are documented fully.
3. Always check the allergy status of the patient before prescribing, dispensing or administering a medicine.
4. Be alert to the fact that the name of a medicine itself may not indicate 100% of the time that the medicine is a penicillin or related to a penicillin.

Patients with a history of anaphylaxis, urticaria or rash immediately after penicillin administration are at risk of immediate hypersensitivity to a penicillin; these individuals should not normally receive a penicillin, a cephalosporin, carbapenem (e.g. imipenem/meropenem), or another β -lactam antibiotic.

Signs and symptoms of immediate hypersensitivity include, dyspnoea, swelling, rash, urticaria.

Individuals with a history of a minor rash (i.e. non-confluent restricted to a small area of the body), or a rash that occurs more than 72 hours after penicillin administration have a mild allergy and can be prescribed other β lactam antibiotics like cephalosporins.

Drug intolerance (e.g. gastrointestinal symptoms, feeling faint) is not an indication to avoid β -lactam antibiotics.

Antibiotic Prophylaxis

Dental Prophylaxis

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Dental prophylaxis for infective endocarditis under local or no anaesthesia.	No prophylaxis is required prior to dental treatment. See NICE Clinical Guideline 64 (www.nice.org.uk) or the British National Formulary (www.bnf.org).			

Prevention of a secondary case of invasive meningococcal, *haemophilus influenzae* or Group A streptococcal disease

Refer to the local PHE unit (tel no 0113 3860300)

Guidelines on the Management of Patients with an Absent or Dysfunctional Spleen

Actions			
1	Flag medical records		
2	Patient to wear bracelet/necklet stating risk of infection		
3	Immunise according to schedule below		
Suggested schedule for immunisation in individuals with splenic dysfunction/splenectomy . N.B. Specialist advice should be sought from the Consultant Haematologist/Oncologist concerning patients undergoing immunosuppressive therapy.			
	Age at which asplenia or splenic dysfunction or immunosuppression is acquired	Vaccination schedule Elective splenectomy: where possible, the vaccination course should ideally be started at least 4-6 weeks prior to surgery, but if necessary may be given up to 2 weeks before. Emergency splenectomy: the vaccination course should ideally be given 2 weeks after surgery; however, immunisation should not be delayed if this is likely to result in a failure to vaccinate. Patients commencing immunosuppressive treatment: where possible the vaccination course should ideally be started at least 4-6 weeks prior to the commencement of chemotherapy or radiotherapy, but if necessary may be given up to 2 weeks before. If this is not possible vaccination should be delayed until at least 3 months post therapy to maximise vaccine response. Immunisation should not be delayed if this is likely to result in a failure to vaccinate.	
		Month 0	Month 2
			Month 4
	Under two years	Routine immunisation schedule should be followed + PPV x 1 after 2 nd birthday	

Guidelines on the Management of Patients with an Absent or Dysfunctional Spleen

	Over two and under five years (fully vaccinated including booster)	Booster dose of Hib/Men-C vaccine. Booster dose of PCV	Single dose of PPV	None
	Over two and under five years (unvaccinated or partially vaccinated)	First dose of Hib/Men-C vaccine. First dose of PCV	Second dose of Hib/Men-C vaccine. Second dose of PCV	Single dose of PPV
	Five years and older (and previously vaccinated with Hib, Men-C, PCV vaccines)	Booster dose of Hib/Men-C vaccine. Single dose of PPV		
	Five years and older (unvaccinated)	First dose of Hib/Men-C vaccine. Single dose of PPV	Second dose of Hib/Men-C vaccine	
PCV = pneumococcal conjugate vaccine, "Prevenar". PPV = pneumococcal polysaccharide vaccine, "Pneumovax II"				
Note: re-immunisation with PPV is recommended every five years. MenC vaccine is given together with Hib vaccine as the combined vaccine "Menitorix". Influenza vaccine should also be given annually.				
4	Prescribe prophylactic antibiotics for at least the first two years post splenectomy (period of highest risk) and also to children until they are at least 16.			
	Age	Drug	Dose	
	Adult	Phenoxymethylpenicillin	500mg BD	
	Child 6-12	Phenoxymethylpenicillin	250mg BD	
	Child < 6	Phenoxymethylpenicillin	125 mg BD	
	If penicillin allergic:			
	Adult and child > 8	Erythromycin	250-500mg daily	
	Child 2-8	Erythromycin	250mg daily	

Guidelines on the Management of Patients with an Absent or Dysfunctional Spleen

	Child <2	Erythromycin	125mg daily
When prophylaxis ends, give small supply of antibiotics for use while seeking urgent medical attention in febrile illness.			
Note: immunosuppressed patients (e.g. haematology patients, patients on chemotherapy) may need prophylaxis for longer – consultant responsible for care to decide.			
5	Instruct patient to seek medical attention immediately if he/she feels unwell (even if taking antibiotic prophylaxis).		
6	Warn of risks of foreign travel:		
	Malaria precautions	Prophylactic antibiotics, repellents etc.	
	Group A, C, W135, Y meningococcal vaccination for:	Sub-Saharan Africa, India, Nepal, pilgrims to Saudi Arabia for Hajj or Umrah (boost five-yearly in on-going risk).	
7	Warn of danger of animal bites: seek medical attention.		
8	Refer to DOH (www.dh.gov.uk) for “I have no functioning spleen” card and further information.		

Prophylaxis for Urinary Catheterisation

Refer to NICE CG 139 (March 2012)

When changing catheters in patients with a long-term indwelling urinary catheter, do not offer antibiotic prophylaxis routinely. Consider antibiotic prophylaxis for patients who:

- Have a history of symptomatic urinary tract infection after catheter change, or;
- Experience trauma during catheterisation.

The antibiotic of choice would depend on previous cultures / sensitivity results.

Eye Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Conjunctivitis	<p>Viral infections are common.</p> <p>Conjunctivitis is usually a self-limiting condition. Most people experience remission after 2-5 days - consider offering a delayed prescription.</p> <p>Exclude serious causes of red eye.</p> <p>In newborn, consider the possibility of <i>chlamydia</i> and <i>neisseria gonorrhoea</i>.</p> <p>Exclusion of single cases from school/nursery is not generally necessary. It may be necessary if an outbreak occurs (http://www.hpa.org.uk/).</p>	Chloramphenicol 0.5% drops and 1% ointment at night	2 hourly reducing to QDS	All for 48 hours after resolution

Gastro-Intestinal Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</p>				
<p>Note: helicobacter test and treatment strategies benefit patients with ulcer disease and 8% of patients with functional dyspepsia. They reduce future risk of ulcer disease and gastric cancer, and reduce the need for long term PPIs.</p>				
<p>Eradication of <i>Helicobacter pylori</i></p> <p>Refer to NICE Clinical Guideline No 17: Dyspepsia – Management of dyspepsia in adults in primary care. August 2004 amended June 2005</p>	<ol style="list-style-type: none"> 1. Confirm presence of <i>H. pylori</i> before starting eradication therapy. 2. There is normally no need to continue proton pump inhibitors or H₂-receptor antagonists unless the ulcer is complicated by haemorrhage or perforation. 3. There is insufficient evidence to support eradication therapy in patients who continue to take NSAIDs. 	<p>High dose generic PPI (Omeprazole or Lansoprazole) and Clarithromycin and Amoxicillin</p> <p>If penicillin allergic use high dose generic PPI (Omeprazole or Lansoprazole) and Clarithromycin and Metronidazole</p>	<p>(20mg BD or 30mg BD) and 500mg BD and 1g BD</p> <p>(20mg BD or 30 mg BD) and 250mg BD and 400mg BD</p>	<p>7 days treatment only</p> <p>7 days treatment only</p>

Gastro-Intestinal Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
	If eradication has failed with this treatment. 1. Check that the original treatment indications were valid. 2. Check that failure of eradication has been confirmed with C ¹³ urea breath test or stool antigen 3. Check that patient is strongly motivated (treatment failure is often due to poor compliance). 4. If treatment failure has occurred despite the above – seek further advice from Gastroenterologists.			
Gastroenteritis	Most infections are self-limiting. Fluid replacement essential. Antibiotic therapy is not usually indicated as it only reduces diarrhoea by 1-2 days, can cause resistance, and may be associated with side effects. Initiate treatment if the patient is systemically unwell following advice from the microbiologist. Notification and advice on exclusion from environmental health (Calderdale – (01422) 392329; Kirklees – (01484) 226456; Wakefield (0845) 8506506). General advice is to exclude from work / school, etc, until 48 hours after cessation of symptoms where the patient may be in a position to pass on infection. For more difficult cases contact PHE (0113) 3960300, to speak to the duty professional.			
Giardiasis	A parasitic disease caused by the protozoan <i>Giardia lamblia</i> . The giardia organism inhabits the digestive tract of a wide variety of domestic and wild animal species, as well as humans. It is a common cause of gastroenteritis in humans.	Metronidazole (Pregnancy – refer to guidance Page 5; consider e.g. 400mg TDS for 5 days)	Adults: 2g OD Children: < 1 yr – upto 40mg/kg/day 1-3 yrs - 500mg OD 3-7 yr - 600-800mg OD 7-10 yr - 1g OD	3 days

Gastro-Intestinal Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Cryptosporidium	This coccoidal protozoa causes diarrhoea in animals and man. Infection is common in children and young adults.	No effective specific treatment. Symptomatic treatment only. Symptoms may last for 1-3 weeks in healthy individuals, and resolves slowly and spontaneously.		
Clostridium difficile	<p><i>Clostridium difficile</i> is implicated in 20% -30% of patients with antibiotic-associated diarrhoea, in 50% to 75% of those with antibiotic-associated colitis and in >90% of those with antibiotic-associated pseudomembranous colitis.</p> <p>Risk factors for <i>C.difficile</i> infection (CDI) include treatment with antibiotics (commonly broad-spectrum penicillins, cephalosporins, clindamycin), advanced age, hospitalisation, exposure to other cases of CDI, proton pump inhibitors (PPIs) & recent chemotherapy.</p> <p>Clinical diagnosis</p> <p>Diarrhoea in patients (profuse +/- blood), particularly those a) who are currently on or have been on antibiotics in the past 2 months;.b) With a h/o previous CDI; c) With recent hospitalisation; d) With a history or exacerbation of inflammatory bowel disease. Stools should be sent for <i>C.difficile</i> toxin (CDT). See investigations</p> <p>Infection control measures (if patient in nursing or residential home etc.)</p> <ul style="list-style-type: none"> - Isolate the patient and start contact isolation precautions as per the infection control manual. - Maximise hand hygiene after contact with cases; hand wash using soap and water only. Alcohol gel alone is not adequate for the inactivation of <i>C.difficile</i> spores. 			

Gastro-Intestinal Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
	Investigations FBC, serum creatinine, stool for <i>C. Difficile</i> toxin	Stop/review antibiotics (switch to narrow spectrum antibiotics) if possible. Consider other causes of diarrhoea e.g. antacids, tube feeds. Do not prescribe antimotility agents during acute infection, discontinue laxatives, and consider stopping or reviewing the dose of proton pump inhibitors.		
	Definition of severe <i>C.difficile</i>. Any patient with CDI and fever, WCC >15, abdominal pain/tenderness, acute rise in serum creatinine (more than 50% of baseline) may have severe disease, and the case should be discussed with microbiology.	Mild disease - (< 4 stools/day, patient not unwell). Supportive therapy initially. Treat as below if toxin positive and diarrhoea persists or if result of toxin test is pending and there is clinical suspicion of CDI.		
		Moderate disease - (>4 stools/day, pt well) Metronidazole	400mg TDS	10 – 14 days
		Severe disease Discuss treatment options with microbiologist.		

Gastro-Intestinal Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
	<p>Recurrence of symptoms following initial improvement after a 10-14 day course is likely to be due to re-infection by another <i>C.difficile</i> strain, further antibacterial treatment or relapse due to germination of residual <i>C.difficile</i> spores within the colon. Send repeat investigations as above and treat.</p>	<p>Recurrence of symptoms: Metronidazole</p> <p>If > 1 recurrence or severe disease, contact Microbiology</p>	400mg TDS	10-14 days
	<p>Review - If no improvement within 3 days or clinical deterioration, contact Microbiology. Note: clearance stools are not required for <i>C.difficile</i> infection. Repeat stool specimens for <i>C.difficile</i> toxin on previous positive patients should only be sent if;</p> <ul style="list-style-type: none"> - Symptoms persist despite treatment when a further test may be undertaken after 4 weeks. - Symptoms resolve and then recur, which may be due to re-infection or relapse. 			
Salmonella	Most cases are mild and self-limiting. Seek advice from Microbiological if treatment considered.			

Parasitic Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Threadworm	Treat household contacts. Note: pripsen oral powder (piperazine phosphate and sennosides) has been discontinued and is therefore no longer a treatment option.	Mebendazole (for all over 6 months of age; see Children's BNF) – Note: mebendazole is unlicensed in under 2 years of age)	100mg	If reinfection occurs, second dose may be needed after 2 weeks

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Note: certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details				
Vaginal candidiasis	All topical and oral azoles give 75% cure	Oral fluconazole Clotrimazole	150 mg orally 500 mg pessary or 10% cream	stat stat
	In pregnancy: avoid oral azoles and use intravaginal treatment	Clotrimazole or miconazole 2% cream	100mg pessary at night 5 g cream intravaginally BD	6 nights 7 days
Bacterial vaginosis	A 7 day course of oral metronidazole is slightly more effective than 2g stat. Avoid 2g stat dose in pregnancy/breast feeding.	Oral metronidazole, or if unable to tolerate oral treatment, or if woman prefers topical therapy:	400mg BD or 2g (if compliance is an issue)	7 days stat
		Metronidazole 0.75% vaginal gel	5g applicatorful at night	5 nights
		or Clindamycin 2% cream	5g applicatorful at night	7 nights

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p><i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i></p>				
<p><i>Note: certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details</i></p>				
<p>Chlamydia trachomatis</p>	<p>Opportunistically screen all patients aged 15-25 yrs. Treat patient and/or refer to Sexual Health Service for partner notification and follow up.</p>	<p>First line: Azithromycin</p> <p>Second line: Doxycycline</p> <p>Seek advice from Sexual Health Service if pregnant or breast feeding.</p>	<p>1g stat</p> <p>100mg BD</p>	<p>7 days</p>

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
<i>Note: certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details</i>				
Trichomoniasis	<p>Partners should be treated simultaneously. Refer patients to Sexual Health Service.</p> <p>In pregnancy or breastfeeding: avoid 2g single dose. Consider clotrimazole for symptom relief (not cure) if metronidazole declined and treat post-natally.</p>	<p>Metronidazole</p> <p>or</p> <p>Clotrimazole pessary</p>	<p>400mg BD or 2g</p> <p>100mg OD</p>	<p>7 days stat</p> <p>6 nights</p>

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</p>				
<p>Note: certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details</p>				
<p>Pelvic Inflammatory Disease (PID)</p>	<ul style="list-style-type: none"> • Ideally refer all suspected PID to Sexual Health Service. • PID is almost always a sexually transmitted disease and the commonest organisms are <i>C.trachomatis</i> and <i>N gonorrhoea</i>. • Tubal infertility, ectopic pregnancy, and chronic pelvic pain are the main complications of PID. • A diagnosis of pelvic inflammatory disease (PID) should be made on clinical grounds. • Take endocervical swabs for gonorrhoea and chlamydia and a high vaginal swab (note: negative swab results do not rule out a diagnosis of PID). <p>A referral to the hospital should be considered in the following situations:</p> <ul style="list-style-type: none"> • A surgical emergency cannot be excluded. • Lack of response to oral therapy. • Clinically severe disease. • Presence of a tubo-ovarian abscess. • Intolerance to oral therapy.. • Pregnancy. <p>Start empirical antibiotics as soon as a presumptive diagnosis of PID is made clinically.</p> <p>Note: refer all patients with/without proven STIs (including trichomoniasis) to Sexual Health Service for partner notification and follow up.</p>			

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
<i>Note: Certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details</i>				
	If the risk of gonococcal infection is low:			
		Ofloxacin plus Metronidazole	400mg BD plus 400mg BD	14 days 14 days
	If the risk of gonococcal infection is high: (the woman's partner has gonorrhoea, her symptoms and signs are clinically severe, has had sexual contact whilst abroad) – Refer to Sexual Health Service			
		Ceftriaxone plus Doxycycline plus Metronidazole	500mg as a single intramuscular dose 100mg BD 400mg BD	Stat 14 days 14 days

Genital Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p><i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i></p>				
<p><i>Note: certain vaginal preparations may affect latex condoms and diaphragms - see BNF for details</i></p>				
<p>Epididymo-orchitis</p>	<p>Diagnostic criteria: Ideally refer all men with symptoms suggestive of epididymo-orchitis to Sexual Health Service</p> <ul style="list-style-type: none"> • Severe scrotal pain, usually unilateral +/- inguinal pain. Scrotum of affected side may be erythematous and oedematous and a urethral discharge may be present. Epididymis swollen and tender on palpation. • Take urethral swab for culture and Chlamydia nucleic acid amplification; urine for culture. <p>Aetiology</p> <ul style="list-style-type: none"> • <35 years of age: <i>Neisseria gonorrhoea</i> and <i>Chlamydia trachomatis</i> • >35 years of age: Coliforms and <i>Ps. aeruginosa</i> also <i>Neisseria gonorrhoea</i> and <i>Chlamydia trachomatis</i> Gram -ve enteric organisms are more likely if recent instrumentation or catheterisation has occurred. <p>Notes</p> <ul style="list-style-type: none"> • Mumps orchitis develops in 20-30% of post-pubertal patients with mumps. • Also consider testicular torsion, abscess, hydrocele, spermatocele, hernia, trauma, testicular cancer. <p>Refer to hospital if severely unwell or testicular torsion (especially in adolescents or males under 30yrs). Refer all men with likely sexual exposure for partner notification and follow up to Sexual Health Service.</p>			

	Most probably due to any sexually transmitted pathogen. Refer to Sexual Health Service for treatment.	Ceftriaxone Doxycycline	500 mg IM plus 100 mg bd	Stat 10-14 days
	Most probably due to chlamydia or other non-gonococcal organisms (ie microscopy negative for gram-negative-intracellular diplococci and no risk factors for gonorrhoea identified).	Doxycycline or Ofloxacin	100 mg bd 200mg bd	10-14 days 14 days
	Most probably due to enteric organisms	Ofloxacin or Ciprofloxacin	200 mg bd or 500 mg bd	14 days 10 days

Meningitis

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Suspected meningococcal disease	Transfer all patients to hospital immediately. If time before admission, and non-blanching rash, give IV or IM benzylpenicillin or cefotaxime, unless definite history of hypersensitivity.	IV or IM benzylpenicillin	Age 10+ years: 1200 mg Children 1 - 9 yr: 600 mg Children <1 yr: 300 mg	
		IV or IM cefotaxime	Age 12+ years: 1gram Child < 12 yrs: 50mg/kg	
Prevention of secondary case of meningitis	<p>Prophylaxis for prevention of secondary infection should only be prescribed in line with local policy as recommended by the PHE.</p> <p>This will involve close family contacts, and will usually be managed from the admitting ward.</p> <p>If in doubt seek advice from the Public Health England duty professional (0113) 3860300. Out of hours discuss with Public Health England Specialist on-call (via Yorkshire Ambulance Service and ask for the South and West Public Health England out of hours rota) on 0300 3300260.</p>			

Lower Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Acute exacerbation of COPD	<p>Many cases are viral. Antibiotics are not indicated in absence of purulent/mucopurulent sputum.</p> <p>Treat exacerbations promptly with antibiotics if purulent sputum and increased shortness of breath and/or increased sputum volume</p>	<p>First line: Amoxicillin or Clarithromycin or Doxycycline</p>	<p>500mg TDS 500mg BD 200mg stat then 100mg OD</p>	<p>Antibiotics should be given until clinical improvement - review after 5-7 days</p>

		<p>If there is no clinical benefit after the first antibiotic consider using an alternative first line option and send sputum for culture and sensitivity reports.</p> <p>If patient fails to respond - discuss the case with a Microbiologist.</p>	
Acute bronchitis	<p>Systematic reviews indicate benefits of antibiotics are marginal in otherwise healthy adults. Consider using the option of a delayed</p>	<p>First line: No antibiotics needed in otherwise healthy adults with no underlying lung disease. Consider use in the elderly, co- morbidity (e.g. heart failure, diabetes) or deteriorating clinically.</p>	

Lower Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</p>				
	<p>Prescription.</p>	<p>Second line: Amoxicillin or Doxycycline</p>	<p>500mg TDS 200mg stat then 100mg OD</p>	<p>5-7 days</p>
<p>Community - acquired pneumonia (CAP) Severity assessment chart (BTS guidelines)</p>	<ol style="list-style-type: none"> 1. Assess the severity and continue to review patients (see below). 2. Microbiological investigations not recommended routinely for those managed in the community - consider if no response to empirical therapy after 48 hours. 3. Examination for <i>Mycobacterium tuberculosis</i> should be considered for patients with a persistent productive cough, especially if malaise, weight loss, or night sweats, or if other risk factors exist. 4. Serological investigations should be considered during outbreaks (e.g. <i>legionella</i>, <i>mycoplasma</i> and <i>pertussis</i>). 5. Amoxicillin 250mg TDS is insufficient to treat, prescribe 500mg TDS. 			

Lower Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
	<p>Assessment and review of patients Use CRB65 score to help guide and review: Each scores 1: Confusion (AMT<8); Respiratory rate >30/min; Age >65; BP systolic <90 or diastolic ≤ 60; Score 0: suitable for home treatment; Score 1-2: hospital assessment or admission Score 3-4: urgent hospital admission Mycoplasma infection is rare in over 65s</p>	<p>IF CRB65=0: Amoxicillin or Clarithromycin or Doxycycline</p>	<p>500mg TDS 500mg BD 200 mg stat/100 mg OD</p>	<p>7 days 7 days 7 days</p>
		<p>If CRB65=1 & AT HOME Amoxicillin and clarithromycin or Doxycycline alone</p>	<p>500mg TDS 500mg BD 200 mg stat/100 mg OD</p>	<p>7 to 10 days 7 to 10 days</p>

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Influenzae	<p>Annual vaccination is essential for all those at high risk of influenza. For otherwise healthy adults the use of antivirals is not recommended. Treat symptomatic at risk patients only when influenza is circulating in the community. Prescribers will be advised when this is appropriate via letter from NHS England.</p> <p>See current guidance on the management of influenza via the Public Health England website: https://www.gov.uk/government/organisations/public-health-england.</p>			

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p><i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i></p>				
<p>Pharyngitis / sore throat / tonsillitis</p>	<p>Avoid antibiotics as 90% resolve in 7 days without, and pain only reduced by 16 hours Check Centor score. Antibiotics are recommended if one or more of the following: history of rheumatic fever, scarlet fever, pronounced systemic infection, immunosuppression and consider if Centor Score 3 or 4 (Lymphadenopathy; No Cough; Fever; Tonsillar Exudate).</p>	<p>First line: No antibiotics.</p>		
		<p>Second line: Phenoxyethylpenicillin or If allergic to penicillin: Clarithromycin</p>	<p>Adult: 500mg QDS Adult: 250-500mg BD</p>	<p>10 days 5 days</p>

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Otitis media <i>(refer to the BNF for Children (BNFC) for child doses)</i>	Many are viral. Consider immediate antibiotics or offering a delayed prescription for pain relief if: <ul style="list-style-type: none"> • <2 years AND bilateral AOM or bulging membrane & ≥ 4 marked symptoms • All ages with otorrhoea 	First line: No antibiotics – “Wait and see” recommended for 72 hours Offer a delayed prescription.		
		Second line: Amoxicillin	See BNFC	5 days

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
	Consider antibiotics in those at risk of poor outcome e.g. under 2 years of age, bilateral acute otitis media, vomiting and high fever.	If allergic to penicillin: Clarithromycin	Refer to BNFC	5 days

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Acute otitis externa	<p>First use aural toilet (if available) & analgesia.</p> <p>Cure rates similar at 7 days for topical acetic acid or antibiotic +/- steroid.</p> <p>If cellulitis or disease extending outside ear canal, start oral antibiotics and refer to ENT.</p>	<p>First line: Acetic acid 2%</p> <p>Second line: Gentamicin/Neomycin and steroid drops (several preparations available).</p>	<p>1 spray TDS (EarCalm[®])</p> <p>According to manufacturers instructions.</p>	<p>7 days</p> <p>7 days min to 14 days max</p>

Upper Respiratory Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: Doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Acute sinusitis	Many are viral. Symptomatic benefit of antibiotics is small. Reserve for severe profuse purulent nasal discharge, facial pain, systemic symptoms or persistent (>10 days) symptoms.	First line: No antibiotic Second line: Amoxicillin or Doxycycline Discuss with microbiologist if persistent symptoms	500mg TDS 200mg stat/100mg OD	7 days 7 days

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Impetigo	<p>Topical use should be minimised to reduce development of resistance.</p> <p><i>Caution: with the topical use of fusidic acid as there may be local resistance.</i></p> <p>Multiple courses of topical antibiotics may lead to increased resistance.</p>	<p>Flucloxacillin or Clarithromycin</p> <p>For minor infections only: Hydrogen peroxide cream 1%</p> <p>Second line: Mupirocin 2% Or Fusidic acid</p>	<p>500mg QDS</p> <p>250mg-500mg BD</p> <p>2-3 times daily</p> <p><i>Topically TDS</i></p>	<p>7 days 7 days</p> <p>Up to 3 weeks</p> <p>5 days</p>
Cellulitis	<p>Class 1: patients have no signs or symptoms of systemic toxicity and have no uncontrolled co-morbidities and are managed on an outpatient basis with oral antibiotics.</p> <p>Class 2: patients are either systemically ill, without any unstable co-morbidities, or are systemically well, but have one or more co-morbidities. Require initial parenteral antibiotic therapy which may be delivered from home if OPAT services available</p> <p>Class 3 and 4: patients are septic or, have at least one unstable co-morbidity, or a limb-threatening infection. Require admission to hospital for parenteral antibiotic therapy.</p>			

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
	<p>Manage underlying pre-disposing conditions if any (e.g. tinea pedis, ulcers, lymphoedema). Consider urgent hospital admission for intravenous antibiotic treatment in severe, or rapidly worsening infection; suspected orbital, or periorbital cellulitis; facial cellulitis in a child - maintain a low threshold for hospital admission; immunocompromised; diabetes mellitus - admission may not be necessary if diabetes is stable, but maintain a low threshold for hospital admission; significant co-morbidity (e.g. heart failure, renal failure); neonate or child under 1 year.</p> <p>Recurrent cellulitis: treat underlying pre-disposing conditions if any (e.g. tinea pedis, ulcers, lymphoedema). For more than 2 episodes of cellulitis at the same site, long term prophylaxis may be appropriate - seek specialist advice from Dermatology.</p>			
	<p>If no significant improvement occurs in 5 days - IV therapy may be necessary. Serious infections - refer to hospital.</p>	<p>Flucloxacillin or Clarithromycin</p> <p>Facial cellulitis: Consider co-amoxiclav</p>	<p>500mg QDS 500mg BD 625mg TDS</p>	<p>7-14 days (Durations depend on response)</p>

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Leg ulcers	Bacteria will always be present. Antibiotics do not improve healing. Culture swabs and antibiotics are only indicated when there is evidence of clinical infection such as inflammation/redness/cellulitis; increased pain; purulent exudate; rapid deterioration of ulcer or pyrexia. Ideally, sampling for culture should be done by vigorous curettage and aspiration to get an accurate result, however, cleaning of the wound followed by thorough swabbing of the wound bed is deemed practicable in the community.			
Acne Vulgaris (severe)	Tetracyclines are considered first line choice if oral antibiotics are required. <i>Avoid tetracyclines in pregnancy and when breast feeding.</i> Minocycline is not recommended.	Doxycycline or Erythromycin (if tetracyclines contra-indicated).	100mg OD 500mg BD	Durations depend on response.
Scabies	Treat all home & sexual contacts within 24h. Treat whole body from ear/chin downwards and under nails. If under 2 years or elderly, also face/scalp.	Permethrin cream 5%	As per manufacturers instructions.	2 applications one week apart.

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
Diabetic foot infections	<p>Comments: samples should not be taken routinely. Repeat samples are not required unless worsening infection.</p> <p>Bone/joint involvement has to be excluded clinically and radiologically.</p> <p>Investigations: CRP, Swabs C&S. Sampling for culture should be deep, ideally tissue biopsies/pus aspirates to get an accurate result, however, cleaning of the wound followed by thorough swabbing of the wound bed is deemed practicable in the community. If the patient is MRSA positive, please contact Microbiology for antibiotic advice.</p>	<p>Non-limb threatening: Flucloxacillin +/- Amoxicillin <i>(if penicillin hypersensitive:</i> Clindamycin)</p> <p>Deep infections including osteomyelitis: Co-amoxiclav <i>(if penicillin hypersensitive:</i> Clindamycin and Ciprofloxacin)</p>	<p>500mg QDS</p> <p>500mg TDS</p> <p>300mg QDS</p> <p>625mg TDS</p> <p>450mg QDS</p> <p>500mg BD</p>	<p>1-2 weeks</p> <p>2-4 weeks (4-6 weeks if Osteomyelitis)</p>
Modify antibiotic treatment on the basis of sensitivities and/or clinical response.				

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Human bite	Antibiotic prophylaxis advised for all wounds < 72 hours old. Consider tetanus prophylaxis. Assess risk of HIV/ Hepatitis B and C. Post exposure prophylaxis should be offered if bite is from someone known or strongly suspected to be HIV positive (attend A&E).	First line (for both animal and human bites): Co-amoxiclav	625mg TDS	7 days
Animal bite	Prescribe antibiotic prophylaxis for wounds < 48hrs old and risk of infection is high (e.g. bites on face/hands/feet). Consider tetanus prophylaxis and risk of Rabies.	if allergic to penicillin: Metronidazole and Doxycycline*	400mg TDS 100mg BD	7 days 7 days
		Avoid in pregnancy, breast-feeding and children.		

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p align="center">Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</p>				
<p>Dermatophyte infection of the nails (Adults) For children seek advice</p>	<p>Fungal nail infections are common affecting around 5% of those >55y. Many patients do not seek medical advice and the only symptoms are frequently cosmetic changes in the appearance of the nail. Therapy should be considered ONLY if all of the following apply and not for cosmetic reasons alone:</p> <ol style="list-style-type: none">1. The patient has poor or diminished circulation (diabetes or peripheral vascular disease).2. The results of mycological examination confirm the diagnosis (Nail clippings required).3. The patient can and will comply with the long courses of treatment necessary. <p>Take nail clippings; start therapy only if infection is confirmed by microbiology.</p>			
<p>NB: terbinafine is not active against <i>candida</i> Idiosyncratic liver reactions occur rarely with terbinafine. Nail infections may still respond after a treatment course is complete. Nail lacquers can be used in certain circumstances, eg if there are CI to oral treatment (see BNF).</p>		Terbinafine	250mg OD fingers toes Children < 12 years, obtain advice from Dermatologist.	6 - 12 weeks 3 - 6 months

Skin/Soft Tissue Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Candida nail infection	Pulsed itraconazole monthly is recommended for infections with yeasts and non- <i>dermatophyte</i> moulds. Take nail clippings, start therapy only if infection is confirmed by microbiology.	Itraconazole (caution when prescribing in patients at high risk of heart failure)	200mg BD fingers toes Children < 12 years obtain advice from Dermatologist.	7 days/month 2 courses 7 days/ month 3 courses
Dermatophyte infection of the skin	Administer for 14 days after symptomatic resolution. If intractable, consider oral itraconazole following microbiological report.	Clotrimazole 1% cream If failure: Terbinafine 1% Cream following results of skin scrapings.	BD BD	4 - 6 weeks 1 week

Urinary Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.				
<p>Notes:</p> <ol style="list-style-type: none"> In adult women with uncomplicated UTI (i.e. no fever or loin pain) it is reasonable to start empirical treatment with no culture if dipstick positive for nitrite or leucocyte esterase. Negative nitrite and leucocyte esterase have a 95% negative predictive value. Urine culture is always indicated in catheter associated infections, men, children, pregnant women, those with complicated infection or where empirical treatment has failed. In sexually active young men and women with urinary symptoms consider <i>Chlamydia trachomatis</i>. A strong smelling urine is not indicative of a UTI. Asymptomatic bacteriuria occurs in 25% of women and 10% of men >65 years and is not associated with increased morbidity and does not require antibiotic therapy. Pivmecillinam may be prescribed only on the advice of a microbiologist following urine culture analysis. 				
Uncomplicated UTI (i.e. no fever, flank pain in adult females <65 yr old without underlying disease)	+ve nitrites or leucocyte esterase on morning urine increases likelihood of UTI. Nitrofurantoin If compliance an issue, consider 100 mg m/r BD. Avoid Nitrofurantoin in renal impairment if eGFR less than 60 ml per minute per 1.73 m ²	Nitrofurantoin or Trimethoprim	50mg QDS 200mg BD	3 days 3 days
		2 nd line: depends on sensitivity of organism isolated		

Urinary Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
UTI in men, women >65yr	<p>MSU required to confirm the diagnosis and for susceptibility testing.</p> <p>Nitrofurantoin If compliance an issue, consider 100 mg m/r BD.</p> <p>Avoid Nitrofurantoin in renal impairment eGFR less than 60 ml per minute.</p>	<p>Nitrofurantoin or Trimethoprim or Pivemecillinam</p>	<p>50mg QDS</p> <p>200mg BD</p> <p>400mg TDS</p>	<p>3 days (women) 7 days (men)</p>
UTI in pregnancy	<p>Send MSU for culture and start antibiotics. Although short term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus, avoid at term as may produce neonatal haemolysis. Avoid trimethoprim if low folate status or on folate antagonist (e.g. antiepileptic or proguanil).</p>	<p>First line: Nitrofurantoin</p> <p>If susceptible: Amoxicillin</p> <p>Second line: Trimethoprim</p> <p>Give folate if 1st trimester</p>	<p>100 mg m/r BD</p> <p>500 mg TDS</p> <p>200 mg BD (off-label)</p>	<p>7 days</p>

UTI in Children	<p>Child <3 months: refer urgently for assessment.</p> <p>Child ≥ 3 months: use positive nitrite to start antibiotics^{1A+} Send pre-treatment MSU for all patients.</p> <p>Imaging: only refer if child <6 months, recurrent or atypical UTI^{1C}</p>	<p>Lower UTI: Trimethoprim or nitrofurantoin. If susceptible, amoxicillin Second line: Co-amoxiclav</p>	Refer to BNFC	3 days
		<p>Upper UTI: Co-amoxiclav</p>	Refer to BNFC	7-10 days

Urinary Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<p>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</p>				
<p>Catheter associated UTI</p>	<p>Catheter in situ: antibiotics will not eradicate asymptomatic bacteriuria; only treat if systemically unwell or pyelonephritis likely ^{2B+}. Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI or trauma (NICE & SIGN guidance).</p> <ol style="list-style-type: none"> 1. Routine CSU for cultures and sensitivities are not indicated. 2. A clearly marked CSU with relevant clinical details should be sent for C&S prior to starting antibiotic treatment, if infection suspected. 3. Laboratory microscopy and dipstick testing should not be used to diagnose UTI in catheterised patients as they often have white cells or bacteremia because of the catheter. A strong smelling urine is not indicative of a UTI. 4. Symptoms that may suggest UTI include fever, flank pain, or supra-pubic discomfort, change in voiding patterns, nausea, vomiting, malaise or confusion. Patients should be referred to hospital if systemic symptoms such as fever, chills, rigors or confusion appear. 5. In patients with a long term indwelling catheter, it should be changed 12 to 24 hours after treatment for symptomatic UTI has been started. 6. Take into account previous treatments and culture results when choosing an antibiotic for empirical treatment. 7. If no previous sensitivities are available and if immediate treatment for lower UTI is required treat empirically with trimethoprim 200mg BD for 7 days or contact Microbiology for advice. 			

Urinary Tract Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Acute pyelonephritis	If admission not needed, send MSU for culture & sensitivities and start antibiotics.	Co-amoxiclav or Ciprofloxacin	500/125 mg TDS	14 days
	If no response within 24 hours, admit.		500 mg BD	7 days
Acute prostatitis	Send MSU for culture and start antibiotics. 4-wk course may prevent chronic prostatitis.	Ciprofloxacin 2nd line: Trimethoprim	500 mg BD	28 days
	Quinolones achieve higher concentrations in the prostate tissue than trimethoprim .		200 mg BD	28 days

Viral Infections

Illness	Comments	Drug	Dose	Duration of Tx
<i>Note: Doses are oral and for adults unless otherwise stated. Please refer to BNF for further information.</i>				
Varicella zoster/ chickenpox	Pregnant/immunocompromised/neonate: seek urgent specialist advice.	If indicated: Aciclovir	800 mg five times a day	7 days
	Chicken pox: If onset of rash <24hrs & >14yrs or severe pain or dense/oral rash or 2 ^o household case or steroids or smoker consider acyclovir.	Second line for shingles if compliance a problem, as more than ten times the cost		
	Shingles: treat if >50 yrs and within 72 hrs of rash (PHN rare if <50yrs ⁻); or if active ophthalmic zoster or Ramsey Hunt syndrome or eczema.	Valaciclovir or Famciclovir	1g TDS	7 days
			250mg TDS	7 days

Summary of some of the Key Changes from the previous Antimicrobial Guidelines in 2010

Clarithromycin is now recommended for use in most places where erythromycin was formerly (note: the reverse applies to pregnancy).

Doxycycline now second line for sinusitis instead of erythromycin.

OPAT information added.

Guidelines on the Management of Patients with an Absent or Dysfunctional Spleen added.

Prophylaxis for Urinary Catheterisation section has been expanded.

Threadworm now included as part of GI Tract Infections.

Made a clear distinction for the treatment advice of Vaginal Candidiasis when pregnant.

Epididymo-orchitis - simplified and made clear the treatment choice.

Community Acquired Pneumonia –simplified the advice for the assessment and review.

Scabies advice added.