

Coventry & Warwickshire
Area Prescribing Committee

Clinical Guideline – CG005

Community Antibiotic Guidelines For Common Infections in Adults

Coventry and Warwickshire Microbiology



*Guideline developed from original version, CG005 2.1.1, by Dr Peter Gayo Munthali (MRCP, FRCPath, DMS)
Microbiology Clinical Lead, Warwick Medical School (WMS) Clinical Examinations Lead, University Hospital of Coventry and Warwickshire (UHCW) NHS Trust
Honorary Associate Clinical Professor, University of Warwick*

Aims

- 1. To provide a simple, effective set of guidelines for the treatment of infections in adults in the community**
- 2. To control the use of antibiotics in the community in parallel with in-patient use**
- 3. To minimise the use of antibiotics that are the highest risk for *C. difficile* including cephalosporins, quinolones and co-amoxiclav**

Before using these guidelines, review the following points:

- Collect appropriate specimens before starting antibiotics
- Review previous microbiology results, in particular MRSA, Clostridium difficile or ESBL producing coliforms. Treatment may need to be adjusted if these are found
- Antibiotics should be given at regular intervals – *e.g.* qds should be given at 6 hourly intervals if possible
- Doses given are for oral administration unless specified otherwise
- This guideline is intended for **adults** with **normal renal function**

NOTE on Clostridium difficile diarrhoea

All antibiotics have the potential of causing Clostridium difficile diarrhoea. This risk is much increased with the use of broad-spectrum antibiotics such as co-amoxiclav, ceftriaxone and ciprofloxacin. The use of these broad-spectrum antibiotics should only be considered if narrow-spectrum antibiotics cannot be given or are not efficacious in a particular condition.

For further advice please contact the Medical Microbiologist at your local trust

For advice related to genitourinary issues please contact a GUM physician at your local trust

Urinary Tract Infections

There are increasing problems with Extended Spectrum β -Lactamase (ESBL) producing “coliforms”. Apart from possible sensitivity to nitrofurantoin, there is often no oral option to treat these organisms. **Please contact the Medical Microbiologist for advice if needed.**

Adults >65 may be found to have asymptomatic bacteriuria (growth of bacteria from urine without symptoms of UTI).

This should NOT be treated as there is no increased morbidity.

UTI

Sending an MSU is recommended in pregnant women and men

Do Not treat asymptomatic bacteriuria or positive urine dipstick (nitrites and/or leucocytes) without clinical symptoms in non-pregnant patients.

Pregnant women would need further evaluation

Please check MHRA guidance re prescribing of nitrofurantoin in renal insufficiency [here](#)

Treatment Duration

- Non-pregnant women 3-5 days
- Pregnant women and men 7days (Please check suitability of each antibiotic in pregnancy)

For use in pregnancy check suitability of individual antibiotic
Pivmecillinam – check with microbiologist re individual patients

Prophylaxis in non-pregnant adult women:

**see below Appendix A*

Note; The suggested antibiotics are for empirical therapy. Where antibiotic sensitivities are available, please choose the most appropriate antibiotic from the three agents for the patient. An alternative antibiotic should only be used if for some reason none of the three agents can be used.

FIRST LINE: Nitrofurantoin 50 mg qds or 100 mg MR bd (depending on cost and availability)

Avoid if eGFR < 45ml/min/1.73m² - check [MHRA guidance](#)

SECOND LINE: Pivmecillinam 400mg tds [*This may vary from manufacturer’s recommendation in SPC*]

THIRD LINE: Trimethoprim 200 mg bd

Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus.

Avoid trimethoprim in first trimester of pregnancy if low folate status or on folate antagonist (e.g. antiepileptic or proguanil).

Avoid nitrofurantoin at term due to a possible risk of neonatal haemolysis.

Cautions with use in renal failure:

Nitrofurantoin (contraindicated if eGFR<45ml/min but check [MHRA guidance](#));

Trimethoprim (eGFR15-30ml/min - use half normal dose after 3 days; eGFR<15ml/min - use half normal dose).

Caution should be exercised in patients with **chronic neurological conditions such as Parkinson’s disease.** Urinary tract infection may manifest only as a deterioration in their neurological condition. In these cases therefore, an otherwise unexplained deterioration in the Parkinson’s accompanied by a positive urine dip should trigger consideration of early treatment. A mid-stream urine should still be sent for confirmation of the diagnosis and to inform the clinician about antibiotic sensitivity

Acute Pyelonephritis	Ciprofloxacin 500 mg bd for 7-10 days
Always send an MSU	Pyelonephritis is a severe condition and hospital admission for IV antibiotics is often needed. Consider admission if acutely unwell or failure to respond to antibiotics after 24 hours. <i>Ambulatory care referral is available in some areas.</i>
Acute Prostatitis	Ciprofloxacin 500 mg bd for 28 days
Always send an MSU	OR 2nd line, trimethoprim 200mg bd for 28 days
Catheterised patients	If the patient is systemically asymptomatic then no treatment is needed.
Do not swab catheters. Send CSU only if systemically unwell or signs of pyelonephritis.	Treatment is necessary only if the patient is systemically unwell or has signs of pyelonephritis. Most samples taken from a catheter will grow bacteria. It is unlikely that that catheter colonisation will clear if the catheter remains in situ.
Genital Tract Infections	
Bacterial Vaginosis	Metronidazole 400 mg bd for 5 days
	OR intravaginal metronidazole gel 0.75% at night for 5 days
	OR intravaginal clindamycin 2% cream at night for 7 nights
Vaginal Candidiasis	Clotrimazole pessary 500mg stat <u>PLUS</u> clotrimazole 1% cream if co-existing vulvitis
	Failure to resolve in non-pregnant women: Fluconazole 150 mg orally stat
Trichomoniasis	Metronidazole 400 mg bd for 7 days
	OR metronidazole 2 g as a single dose
	Avoid high dose metronidazole in pregnancy
	Refer to GUM and treat partner simultaneously
Pelvic Inflammatory Disease	<u>Low risk of gonococcal infection</u>
Refer the woman with her partner/s to GUM for STI screening	Oral ofloxacin 400 mg bd <u>plus</u> oral metronidazole 400 mg bd, both for 14 days
	OR
	IM ceftriaxone 500 mg stat <u>plus</u> doxycycline 100 mg bd <u>plus</u> metronidazole 400 mg bd, both for 14 days

Rule out ectopic pregnancy before treating in the community	<p><u>High risk of gonococcal infection</u></p> <p>IM ceftriaxone 500 mg stat <i>plus</i> doxycycline 100 mg bd <i>plus</i> metronidazole 400 mg bd, both for 14 days</p> <p>Note: There is cross reactivity between penicillin and cephalosporins. Patients with skin hypersensitivity to penicillin may be given cephalosporins if there is no history of allergy to cephalosporins.</p> <p>Patients with anaphylaxis to penicillin should <u>NEVER</u> be given any beta-lactams</p>
<p>Chlamydia trachomatis</p> <p>Refer patient with partner/s to GUM for STI screening.</p> <p>Partner/s needs treating simultaneously</p>	<p>Azithromycin 1g stat</p> <p>OR</p> <p>Doxycycline 100 mg bd for 7 days – <u>AVOID DOXYCYCLINE IN PREGNANCY</u></p> <p>Refer to GUM and treat partner/s simultaneously</p>
Skin and soft tissue infections	
If previous microbiology samples show MRSA (Meticillin-resistant Staphylococcus aureus) or there is a likelihood of MRSA colonisation, treatment should be adjusted accordingly to cover MRSA. Discuss with microbiology if needed (e.g. if doxycycline-resistant MRSA previously isolated)	
Cellulitis*	<p>Flucloxacillin 500 mg –1g qds for 7 days</p> <p>OR</p> <p><i>If allergy to penicillins – Clarithromycin 500 mg bd for 7 days OR clindamycin 450mg* qds for 7 days</i></p> <p style="text-align: right;"><i>*Most cost-effective = 3 x 150mg</i></p>
Impetigo*	<p>Flucloxacillin 500 mg qds for 7 days</p> <p>OR</p> <p>If allergy to penicillins – Clarithromycin 500 mg bd for 7 days</p>
Wound infections (non-severe)* <i>If severe infection, may require IV antibiotics</i>	<p>Flucloxacillin 500 mg qds for 7 days</p> <p>OR</p> <p>If allergy to penicillins – Clarithromycin 500 mg bd for 7 days</p>
*Skin/soft tissue infection where	Doxycycline 200 mg od for 7 days

MRSA is a likely cause	Review with antibiotic sensitivities - Discuss with Microbiology if needed
Leg ulcers	Antibiotics are not generally appropriate and do not improve healing. Bacteria will always be present colonising the ulcer. Culture swabs and antibiotics only indicated if evidence of clinical infection, e.g. increased pain, cellulitis, pyrexia or ulcer enlargement.
Localised infection associated with peripheral line removal	Doxycycline 200 mg od for 7 days
Animal bite Check if tetanus vaccination up to date Consider if anti rabies prophylaxis required (e.g. bitten abroad; bat bites)	Co-amoxiclav 625 mg tds for 7 days OR If allergy to penicillins – Clindamycin 450mg* qds AND ciprofloxacin 500mg bd for 7 days <i>*Most cost-effective = 3 x 150mg</i> Prophylactic treatment recommended if cat bite, deep wound, bites on hands or face or near joints or ligaments Also recommended if patient is immunocompromised, diabetic, cirrhotic or asplenic
Human bite Assess risk of Tetanus, HIV, Hepatitis B & C	Co-amoxiclav 625 mg tds for 7 days OR If allergy to penicillins - Clindamycin 300mg qds for 7 days <i>Prophylactic treatment is recommended</i>
ENT infections	
Acute otitis media <i>Viral infections common. Resolves spontaneously in most cases - Consider symptomatic treatment first or delayed antibiotic dispensing in collaboration with the patient</i>	80-90% respond without antibiotics Amoxicillin 500 mg tds for 5 days OR If allergy to penicillins - Clarithromycin 500 mg bd for 5 days
Otitis externa	Avoid antibiotics if possible. Keep the ear clean and dry. Topical acetic acid 2% - 1 spray tds is sufficient in many cases. Antibiotics needed if acutely inflamed or extensive. Flucloxacillin 500 mg qds for 5 days OR

	Clarithromycin 500 mg bd for 5 days
Sinusitis <i>Consider symptomatic treatment first or delayed antibiotic dispensing in collaboration with the patient</i>	Often a viral infection. Resolves spontaneously within 14 days in most cases. Antibiotics offer marginal benefit. Antibiotics may be of benefit if purulent pharyngeal discharge. Amoxicillin 500 mg tds for 7 days OR If allergy to penicillins - Doxycycline 200 mg on first day then 100 mg daily for 6 further days
Pharyngitis / Tonsillitis <i>Consider symptomatic treatment first or delayed antibiotic dispensing in collaboration with the patient</i>	This is often a viral infection. Consider antibiotics if 3 of the following – fever, exudate, palpable anterior cervical lymph nodes, absence of cough Phenoxymethyl penicillin 500 mg qds for 10 days OR If allergy to penicillins - Clarithromycin 500 mg bd for 5 days
Dental Infections	
Tooth abscess	Amoxicillin 500 mg tds for 5 days OR If allergy to penicillins - Clarithromycin 500 mg bd for 5 days Patients with dental problems should be referred to a dental practitioner. Antibiotics should only be considered if dentist unavailable and acute need exists.
Eye infections	
Bacterial conjunctivitis	Chloramphenicol 0.5% drops - One drop every 2 hours for the first 48 hours and then every 4 hours thereafter for 5 days See: https://www.medicines.org.uk/emc/medicine/25612 Most bacterial episodes are self limiting
Gastrointestinal infections	

Gastroenteritis <i>Send stool sample if food poisoning or for C.difficile if recent antibiotic use or hospital stay</i>	<p>Fluid replacement essential. Antibiotics not usually necessary unless immunocompromised or prolonged symptoms</p> <p>Check travel, food, hospitalisation and antibiotic history</p>
Clostridium difficile <i>Discuss with microbiologist if advice needed. Repeat samples are usually unnecessary.</i>	<p><u>Mild and Moderate disease</u></p> <p>Metronidazole 400 mg tds for 10-14 days (repeat course for first relapse)</p> <p><u>Severe disease</u></p> <p>Oral vancomycin 125 mg qds for 10-14 days (repeat course for first relapse)</p> <p>Review and stop if possible other antibiotics and PPIs - Avoid antimotility drugs such as loperamide in acute infection. Supportive therapy particularly fluid replacement is vital. Refer to hospital urgently if acutely unwell, if the patient cannot maintain hydration or if signs of serious complications <i>e.g.</i> colitis</p> <p>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/321891/Clostridium_difficile_management_and_treatment.pdf</p>
Helicobacter pylori eradication <i>H.pylori faecal antigen should be tested where persistent dyspepsia of unknown aetiology</i>	<p>Proton Pump Inhibitor† PLUS clarithromycin 500 mg bd PLUS amoxicillin 1g bd for 7 days</p> <p>OR</p> <p>If allergy to penicillin - Proton Pump Inhibitor† PLUS clarithromycin 250 mg bd PLUS metronidazole 400 mg bd for 7 days</p> <p>†Recommended PPI: Lansoprazole 30 mg bd OR omeprazole 20 mg bd</p>
Giardia	<p>Metronidazole 400 mg tds for 5 days</p>
Cryptosporidium	<p>Antibiotics not indicated except in immunocompromised</p> <p>There is spontaneous recovery within a few weeks in immunocompetent patients</p> <p>Seek specialist advice for immunocompromised patients</p>
Diverticulitis	<p>Co-amoxiclav 625 mg bd for 5 – 7 days</p> <p>OR</p> <p>If allergy to penicillin – ciprofloxacin 500mg bd PLUS metronidazole 400mg tds for 5 – 7 days</p> <p>If patient requires IV administration this would be an indication for the patient to be referred to hospital</p>

Respiratory Tract Infections									
Infective exacerbation of COPD	<p>Amoxicillin 500 mg tds for 5 days</p> <p>OR</p> <p>If allergy to penicillins - Doxycycline 200 mg on day one then 100mg daily for a further 4-6 days</p> <hr/> <p>Most infective exacerbations are viral in origin. Consider antibiotics if at least two of the following are present – increased sputum volume, increased sputum purulence, dyspnoea.</p> <p>Note: Where exacerbation is truly due to bacterial infection, some patients may require longer duration of treatment of up to 14 days</p>								
Community Acquired Pneumonia	<p>Amoxicillin 500 mg tds for 7-10 days</p> <p>OR</p> <p>If allergy to penicillins - Clarithromycin 500 mg bd for 7-10 days</p>								
Consider whether hospital admission needed	<p><i>Clinically, pneumonia can be difficult to differentiate from bronchitis, but it is unlikely when the vital signs such as temperature, pulse and respiration are normal, particularly in the setting of normal findings on chest examination.</i></p> <p><i>Please assess severity using British Thoracic Society CRB-65 criteria to decide on course of treatment</i></p> <p><i>Score 1 point for each feature present:</i></p> <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px;"><i>Confusion</i></td> <td style="padding: 2px;"><i>Mini mental test score of 8 or less OR new disorientation in person, time or place</i></td> </tr> <tr> <td style="padding: 2px;"><i>Respiratory rate</i></td> <td style="padding: 2px;"><i>≥ 30/min</i></td> </tr> <tr> <td style="padding: 2px;"><i>Blood pressure</i></td> <td style="padding: 2px;"><i>systolic BP <90 mmHg OR diastolic BP ≤60 mmHg</i></td> </tr> <tr> <td style="padding: 2px;"><i>Age</i></td> <td style="padding: 2px;"><i>≥ 65 years</i></td> </tr> </table> <p><i>Score</i></p> <p><i>0 Likely suitable for home treatment</i></p> <p><i>1 or 2 Consider hospital supervised treatment</i></p> <p><i>3 or 4 Refer to hospital immediately for treatment as severe pneumonia</i></p>	<i>Confusion</i>	<i>Mini mental test score of 8 or less OR new disorientation in person, time or place</i>	<i>Respiratory rate</i>	<i>≥ 30/min</i>	<i>Blood pressure</i>	<i>systolic BP <90 mmHg OR diastolic BP ≤60 mmHg</i>	<i>Age</i>	<i>≥ 65 years</i>
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<i>Blood pressure</i>	<i>systolic BP <90 mmHg OR diastolic BP ≤60 mmHg</i>								
<i>Age</i>	<i>≥ 65 years</i>								
Acute bronchitis	Often viral - antibiotics not generally indicated								
Central Nervous System infections									
Bacterial meningitis	Benzylpenicillin 1.2 g stat intravenous (preferred) or intramuscular								
<i>Urgent hospital admission essential -</i>	OR								

<p><i>Administer parenteral antibiotic dose if time and availability allows</i> <i>Do not delay admission to hospital</i></p>	<p>If allergy to penicillins - Ceftriaxone 2g stat intravenous (<u>caution in severe penicillin allergy</u>)</p>
<h2>Parasitic Infections</h2>	
<p>Threadworm</p>	<p>Mebendazole 100 mg as a single dose, repeated after 14 days if reinfection</p>
<p>Ascaris (roundworm)</p>	<p>Mebendazole 100 mg bd for 3 days</p>
<p>Scabies</p>	<p>Permethrin 5% cream - 2 applications a week apart</p>
<h2>Viral Infections</h2>	
<p>Cold sores</p>	<p>Usually resolve after 7–10 days without treatment</p>
<p>Shingles (Zoster)</p>	<p>Aciclovir 800 mg five times a day for 7 days, seek advice if pregnant</p>
<p>Chicken Pox</p>	<p>Aciclovir 800 mg five times a day for 7 days. *See below</p>
<p><i>*Aciclovir should ideally be started within 24 hours of appearance of rash in adults, although should not be withheld if presentation is later, especially in smokers, pregnant women, immunosuppressed people or if on steroids. Patients should be advised to report symptoms that may suggest complications e.g. chest symptoms, dense rash with or without mucosal lesions, appearance of new lesions after 6 days, neurological symptoms, haemorrhagic rash or bleeding – if any exist, consider urgent hospital assessment.</i></p> <p><i>Any immunosuppressed person should be referred for specialist assessment.</i></p> <p><i>Chickenpox can be particularly severe in the second half of pregnancy, in smokers, those with chronic lung disease or on steroids. Although aciclovir is unlicensed for use in pregnancy, the risk of severe complications is likely to outweigh the risks of giving aciclovir (National Teratology Information Service reports no increased risk of adverse fetal or congenital effects with aciclovir use at any stage of pregnancy).</i></p>	

References

British National Formulary 69 March 2015

British Thoracic Society (2009)

Guidelines for the management of community-acquired pneumonia in adults

Thorax vol 64:supplement III. Available at;

<https://www.brit-thoracic.org.uk/document-library/clinical-information/pneumonia/adult-pneumonia/bts-guidelines-for-the-management-of-community-acquired-pneumonia-in-adults-2009-update/>

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Antibiotic prophylaxis in non-pregnant adult women with recurrent UTIs

Women with recurrent UTI's should be considered for Secondary Care (Urology) opinion

Causes should be investigated and treated where appropriate (e.g. Post-coital cystitis)

Antibiotic prophylaxis should only be initiated on the recommendation from Secondary Care via verbal Consultant advice or after Secondary Care referral

Recurrent UTI is defined as 'three or more episodes of urinary tract infection in the last 12 months confirmed by a urine culture and sensitivity testing (MSU). It **does not** include episodes of bacteriuria without UTI symptoms (asymptomatic bacteriuria) which appears to play a protective role in preventing symptomatic recurrence so should **not** be treated (EXCEPT in pregnant women).

Healthcare professionals should not prescribe antibiotic prophylaxis to adults with long-term indwelling catheters to prevent urinary tract infection unless there is a history of recurrent or severe urinary tract infection.

Urine Dipstick Test:

This test should not routinely be performed on patients with:

- An indwelling catheter
- Urostomy bag
- Care home residents

Where clinical signs of infection are present a urine sample should be sent for culture and analysis.

Preventing recurrent UTIs:

- Offer a 6 month course of low dose continuous antibiotic treatment.
- Patients should be reviewed by Secondary Care 3 - 6 months after commencing prophylaxis.
- Prophylaxis antibiotics should be stopped after 6 months (unless advised otherwise by a Consultant in exceptional circumstances).
- The patient will have a further review in Secondary Care 6 months after stopping the prophylaxis.

First line prophylaxis

Nitrofurantoin (immediate-release) 50 mg to 100 mg every night (modified-release nitrofurantoin is not licensed for prophylaxis) Avoid if GFR <45ml/min

Second line (only after sensitivities confirmed)

Trimethoprim 100 mg every night

Cephalexin 250 mg every night may be used when the above are contra-indicated or not tolerated

References:

NICE Clinical Knowledge Summaries Urinary Tract Infection (Lower) –Women Last Revised July 2015

<https://cks.nice.org.uk/urinary-tract-infection-lower-women>

Dason, S., Dason, J.T. and Kapoor, A. (2011) Guidelines for the diagnosis and management of recurrent urinary tract infection in women. *Canadian Urological Association Journal* 5(5), 316-322