

## Chapter 5: Infections

**The infections chapter of the GMMMG Formulary is NOT an antibiotic prescribing guide and is not intended to guide treatment choice.**

Links to local CCG antimicrobial guidelines should be followed – [see page 2](#).

Please refer to local guidelines for appropriate and cost-effective options for treating commonly encountered infections in your local health economy.

For prescribing within secondary care, please refer to relevant acute trust guidelines.

In view of the increasing problems of antibiotic resistance and the cost of inappropriate prescribing, CCG and acute trust guidelines are reviewed regularly and should be referred to when making treatment choices.

The infections chapter only contains drugs and formulations included in the 'Infection' chapter of the BNF. It does not include topical preparations which can be found in the 'Skin' chapter.

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[For cost information please go to the most recent cost comparison charts](#)

### Key

	<b>Red drug</b> see <a href="#">GMMMG RAG list</a> <i>Click on the symbols to access this list</i>
	<b>Amber drug</b> see <a href="#">GMMMG RAG list</a> <i>Click on the symbols to access this list</i>
	<b>Green drug</b> see <a href="#">GMMMG RAG list</a> <i>Click on the symbols to access this list</i>
	If a medicine is unlicensed this should be highlighted in the template as follows <b>Drug name U</b>
	<b>Not Recommended</b>
	<b>Over the Counter</b>
<b>Order of Drug Choice</b>	Where there is no preferred 1 <sup>st</sup> line agent provided, the drug choice appears in alphabetical order.

<b>BNF chapter</b>	<b>5 Infections</b>
<b>Section</b>	<b>5.1 Antibacterial drugs</b>
Please follow the <a href="#">GMMMG Greater Manchester Antimicrobial Guidelines</a>	
<p>The aims of this guidance are to</p> <ul style="list-style-type: none"> <li>• to provide a simple, empirical approach to the treatment of common infections</li> <li>• to promote the safe and effective use of antibiotics</li> <li>• to minimise the emergence of bacterial resistance in the community</li> </ul>	
<p><b>Additional information:</b></p> <p><a href="#">NICE NG50: Cirrhosis in over 16s: assessment and management</a></p> <p><a href="#">NICE NG51: Sepsis: recognition, diagnosis and early management</a></p> <p><a href="#">NICE NG95: Lyme disease</a></p> <p><a href="#">NICE NG79: Sinusitis (acute): antimicrobial prescribing</a></p> <p><a href="#">NICE NG91: Otitis media (acute): antimicrobial prescribing</a></p>	

## Antimicrobial resistance








Public Health England has published an online bulletin providing information on antimicrobial resistance (AMR). It sets out effective methods to avoid unnecessary prescribing of antibiotics and provides advice for healthcare professionals:



<https://www.gov.uk/government/publications/health-matters-antimicrobial-resistance>

NICE has issued guidance that covers the effective use of antimicrobials (including antibiotics) in children, young people and adults. It aims to change prescribing practice to help slow the emergence of antimicrobial resistance and ensure that antimicrobials remain an effective treatment for infection.

[NICE \(Aug 2015\) Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use NG15](#)

<b>BNF chapter</b>	<b>5 Infections</b>	
<b>Section</b>	<b>5.1 Antibacterial drugs</b>	
<b>Subsection</b>	<b>5.1.4 Aminoglycosides</b>	
	Tobramycin	<a href="#">NICE TA276: Cystic fibrosis (pseudomonas lung infection)</a>
<b>Nebulised</b>	Tobi® nebuliser solution 300mg/5ml ampoules Bramitob® nebuliser solution 300mg/4ml ampoules	<p><b>R</b> for new patients presenting to the service only</p> <p><b>A</b> For existing patients only awaiting repatriation</p>
<b>Inhaled</b>	Tobi Podhaler® dry powder inhalation capsules 28mg	<b>R</b> for cystic fibrosis patients

<p><b>Additional notes</b></p> <p>Tobramycin dry powder for inhalation (DPI) is an option for treating chronic pulmonary infection caused by <i>Pseudomonas aeruginosa</i> in people with cystic fibrosis only if colistimethate sodium is contraindicated, is not tolerated, or has not produced an adequate clinical response and the manufacturer provides tobramycin DPI with the discount agreed as part of the patient access scheme to primary, secondary and tertiary care in the NHS.</p>		
<b>Subsection</b>	<b>5.1.7 Some other antibacterials</b>	
	Vancomycin Capsules 125mg	 For treating severe or recurrent <i>Clostridium difficile</i> only.
	Linezolid	
	Polymixins (colistimethate)	<a href="#">NICE TA276: Cystic fibrosis (pseudomonas lung infection)</a>
<b>Nebulised</b>	Colistimethate injection for nebulisation Promixin® powder for nebuliser solution	 for new cystic fibrosis patients presenting to the service only   for existing cystic fibrosis patients only awaiting repatriation   when nebulised for non-cystic fibrosis patients
<b>Inhaled</b>	Colistimethate sodium Colobreathe ® 125mg dry powder inhalation capsules	 when inhaled for cystic fibrosis patients
<p><b>Additional notes</b></p> <p>Colistimethate sodium dry powder inhalation is an option for treating chronic pulmonary infection caused by <i>P. aeruginosa</i> in people with cystic fibrosis only if they do not tolerate it in its nebulised form and the manufacturer provides colistimethate sodium DPI with the discount agreed as part of the patient access scheme to primary, secondary and tertiary care in the NHS.</p>		
	Rifaximin Tablets 550mg	 Following specialist initiation  <a href="#">NICE TA337: Rifaximin for preventing episodes of overt hepatic encephalopathy, March 2015</a>

<b>Subsection</b>	<b>5.1.9 Antituberculosis drugs</b>	 Following specialist initiation
<p><b>Additional notes</b></p> <p>All TB treatment must be prescribed by a specialist in treating TB infection. All treatment is therefore provided by the specialist centre until patient is stable then RAG status is green.</p> <p>Treatment of drug resistant TB is commissioned by NHSE.</p>		
<b>Subsection</b>	<b>5.1.10 Antileprotic drugs</b>	
<b>First choice</b>	Dapsone Tablets 50mg, 100mg	 Following specialist initiation for leprosy and dermatitis herpetiformis

<b>Chapter</b>	<b>5 Infections</b>	
<b>Section</b>	<b>5.2 Antifungal drugs</b>	
<b>Subsection</b>	<b>5.2.1. Triazole antifungals</b>	
<b>First choice</b>	Fluconazole Capsules 50mg, 150mg, 200mg	
<b>Alternatives</b>	Itraconazole Capsules 100mg	
<b>Additional notes</b>		
Following reports of heart failure, caution is advised when prescribing itraconazole to patients at high risk of heart failure.		
	Posaconazole	<b>R</b> <a href="#">MHRA DSU: Posaconazole (Noxafil): tablets and oral suspension are not directly interchangeable</a>
	Voriconazole	<b>R</b> <a href="#">MHRA DSU: Voriconazole - reminder of risk of liver toxicity, phototoxicity and squamous cell carcinoma, May 2014</a>
<b>Do Not Prescribe</b>	<b>Ketoconazole</b> For oral administration	<u>Criterion 1 (see RAG list)</u>
<b>Subsection</b>	<b>5.2.2 Imidazole antifungals</b>	
<b>Subsection</b>	<b>5.2.3 Polyene antifungals</b>	
<b>Subsection</b>	<b>5.2.4 Echinocandin antifungals</b>	
	Caspofungin IV infusion	<b>R</b>
	Micafungin IV infusion	<b>R</b>

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<b>Subsection</b>	<b>5.2.5 Other antifungals</b>	
	Terbinafine Tablets 250mg	

<b>Chapter</b>	<b>5 Infections</b>	
<b>Section</b>	<b>5.3 Antiviral drugs</b>	
<b>Subsection</b>	<b>5.3.1 HIV infection</b>	<p><b>R</b></p> <p>Only prescribed by a specialist experienced in the management of HIV infection</p>
<b>Subsection</b>	<b>5.3.2 Herpes virus infections</b>	
	<b>5.3.2.1 Herpes simplex and varicella-zoster infection</b>	
<b>First choice</b>	<p>Aciclovir</p> <p>Tablets 200mg, 400mg, 800mg</p> <p>Cream 5% 2g – see Skin chapter</p> <p>Eye ointment 3% 4.5g – see Eye chapter</p>	
<b>Alternatives</b>	<p>Valaciclovir</p> <p>Tablets 250mg, 500mg</p>	
	<b>5.3.2.2 Cytomegalovirus</b>	<b>R</b>
<b>Subsection</b>	<b>5.3.3 Viral hepatitis</b>	<b>R</b>
	<b>5.3.3.1 Chronic hepatitis B</b>	
	<p>Adefovir dipivoxil</p> <p>Tablets 10mg</p>	<p><b>R</b></p> <p><a href="#">NICE TA96: Hepatitis B (chronic) - adefovir dipivoxil and pegylated interferon alpha-2a</a></p>
	<b>5.3.3.2 Chronic hepatitis C</b>	
	<p><a href="#">NICE TA75: Interferon alfa (pegylated and non-pegylated) and ribavirin for the treatment of chronic hepatitis C,</a></p> <p><a href="#">NICE TA106: Peginterferon alfa and ribavirin for the treatment of mild chronic hepatitis C,</a></p> <p><a href="#">NICE TA200: hepatitis C - peginterferon alfa and ribavirin</a></p> <p><a href="#">MHRA: Direct-acting antiviral interferon-free regimens to treat chronic hepatitis C: risk of hepatitis B reactivation</a></p> <p><a href="#">MHRA: Direct-acting antivirals to treat chronic hepatitis C: risk of interaction with vitamin K antagonists and changes in INR</a></p>	
	<p>Boceprevir▼</p> <p>Capsules 200mg</p>	<p><b>R</b></p> <p><a href="#">NICE TA253: Hepatitis C (genotype 1) boceprevir</a></p>

	Sofosbuvir▼ Tablets 400mg	<b>R</b> <a href="#">NICE TA330: Sofosbuvir for treating chronic hepatitis C</a> <a href="#">MHRA DSU: Sofosbuvir with daclatasvir; sofosbuvir with ledipasvir: risks of severe bradycardia and heart block when taken with amiodarone, May 2015</a>
	Sofosbuvir-velpatasvir▼ Tablets 400mg/100mg	<b>R</b> <a href="#">TA430: Sofosbuvir-velpatasvir for treating chronic hepatitis C</a>
	Telaprevir▼ Tablets 375mg	<b>R</b> <a href="#">NICE TA252: hepatitis C (genotype 1) telaprevir</a>
	Elbasvir-grazoprevir▼ 50mg/100mg film-coated tablets	<b>R</b> <a href="#">NICE TA413: Elbasvir-grazoprevir for treating chronic hepatitis C</a>
	Glecaprevir-pibrentasvir▼ 100mg/40mg film-coated tablets	<b>R</b> <a href="#">NICE TA499: Glecaprevir-pibrentasvir for treating chronic hepatitis C</a>
	Sofosbuvir-velpatasvir-voxilaprevir▼ 400mg/100mg/100mg film-coated tablets	<b>R</b> <a href="#">NICE TA507: Sofosbuvir-velpatasvir-voxilaprevir for treating chronic hepatitis C</a>
<b>Subsection</b>	<b>5.3.4 Influenza</b>	
<b>First choice</b>	Oseltamivir Capsules 30mg, 45mg, 75mg Suspension 6mg/1ml	Suspension only for children under 1 year of age
<b>Alternatives</b>	Zanamivir Dry powder for inhalation 5mg blister	
<b>Additional Notes:</b> Influenza vaccination remains the first line preventative treatment for influenza. Vaccination programmes should be promoted to all at risk patients, and programmes should be initiated in residential settings as a priority. For more information see <a href="#">Public Health England</a> . <a href="#">NICE TA158: Oseltamivir, amantadine (review) and zanamivir for the prophylaxis of influenza, Sep 2008</a>		



[NICE TA168: amantadine, oseltamivir and zanamivir for the treatment of influenza, Feb 2009](#)

NICE guidance for the use of antivirals for seasonal influenza does not apply in an influenza pandemic; other guidelines will be issued.

Subsection	<b>5.3.5 Respiratory syncytial virus</b>	
	Ribavirin Tablets 200mg	<div style="text-align: center;"><b>R</b></div> <p><a href="#">NICE TA75: Hepatitis C - pegylated interferons, ribavirin and alfa interferon</a> extended in <a href="#">NICE TA106</a> and partially updated by <a href="#">NICE TA200</a></p>
<p>The <a href="#">Greater Manchester Hep C Strategy</a> website provides further information on treatment strategies for hepatitis C in Greater Manchester.</p>		

<b>Chapter</b>	<b>5 Infections</b>	
<b>Section</b>	<b>5.4 Antiprotozoal drugs</b>	
<b>Subsection</b>	<b>5.4.1 Antimalarials</b>	
	<b>Malaria prophylaxis</b>	
	<b>Drugs for malaria prophylaxis are not prescribable on the NHS.</b>	
<b>Additional Notes:</b>		
Chloroquine and proguanil are available over the counter (OTC) whereas mefloquine and Malarone® require a private prescription.		
Refer to BNF or MIMS for telephone numbers for up to date advice on recommended products.		
<b>Grey drugs</b> Items which are listed as Grey are deemed not suitable for routine prescribing but may be suitable for a defined patient population	<b>Travel vaccines</b> Hepatitis B, Japanese Encephalitis, Meningitis ACWY, Yellow Fever, Tick-borne encephalitis, Rabies, BCG  Not to be prescribed on the NHS solely for the purposes of travel; only to be prescribed for other indications, as outlined in <a href="#">Immunisation Against Infectious Disease – the Green Book</a>	<b>G<sub>n</sub></b> <a href="#">Criterion 3 (see RAG list)</a>
	<b>Malaria treatment</b>	
	Malarone® tablets Riamet® tablets	Specialist initiation
<b>Subsection</b>	<b>5.4.2 Amoebicides</b>	
<b>First choice</b>	Metronidazole tablets 200mg, 400mg	
<b>Alternatives</b>	Tinidazole tablets 500mg	
<b>Subsection</b>	<b>5.4.3 Trichomonacides</b>	
	Metronidazole tablets 400mg	
<b>Subsection</b>	<b>5.4.4 Antigiardial drugs</b>	
	Metronidazole tablets 400mg	
<b>Subsection</b>	<b>5.4.5 Leishmaniocides</b>	Not used in primary care – refer to specialist

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	<b>5.4.6 Trypanocides</b> <b>5.4.7 Drugs for toxoplasmosis</b> <b>5.4.8 Drugs for pneumocystis pneumonia</b>	
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<b>Chapter</b>	<b>5 Infections</b>	
<b>Section</b>	<b>5.5 Anthelmintics</b>	
<b>Subsection</b>	<b>5.5.1 Drugs for threadworms</b>	
<b>First choice</b>	Mebendazole Tablets (chewable) 100mg	
<b>Subsection</b>	<b>5.5.2 Ascaricides (roundworm)</b>	
<b>Subsection</b>	<b>5.5.4 Drugs for hookworms</b>	
	Mebendazole Tablets (chewable) 100mg	
<b>Subsections</b>	<b>5.5.3 Drugs for tapeworm infections</b> <b>5.5.5 Schistosomicides</b> <b>5.5.6 Filaricides</b> <b>5.5.7 Drugs for cutaneous larva migrans</b> <b>5.5.8 Drugs for strongyloidiasis</b>	Unlicensed drugs. Can be prescribed by secondary care on a named patient basis following advice from microbiologist.