NHS
The NHS in Rotherham

ANTIMICROBIAL SUMMARY PROTOCOL FOR THE MANAGEMENT OF INFECTION IN PRIMARY CARE 2017 - 2019

Next review due December 2019

To be used in conjunction with the detailed Antimicrobial Protocol for the Management of Infection in Primary Care 2017-2019

Empirical Prescribing Formulary

Adult doses are stated unless otherwise indicated. Refer to full Protocol or current BNF/BNFC if doses or condition not stated.

CONDITION	COMMENT	1ST LINE CHOICE	2ND LINE CHOICE
ACUTE SORE THROAT	FeverPAIN score can help determine high risk. If score 3 there is a 40% probability of bacterial infection **use 3-day back up antibiotics** if 4 or more then use immediate antibiotics if severe or 48 hour short back-up prescription.	**PENICILLIN V** 500mg QDS or 1gram BD (QDS when severe) for 10 days	***If Penicillin allergic*** **CLARITHROMYCIN** 250mg - 500mg BD, 5 days
ACUTE OTITIS MEDIA ***NB Child doses***	**Consider 2 or 3-day-delayed or immediate antibiotics** for pain relief if: ➢ < 2yrs AND bilateral AOM (NNT4) or bulging membrane & ≥ 4 marked symptoms ➢ **All ages** with otorrhoea (NNT3) Antibiotics to prevent Mastoiditis NNT >4000	**AMOXICILLIN** Neonate 30mg/kg TDS (7-28days) 1 month-1year 125mg TDS 1-5 years 250mg TDS 5-18+ years 500mg TDS	***If Penicillin allergic*** **AZITHROMYCIN 6m – 17Yrs** 0 -15kg) 10mg/kg 15 -25kg 200mg 26 -35kg 300mg 36 -45kg 400mg > 46kg 500mg **All OD for 3 days** **MAX 500mg /dose**
ACUTE OTITIS EXTERNA	**First use analgesia and aural toilet (if available) as may not be infective. If cellulitis or disease extending outside ear canal, swab and start oral antibiotics and refer to exclude malignant otitis externa.**	**ACETIC ACID 2%,** 1 spray TDS for 7 days	**NEOMYCIN SULPHATE WITH CORTICOSTEROID,** 3 drops TDS for 7 days min to 14 days max
ACUTE BACTERIAL RHINOSINUSITIS	**Avoid antibiotics as 80% resolve in 14 days without treatment, and they only offer marginal benefit after 7 days NNT 15** **Use adequate analgesia** **Consider 7-day-delayed or immediate antibiotic** when purulent pharyngeal discharge NNT8	**AMOXICILLIN** 500mg (1gram if severe) TDS, for 7 days ***OR*** **PENICILLIN V** 500mg QDS for 7 days	***If Penicillin allergic*** **DOXYCYCLINE** 200mg STAT, then 100mg BD, for 7 days ***For persistent symptoms*** **CO-AMOXICLAV** 625mg TDS for 7 days
ACUTE COUGH, BRONCHITIS	Antibiotic little benefit if no co-morbidity. Symptom resolution can take 3 weeks. **Consider 7 day delayed antibiotic** with symptomatic advice/leaflet **Consider immediate antibiotics if > 80yr and ONE of:** hospitalisation in past year, oral steroids, diabetic, congestive heart failure **OR> 65yrs with 2 of the above.**	**AMOXICILLIN** 500mg TDS, for 5 days	***If Penicillin allergic*** **DOXYCYCLINE** 200mg STAT, then 100mg OD, for 5 days
ACUTE EXACERBATIONS OF COPD	Treat exacerbations promptly with antibiotics if purulent sputum **and** increased shortness of breath and/or increased sputum volume Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months	**AMOXICILLIN** 500mg TDS for 5 days	***If Penicillin allergic*** **DOXYCYCLINE** 200mg STAT then 100mg BD, for 5 days **OR CLARITHROMYCIN** 500mg BD, for 5 days
		If resistance risk factors **CO-AMOXICLAV** 625mg TDS for 5 days	
COMMUNITY ACQUIRED PNEUMONIA **See BTS guidelines for full details**	**Use CRB-65 score to help guide and review: Score's should not substitute clinical judgement i.e. signs of fever, cough, sputum, new focal chest signs** **Score 0** – Low risk: consider home based care **Score 1 - 2**: Intermediate risk: consider referral to breathing space or hospital assessment **Score 3 - 4: urgent hospital admission** Mycoplasma infection is rare in over 65s	**If CRB65=0** **AMOXICILLIN** 500mg – 1g TDS ***OR*** **CLARITHROMYCIN** 500mg BD ***OR*** **DOXYCYCLINE** 200mg STAT then 100mg BD Use 5 days. Review at 3 days & extend to 7 -10 days if poor response	**If CRB65 = 1,2 & AT HOME** **AMOXICILLIN** 500mg – 1g TDS for 7 -10 days ***AND*** **CLARITHROMYCIN** 500mg BD, for 7 – 10 days ***OR*** **DOXYCYCLINE alone** 200mg STAT then 100mg BD, for 7-10 days
UNCOMPLICATED UTI - ADULTS (No fever or flank pain)	**WOMEN** with severe/ ≥ 3 symptoms: treat **WOMEN** with mild/ ≤ 2 symptoms AND urine NOT cloudy 97% negative predictive value, do not treat unless other risk factors for infection. If presence of cloudy urine use dipstick to guide treatment Nitrite + blood/leucocytes has 92% positive predictive chance of infection. No nitrite, leucocytes, and blood has a 76% negative predictive chance of no infection	**NITROFURANTOIN** 100mg MR BD **Use First line if eGFR>45ml/min eGFR 30- 44 use ONLY for 3-7days if resistance and no alternative** ***OR*** **TRIMETHOPRIM** 200mg BD ***OR***	Always safety net and perform culture in all treatment failures. **In increased resistance** If GFR<45 ml/min or elderly consider pivmecillinam OR FOSFOMYCIN 3Gram sachet 3g stat in women

	Counsel women that symptoms may still be present after 3 days but that they will clear. **MEN:** Investigate for underlying pathology. Consider prostatitis and send pre-treatment MSU OR if symptoms mild/non-specific, use negative nitrite and leucocytes to exclude UTI	**PIVMECILLINAM** 200mg TDS (400mg TDS if resistance risk) **Women for 3 days** **Men for 7days**	Men 3g stat, then 2nd 3g dose 3 days later).
UTI - PREGNANCY	**Send MSU for culture & sensitivity and start empirical antibiotics** Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus; manufacturer advises avoid at term. Avoid trimethoprim if low folate status or on folate antagonist (e.g. antiepileptic or proguanil)	**NITROFURANTOIN** 100mg MR BD for 7 days **Use First line if eGFR>45ml/min** **eGFR 30- 44 use ONLY for 3-7days if resistance and no alternative**	**TRIMETHOPRIM** (off label) 200mg BD 7 days **Give folic acid if first trimester; 400mcg or 5mg if NTD risk** **If susceptible** **(resistance is common)** **AMOXICILLIN** 500mg TDS for 7days
ACUTE PYLONEPHRITIS	If admission not needed, send MSU for culture & sensitivities and start antibiotics **If no response within 24 hours, admit** ***Note: Ciprofloxacin encourages emergence of MRSA and C.diff***	**CIPROFLOXACIN** 500mg BD for 7-10 days ***NB Norfloxacin is NOT appropriate as does not penetrate parenchyma sufficiently***	**CO-AMOXICLAV** 625 mg TDS for 7 -10 days If lab report shows sensitive **TRIMETHOPRIM** 200mg BD 14 days
ANTIBIOTIC ASSOCIATED DIARRHOEA - CLOSTRIDIUM DIFFICILE INFECTION	Stop unnecessary antibiotics and/or PPIs 70% respond to metronidazole in 5 days; 92% in 14 days If severe symptoms or signs (below) should treat with oral vancomycin, review progress closely and/or consider hospital referral. **Admit if severe:** Temp>38.5 ^{o}C ; WCC >15, rising creatinine or signs/symptoms of severe colitis	***1st episode*** **METRONIDAZOLE** 400mg or 500 mg TDS for 10 days if GDH +ve for 14 days if CDI toxin +ve	***2nd episode/Severe/type 027*** **ORAL VANCOMYCIN** 125mg QDS 14 days **Recurrent disease** Seek microbiology advice
CHLAMYDIA TRACHOMATIS / URETHRITIS	**Opportunistically screen all aged 15-25yrs.** **Treat partners and refer to GUM service** **Pregnancy or breastfeeding:** Refer to Integrated sexual health if pregnant or breast feeding. Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment.	**DOXYCYCLINE** 100mg BD for 7 days ****Doxycycline is contra-indicated in pregnancy****	**Referral to integrated sexual health is an alternative for treatment and recommended for contact tracing**
VAGINAL CANDIDIASIS	All topical and oral azoles give 75% cure **Pregnancy:** avoid oral azole drugs and use intravaginal for 6 nights/7 days	**CLOTRIMAZOLE 500MG pessary or 10% cream STAT** ***OR*** **FLUCONAZOLE 150mg STAT**	*If Pregnant* **CLOTRIMAZOLE 100mg pessary ON for 6 nights** ***OR*** **MICONAZOLE 2% cream intravaginally BD for 7 days**
BACTERIAL VAGINOSIS	Oral metronidazole is as effective as topical treatment but is cheaper. Less relapse with 7 day than 2g stat at 4 weeks **Pregnant /breastfeeding:** 2g stat metronidazole C/I Treating partners does not reduce relapse	**METRONIDAZOLE** 400mg BD for 7 days ***OR*** **METRONIDAZOLE** 2 gram STAT	*If Pregnant* **METRONIDAZOLE 0.75% VAGINAL GEL 5gram ON for 5 NIGHTS** ***OR*** **CLINDAMYCIN 2% VAGINAL CREAM 5gram ON for 7 NIGHTS**
CONJUNCTIVITIS	Most conjunctivitis is viral or self-limiting. Bacterial conjunctivitis is usually unilateral and also self-limiting. It is Characterised by red eye with mucopurulent, not watery discharge. **Only treat if severe.** 65% resolve on placebo by day five Fusidic acid has less Gram-negative activity	**CHLORAMPHENICOL** 0.5% drop 2 hourly for 2 days then 4 hourly (while awake) ***AND*** **CHLORAMPHENICOL** 1% ointment ON **BOTH** for 48 hrs after resolution	**FUSIDIC ACID 1% GEL** BD for 48 hrs after resolution
MRSA	Use cultures to confirm MRSA infection. Only treat if active infection, MRSA *confirmed* by lab results, infection not severe and admission not required. Use antibiotic sensitivities to guide treatment. If severe infection or no response to monotherapy after 24-48 hours, seek advice from microbiologist on combination therapy.	**DOXYCYCLINE alone** 200mg Stat then 100 mg BD for 5 days ***Stop if diarrhoea develops***	**SEEK MICROBIOLOGY ADVICE**
IMPETIGO	**Reserve topical antibiotics for very localised lesions to reduce the risk of resistance** **Avoid fusidic acid preparations to reduce risk of resistance as also available orally** For extensive, severe, or bullous impetigo, use oral antibiotics	***Topical*** **POLYFAX® OINTMENT** Apply BD **for up to 3 weeks** ***OR*** **HYDROGEN PEROXIDE** (CRYSTACIDE®)	***Oral Antibiotics*** **FLUCLOXACILLIN** 500mg QDS for 7 days *If Penicillin allergic* **CLARITHROMYCIN**

<table>
<tr><td></td><td>Reserve MUPIROCIN TDS for 5 days for MRSA ONLY</td><td colspan="2">Apply BD - TDS for up to 3 weeks</td><td>500mg BD for 5 days</td></tr>
<tr><td>BITES ANIMAL & HUMAN</td><td>Thorough irrigation is important
<u>Human:</u> Assess risk of tetanus, rabies, HIV, hepatitis B/C
Antibiotic prophylaxis is advised
<u>Cat or Dog:</u> Assess risk of tetanus and rabies <u>and</u> give prophylaxis if cat scratch puncture wound or for Dog/Cat bite to hand, foot, face, joint, tendon, ligament; immunocompromised /diabetic/asplenic/cirrhotic/ presence of prosthetic valve or prosthetic joint
<u>Note:</u> Ciprofloxacin encourages emergence of MRSA and C.diff</td><td colspan="2"><u>Prophylaxis or Treatment</u>
CO-AMOXICLAV alone 375-625 mg
TDS for 7 days
AND review at 24&48 hrs</td><td>If penicillin allergic or cat scratch/puncture wound:
METRONIDAZOLE 400mg
PLUS
DOXYCYCLINE 100mg
BD for 7 days
AND review at 24&48 hrs</td></tr>
<tr><td rowspan="3">CELLULITIS</td><td rowspan="3">Ensure correct diagnosis; if bilateral cool red legs with no fever and normal WBC, likely to be stasis dermatitis rather than cellulitis

MILD (Class I): patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone

MODERATE (Class II): febrile and ill, or comorbidity, use IV treatment in the community or admit for treatment

SEVERE (Class III): toxic appearance: admit. If river or sea water exposure, discuss with microbiologist.

Stop clindamycin if diarrhoea occurs.</td><td rowspan="2">FLUCLOXACILLIN 500mg
QDS for 7 days
If slow response continue for a further 7 days.</td><td rowspan="2">If penicillin allergic
CLARITHROMYCIN 500mg
BD for 7days If slow response continue for a further 7 days.
If taking Statin's
DOXYXYCLINE 200mg STAT then 100mg OD for 7 days
If slow response continue for a further 7 days.</td></tr>
<tr></tr>
<tr><td colspan="2">IF UNRESOLVING: CLINDAMYCIN 300 – 450mg QDS for 7 days
If slow response continue for a further 7 days.</td></tr>
<tr><td colspan="2">FACIAL: CO-AMOXICLAV 625mg TDS alone for 7 days
If slow response continue for a further 7 days.</td></tr>
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This summary guideline accompanies NHS Rotherham CCG: Management of Infection in Primary Care 2017-19 and is available at **http://www.rotherham.nhs.uk/clinicians/guidelines.htm**
The guidance in both is based on the best available evidence but its application must be modified by professional judgement. 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 consideration of a larger dose or longer course may be necessary.
This Communication was issued in partnership by NHS Rotherham CCG and Rotherham NHS Foundation Trust