

To be used in conjunction with the detailed Antimicrobial Protocol for the Management of Infection in Primary Care 2013-2015

**EMPIRICAL PRESCRIBING FORMULARY**

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

CONDITION	COMMENT	1ST LINE CHOICE	2ND LINE CHOICE
<b>Acute sore throat</b>	<b>Avoid antibiotics as 90% resolve in 7 days without treatment</b> CENTOR score can help determine high risk. If CENTOR score 3 or 4 there is a higher probability of bacterial infection <b>so consider 2 or 3-day-delayed or immediate antibiotics</b> <sup>1A+</sup>	<b>PENICILLIN V</b> <sup>3B</sup> : 500mg QDS or 1gram BD (QDS when severe <sup>7D</sup> ) for 10 days	<b>If Penicillin allergic</b> Clarithromycin 250-500mg BD for 5 days
<b>Acute Otitis Media</b> <i>NB Child doses</i>	<b>Avoid antibiotics as 60% resolve in 24hrs without treatment</b> <b>Consider 2 or 3-day-delayed antibiotics</b> for pain relief if: <ul style="list-style-type: none"> <li>&lt; 2yrs AND bilateral AOM (NNT4) or bulging membrane &amp; <math>\approx</math> 4 marked symptoms <sup>5-7+</sup></li> <li>All ages with otorrhoea (NNT3) <sup>8A+</sup></li> <li>Antibiotics to prevent Mastoiditis NNT &gt; 4000 <sup>9B-</sup></li> </ul>	<b>AMOXICILLIN</b> <sup>8A+,7A</sup> : 40mg/kg/day in 3 doses (max. 1.5g daily) <sup>10B-</sup> for 5 days	<b>NB Child doses</b> <b>If Penicillin allergic</b> <b>AZITHROMYCIN</b> >6m 10mg/kg, 15-25kg 200mg >26-35kg 300mg, 36-45kg 400mg >45kg 500mg <b>ALL OD for 3 days</b>
<b>Acute Otitis Externa</b>	<b>First use aural toilet</b> (if available) & analgesia. If cellulitis or disease extending outside ear canal, swab and start oral antibiotics and refer <sup>2A+</sup>		
<b>Acute Bacterial Rhinosinusitis</b>	<b>Avoid antibiotics as 80% resolve in 14 days without treatment</b> They only offer marginal benefit after 7 days NNT 15 <sup>2,3A+</sup> <b>Use adequate analgesia</b> <sup>4B+</sup> Consider 7-day-delayed or immediate antibiotic when purulent pharyngeal discharge NNT8 <sup>1,2A+</sup>	<b>AMOXICILLIN</b> <sup>4A+,7A</sup> : 500mg TDS, 7 days <b>OR</b> <b>DOXYCYCLINE</b> 200mg STAT, then 100mg BD, for 7 days	<b>NEOMYCIN SULPHATE WITH CORTICOSTEROID</b> <sup>3A-4D</sup> 3 drops TDS for 7 days min to 14 days max <sup>7A+</sup>
<b>ACUTE COUGH, BRONCHITIS</b>	Antibiotic little benefit, if no co-morbidity <sup>7-4A+</sup> <b>Consider 7 day delayed antibiotic</b> with symptomatic advice/leaflet <sup>1,5A+</sup> <b>Consider immediate antibiotics</b> if > 80yr and ONE of: hospitalisation in past year, oral steroids, diabetic, congestive heart failure <b>OR</b> > <b>65yrs with 2 of the above.</b>		<b>For persistent symptoms</b> <b>CO-AMOXICLAV</b> 625mg TDS for 7 days
<b>Acute Exacerbations of COPD</b>	Treat exacerbations promptly with antibiotics if purulent sputum and increased shortness of breath <b>and/or</b> increased sputum volume <sup>1,3B-</sup> . Risk factors for antibiotic resistant organisms include co-morbid disease, severe COPD, frequent exacerbations, antibiotics in last 3 months <sup>2</sup>	<b>AMOXICILLIN</b> 500mg TDS, for 5 days <sup>4C</sup>	<b>If Penicillin allergic</b> <b>DOXYCYCLINE</b> 200mg STAT, then 100mg OD, for 5 days <sup>5C</sup> <b>OR</b> <b>CLARITHROMYCIN</b> 500mg BD, for 5 days <sup>6A</sup>
<b>Community Acquired Pneumonia</b> <i>See BTS guidelines for full details</i>	<b>Use CRB-65 score to help guide and review!</b> <sup>1</sup> <b>Score's should not substitute clinical judgement i.e. signs of fever, cough, sputum, new focal chest signs</b> <b>See BTS guidelines for full details</b> <b>Score 0</b> suitable for home treatment; <b>Score 1 - 2</b> : refer to breathing space or hospital assessment /admission; <b>Score 3 - 4</b> : urgent hospital admission <b>Give immediate IM benzylpenicillin or amoxicillin 1gram orally<sup>D</sup> if delayed admission / life threatening</b> Mycoplasma infection is rare in over 65s <sup>1</sup>	<b>AMOXICILLIN</b> <sup>4+</sup> 500mg – 1gram TDS, for 7 days <b>OR</b> <b>CLARITHROMYCIN</b> <sup>4-</sup> : 500mg BD, for 7 days <b>OR</b> <b>DOXYCYCLINE</b> <sup>D</sup> 200mg STAT, then 100mg OD, for 7 days	<b>If CRB65=1 &amp; AT HOME</b> <b>AMOXICILLIN</b> <sup>4+</sup> 500mg – 1gram TDS, for 7 -10 days <b>AND</b> <b>CLARITHROMYCIN</b> <sup>4-</sup> 500mg BD, for 7 – 10 days <b>OR</b> <b>DOXYCYCLINE</b> alone 200mg STAT, then 100mg OD, for 7-10 days
<b>Uncomplicated UTI - Adults</b> (No fever or flank pain)	<b>WOMEN</b> with severe $\geq$ 3 symptoms: treat <sup>1,2C</sup> <b>WOMEN</b> with mild $\leq$ 2 symptoms: use dipstick and presence of cloudy urine to guide treatment. Nitrite & blood/leucocytes has 92% positive predictive chance of infection, -ve nitrite, leucocytes, and blood has a 76% negative predictive chance of no infection <sup>3A-</sup> . <b>Counsel women that symptoms may still be present after 3 days but that they will clear.</b> <b>MEN:</b> Investigate for underlying pathology. Consider prostatitis and send pre-treatment MSU1, <sup>5C</sup> OR if symptoms mild/non-specific, use -ve nitrite and leucocytes to exclude UTI <sup>6C</sup>	<b>MACROBID</b> (nitrofurantoin) <sup>8B+, 9C, 10B+</sup> : 100mg MR BD <b>OR</b> <b>MACRODANTIN</b> (nitrofurantoin) <sup>8B+, 9C, 10B+</sup> : 50mg caps every 6 hrs <b>Avoid Nitrofurantoin in renal impairment</b> (eGFR<60ml/minute) <b>OR</b> <b>TRIMETHOPRIM</b> <sup>7B+</sup> : 200mg BD <b>Women for 3 days<sup>2,12,13A+</sup></b> <b>Men for 7 days<sup>1,4C</sup></b>	Perform culture in all treatment failures <sup>8</sup> Amoxicillin resistance is common; only use if susceptible <sup>14B+</sup> Community multi-resistant Extended-spectrum Beta-lactamase (ESBL) E. coli are increasing; nitrofurantoin or fosfomycin (on microbiology advice, prescribed via Rotherham hospital) are options <sup>14,15B,16A</sup>
<b>UTI-Pregnancy</b>	<b>Send MSU for culture &amp; sensitivity and start empirical antibiotics</b> <sup>1A</sup> Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus <sup>2C</sup> Manufacturer advises avoid at term. Avoid trimethoprim if low folate status <sup>2</sup> or on folate antagonist (e.g. anti-epileptic or proguanil) <sup>2</sup>	<b>MACROBID</b> (nitrofurantoin) <sup>8B+, 9C, 10B+</sup> : 100mg MR BD for 7 days <sup>5C</sup> <b>OR</b> <b>MACRODANTIN</b> (nitrofurantoin) <sup>8B+, 9C, 10B+</sup> : 50mg caps every 6 hrs for 7 days <sup>6C</sup> <b>Avoid Nitrofurantoin in renal impairment (eGFR&lt;60ml/minute)</b>	<b>TRIMETHOPRIM</b> <sup>7B+</sup> (off label) 200mg BD for 7 days <sup>6C</sup> <b>Give folic acid if first trimester; 400mcg or 5mg if NTD risk</b> <b>Third Line</b> <b>CEFALEXIN</b> <sup>4C, 5B-</sup> : 500 mg BD for 7 days <sup>5C</sup>
<b>Acute pyelonephritis</b>	If admission not needed, send MSU for culture & sensitivities and start antibiotics <sup>1C</sup> If no response within 24 hours, admit <sup>2C</sup> <b>Note: Ciprofloxacin encourages emergence of MRSA and C.diff</b>	<b>CIPROFLOXACIN</b> 500mg BD for 7-14 days <sup>3A-</sup> <b>NB Norfloxacin is NOT appropriate as does not penetrate parenchyma sufficiently</b>	<b>If &gt;50yrs of age</b> <b>CO-AMOXICLAV</b> 625 mg TDS for 14 days <sup>4C</sup>
<b>Antibiotic Associated Diarrhoea</b>	Stop unnecessary antibiotics and/or PPIs <sup>1,2B+</sup> 70% respond to metronidazole in 5 days; 92% in 14 days <sup>3</sup> If severe symptoms or signs (below) should treat with oral vancomycin, review progress closely and/or consider hospital referral. <b>Admit if severe:</b> Temp>38.5°C; WCC >15, rising creatinine or signs/symptoms of severe colitis <sup>1C</sup>	<b>1st/2nd episodes</b> <b>METRONIDAZOLE</b> <sup>1A-</sup> : 400 or 500 mg TDS for 10-14 days <sup>1C</sup>	<b>3rd episode /severe</b> <b>ORAL VANCOMYCIN</b> <sup>1A-</sup> : 125mg QDS 14 days <sup>1C</sup>
<b>Clostridium Difficile Infection</b>	Opportunistically screen all aged 15-25yrs. <sup>1</sup> Treat partners and refer to GUM service <sup>2,3 B+</sup> <b>Pregnancy<sup>2C</sup> or breastfeeding:</b> azithromycin (off-label use) is the most effective option <sup>5A+, 6B-</sup> Due to lower cure rate in pregnancy, test for cure 6 weeks after treatment <sup>3C</sup>	<b>AZITHROMYCIN</b> 1 gram STAT <sup>4A+</sup> <b>OR</b> <b>DOXYCYCLINE</b> 100mg BD, for 7 days <sup>4A+</sup>	<b>If Pregnant / breastfeeding</b> <b>AZITHROMYCIN</b> 1 gram STAT (off label use) <sup>5A+</sup> <b>OR</b> <b>ERYTHROMYCIN</b> 500mg QDS for 7 days <sup>5A+</sup> <b>OR</b> <b>AMOXICILLIN</b> 500mg TDS for 7 days <sup>5A+</sup>
<b>Chlamydia</b>	<b>Most conjunctivitis is viral or self-limiting.</b> Bacterial conjunctivitis is usually unilateral and also self limiting. <sup>2C</sup> It is Characterised by red eye with mucopurulent, not watery discharge. <b>Only treat if severe.</b> 65% resolve on placebo by day five <sup>1A+</sup> Fusidic acid has less Gram-negative activity <sup>3</sup>	<b>CHLORAMPHENICOL</b> 0.5% drop 2 hourly for 2 days then 4 hourly (while awake) <b>AND (if required)</b> <b>CHLORAMPHENICOL</b> 1% ointment ON both for 5 days or 48 hrs after resolution	<b>FUSIDIC ACID 1% GEL</b> BD for 5 days or 48 hrs after resolution
<b>Conjunctivitis</b>	Use cultures to confirm MRSA infection. <b>Only treat if active infection, MRSA confirmed</b> sensitivities to guide treatment. If severe infection or no response to monotherapy after 24-48 hours, seek advice from microbiologist on combination therapy.	<b>DOXYCYCLINE alone</b> <sup>1B+</sup> 200mg Stat then 100 mg BD for 5 days	<b>CLINDAMYCIN ALONE</b> , <sup>2B</sup> (if sensitive) 300–450 mg QDS for 7 days
<b>MRSA</b>	Reserve topical antibiotics for very localised lesions to reduce the risk of resistance <sup>1,5C, 4B+</sup> Avoid fusidic acid preparations to reduce risk of resistance as also available orally For extensive, severe, or bullous impetigo, use oral antibiotics <sup>1C</sup> <b>Reserve MUPIROCIN</b> <sup>3A+</sup> : TDS for 5 days for MRSA ONLY <sup>1</sup>	<b>Topical</b> <b>POLYFAX® OINTMENT</b> Apply BD for up to 3 weeks <b>OR</b> <b>HYDROGEN PEROXIDE (CRYSTACIDE®)</b> Apply BD - TDS for up to 3 weeks	<b>Oral Antibiotics</b> <b>FLUCLOXACILLIN</b> <sup>2C</sup> 500mg QDS for 7 days <b>If Penicillin allergic</b> <b>CLARITHROMYCIN</b> <sup>2C</sup> 500mg BD for 5 days
<b>Impetigo</b>			
<b>Bites Animal &amp; Human</b>	<b>Thorough irrigation is important</b> <sup>1C</sup> <b>Human:</b> Assess risk of tetanus, HIV, hepatitis B&C <sup>1C</sup> Antibiotic prophylaxis is advised <sup>3B-</sup> <b>Animal and Human:</b> Assess risk of tetanus and rabies <sup>2C</sup> Give prophylaxis if cat bite/puncture wound <sup>2</sup> ; bite to hand, foot, face, joint, tendon, ligament; immunocompromised /diabetic/diabetic/cirrhotic or elderly patients <b>Note: Ciprofloxacin encourages emergence of MRSA and C.diff</b>	<b>Prophylaxis or Treatment</b> <b>CO-AMOXICLAV alone</b> 375-625 mg TDS <sup>4C</sup> for 7 days <sup>4,5,6C</sup>	<b>If Penicillin allergic</b> <b>CLINDAMYCIN</b> 300mg QDS <b>PLUS</b> <b>CIPROFLOXACIN</b> 500mg BD Both for 7 days, AND review at 24&48 hrs <sup>2C</sup>
<b>Cellulitis</b>	Ensure correct diagnosis-if bilateral cool red legs with no fever and normal WBC, likely to be stasis dermatitis rather than cellulitis If patient afebrile and healthy other than cellulitis, use oral flucloxacillin alone <sup>1,2C</sup> If river or sea water exposure, discuss with microbiologist. If febrile and ill, admit for IV treatment <sup>1C</sup> <b>Stop clindamycin if diarrhoea occurs.</b> * If slow response continue for a further 7days. <sup>1C</sup>	<b>FLUCLOXACILLIN</b> <sup>1,2,3C</sup> 500mg QDS for 7 days <sup>*</sup> <b>OR</b> <b>CLINDAMYCIN</b> 300 – 450mg QDS for 7 days <sup>*</sup>	<b>CLARITHROMYCIN</b> <sup>1,2,3C</sup> 500mg BD for 7 days <sup>*</sup> <b>OR</b> <b>CLINDAMYCIN</b> 300 – 450mg QDS for 7 days <sup>*</sup>
		<b>FACIAL: CO-AMOXICLAV</b> 625mg TDS alone for 7 days <sup>*</sup>	

# ANTIMICROBIAL SUMMARY PROTOCOL FOR THE MANAGEMENT OF INFECTION IN PRIMARY CARE 2013 - 2015

Next review due May 2015

This summary protocol has been produced using the NHS Rotherham CCG full protocol on Management of Infection in Primary Care 2013 – 2015 and is largely based on the HPA Management of Infection Guidance for Primary Care for local adaption. Where numbers are present as superscript to text they represent references from the HPA guidance and letters indicate grading of strength of evidence i.e. <sup>A+</sup>= Systematic review, <sup>D</sup>= Informal Opinion,

## KEY PRINCIPLES OF ANTIMICROBIAL PRESCRIBING

1. Only prescribe antibiotics where there is evidence of a bacterial infection and there is likely to be a clear clinical benefit and in severe infections initiate antibiotics as soon as possible.
2. Do not prescribe an antibiotic before checking previous microbiology results to determine the patient's usual isolates and sensitivities, if there is a chronic underlying condition and/or to make sure the patient has not grown MRSA, ESBLs (Extended Spectrum Beta-lactamase producers) or clostridium difficile since these isolates will influence your antibiotic choice.
3. Check for hypersensitivity and allergy status, determine if genuine and document description clearly and the severity of it if not documented already.
4. Use simple, well established, generic narrow spectrum antibiotics where possible and they remain effective. Avoid broad spectrum agents (e.g. co-amoxiclav, quinolones and cephalosporins) as they increase the risk of c. difficile, MRSA and resistant UTIs.
5. NHS Rotherham guidelines suggest a dose and duration for empiric treatment; however in severe cases a larger dose or longer course may need to be considered. If in doubt contact Microbiology for advice.
6. Consider a 'no' or 'delayed antibiotic' strategy for acute self-limiting upper respiratory tract infections.<sup>1,A+</sup>, and urinary tract infections when appropriate.
7. Antibiotics are ineffective against viral sore throats, simple coughs and colds.
8. Ensure the clinical indication, dose, route and duration of antibiotics is clearly documented in the patient's medical records.
9. Avoid the use of topical antibiotics, especially those that are available for systemic use (e.g. fusidic acid), this practice tends to compromise their effectiveness since it selects for resistance.
10. Limit prescribing of antibiotics over the telephone to exceptional cases ONLY.
11. Avoid longer courses of treatment than necessary.
12. Lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture and seek advice.
13. Avoid unnecessary use of combinations of antimicrobials where a single drug would be equally effective.
14. Avoid prophylactic use of antibiotics unless of proven benefit.
15. Clarithromycin has a better side-effect profile than erythromycin, greater compliance as its dose is twice rather than four times daily & generic tablets are similar cost and may be a suitable alternative where specifically mentioned. In children erythromycin may be preferable as clarithromycin syrup is twice the cost.

Where 'best guess' or empirical therapy has failed (including any determined through culture and sensitivity) or special circumstances exist, specialist Microbiologist advice can be obtained from Rotherham Foundation Trust (RFT).

Consultant Microbiologist ☎ 01709 304742 / 307712  
 Microbiology lab ☎ 01709 304242 or via  
 RFT Switchboard ☎ 01709 82000 bleep no. 280.

## PENICILLIN ALLERGY

### Allergy Status

- Always ask for a description of the reaction experienced.
- Document in the notes the name of medicine and the reaction.
- Diarrhoea is a result of change in bowel flora and not an allergic reaction
- True penicillin-allergic patients will react to all penicillins. About 10% of penicillin-sensitive patients will also be allergic to cephalosporins. Where patients are penicillin allergic, use clarithromycin in place of the penicillin agent (unless an alternative is specified in the guideline or seek advice from microbiologist on suitable alternatives).

This summary guideline accompanies NHS Rotherham CCG: Management of Infection in Primary Care 2013-2015 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

## MRSA

Use cultures to confirm MRSA infection. For active MRSA infection 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.

Patient's with MRSA should have an alert attached in their clinical record in active/current problems, as once a patient has been identified as MRSA positive the risk of clinical infection remains throughout their life. MRSA is resistant to Beta-lactam Antimicrobials such as flucloxacillin, co-amoxiclav, cephalosporins and other agents such as ciprofloxacin and any future courses of antibiotics should be prescribed with care.

MRSA READ codes: EMIS: A3B11 System One: XE0R6

## ANTIBIOTIC ASSOCIATED DIARRHOEA – CLOSTRIDIUM DIFFICILE INFECTION

C. Diff Infection (CDI) may manifest whilst on antibiotics, but a significant number of cases occur following cessation of therapy, the incubation period extending to several weeks. Symptoms may include fever, abdominal pain and diarrhoea (with/without blood and or mucus). Antibiotics particularly associated with CDI include broad spectrum agents such as co-amoxiclav, cephalosporins, quinolones (including ciprofloxacin) and clindamycin (the '4C antibiotics').

Any patient with an antigen GDH positive but toxin-positive result should be treated (as overleaf) if the diarrhoea is otherwise unexplained and persists. Patient's with a history of CDI should have an alert attached in their clinical record *in active/current problems*, as once a patient has been infected with a CDI or has been identified as antigen GDH positive and C.Diff toxin negative the risk of clinical infection remains throughout their life.

C.Diff Infection (CDI) (i.e GDH +ve, C.Diff toxin +ve) READ Code:EMIS/System One:A3Ay2  
 Please add a free text alert to identify: GDH +ve, C.Diff toxin -ve:

Stop unnecessary antibiotics and/or PPIs <sup>1,2B+</sup>  
 70% respond to metronidazole in 5 days; 92% in 14 days<sup>3</sup>  
 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°C; WCC>15, rising creatinine or signs/symptoms of severe colitis<sup>1C</sup>

## DENTAL / ORAL INFECTIONS

GPs should not routinely be involved in dental treatment and, if possible advice should be sought from the patient's dentist, who should have details of how to access treatment out-of-hours, or advice sought from NHS direct on 0845 4647.

## CONJUNCTIVITIS

Most conjunctivitis is viral or self-limiting. Bacterial conjunctivitis is usually unilateral and also self limiting.<sup>2C</sup> It is characterised by red eye with mucopurulent, not watery discharge. Only treat if severe. 65% resolve on placebo by day five<sup>1A+</sup> Fusidic acid has less Gram-negative activity<sup>3</sup>

## MENINGITIS

Transfer all patients to hospital immediately.

If time before admission, give IV benzylpenicillin <sup>1,2B+</sup>, unless hypersensitive, i.e. history of difficulty breathing, collapse, loss of consciousness, or rash <sup>1B-</sup>

GIVE: IV or IM benzylpenicillin or cefotaxime (give IM if vein cannot be found)

benzylpenicillin: Children <1 yr: 300 mg, Children 1 - 9 yr: 600 mg, Age 10+ years: 1200 mg

cefotaxime :Children < 12 yrs: 50mg/kg, Children 12+ years: 1gram

Prevention of secondary case of meningitis:

Only prescribe following advice from Health Protection Agency / Public Health On-Call:

Contact details for Public Health

9 am – 5 pm, Mon - Fri 01142 428850  
 Out of hours: Contact on-call Public Health via Rotherham Foundation Trust switchboard ☎ 01709 802000

## MYCOBACTERIAL INFECTIONS

Infection control risk – for appropriate isolation and infection control precautions:

Refer to Consultant Chest Physician and Infection control team via Rotherham Foundation Trust switchboard ☎ 01709 802000

Advice available from TB Specialist Nurse on Mon –Thurs 9 am – 5 pm ☎ 01709 423253

## LOWER RESPIRATORY TRACT INFECTIONS

Note: Low doses of penicillins are more likely to select out resistance.<sup>1</sup> Do not use quinolones (ciprofloxacin, ofloxacin) first line due to poor pneumococcal activity. Reserve all quinolones (including levofloxacin) for proven resistant organisms.

### ACUTE COUGH, BRONCHITIS

Antibiotic little benefit if no co-morbidity<sup>1-4A+</sup> Symptom resolution can take 3 weeks.

Consider 7 day delayed antibiotic with symptomatic advice / leaflet <sup>1,5A-</sup>

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.

### COMMUNITY-ACQUIRED PNEUMONIA

TREATMENT IN THE COMMUNITY <sup>2,3</sup>

Use CRB-65 score to help guide and review:<sup>1</sup> Score's should not substitute clinical judgement i.e. signs of fever, cough, sputum, new focal chest signs etc. See BTS guidelines for full details

Each scores 1: Confusion (AMT< 8) ; Respiratory rate ≥ 30/min; BP systolic < 90 or diastolic ≤ 60; Age ≥ 65

## SELF LIMITING UPPER RESPIRATORY TRACT INFECTIONS

Use CENTOR criteria to determine high risk <sup>3A-</sup>

Score	Criteria
+1	a) Tonsillar swelling or exudates
+1	b) Tender anterior cervical glands
+1	c) History of fever ≥38oC
+1	d) Age < 15 years
+1	e) Absence of cough
-1	f) Age > 45 years

Antibiotics to prevent Quinsy NNT>4000 <sup>4B-</sup>

Antibiotics to prevent Otitis media NNT200 <sup>2A+</sup>

## URINARY TRACT INFECTIONS

People >65 years: do not treat asymptomatic bacteriuria in the absence of white cells or <10 5, CFU/ml; it is common but is not associated with increased morbidity<sup>1B+</sup> unless pathogen isolate is MRSA.

Typical UTI Symptoms: dysuria, urgency, frequency, polyuria, suprapubic tenderness, haematuria.

Catheter in situ: antibiotics will not eradicate asymptomatic bacteriuria; only treat if systemically unwell or pyelonephritis likely <sup>2B+</sup>

Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI <sup>3B</sup>

## GASTRO-INTESTINAL TRACT INFECTIONS

### INFECTIOUS DIARRHOEA

Refer previously healthy children with acute, painful or bloody diarrhoea to exclude E. coli 0157 infection.<sup>1C</sup>

Antibiotic therapy not indicated unless systemically unwell.<sup>2C</sup> If systemically unwell and campylobacter suspected (e.g. undercooked meat and abdominal pain), consider clarithromycin 250–500 mg BD for 5–7 days if treated early <sup>3C</sup>

### ACUTE GASTROENTERITIS

Antimicrobials usually NOT required. May be necessary in invasive salmonellosis. Seek advice from microbiology. Cases of food poisoning should be notified.

### TRAVELLER'S DIARRHOEA

Only consider standby antibiotics for remote areas or people at high-risk of severe illness with travellers' diarrhoea <sup>1,2C</sup> Medical attention should be sought in the country of travel for assessment of whether antibiotics are required.

## GENITAL TRACT INFECTIONS

### STI SCREENING

People with risk factors should be screened for chlamydia, gonorrhoea, HIV, syphilis. Refer individual and partners to GUM service. Risk factors: < 25y, no condom use, recent (<12mth) /frequent change of partner, symptomatic partner <sup>1,2</sup>

## PROPHYLAXIS AGAINST INFECTIVE ENDOCARDITIS

Antibiotics have been previously offered routinely as a preventative measure to people at risk of infective endocarditis undergoing interventional procedures. However, there is little evidence to support this practice. Antibiotic prophylaxis has not been proven to be effective and there is no clear association between episodes of infective endocarditis and interventional procedures. As a result, this guideline recommends that antibiotic prophylaxis is no longer offered routinely for defined interventional procedures. For full details please see RFT Antimicrobial Policy for Adults 2013-15

## NOTIFIABLE DISEASES

Doctors must notify the Proper Officer of the local authority (usually the consultant in communicable disease control) when attending a patient suspected of suffering from any of the diseases listed below; a form is available from the Proper Officer. Notification should be made on suspicion, and not delayed whilst awaiting confirmation.

Anthrax	Mumps
Botulism	Paratyphoid fever
Brucellosis	Plague
Cholera	Poliomyelitis, acute
Diarrhoea (infectious bloody)	Rabies
Diphtheria	Rubella
Encephalitis, acute	SARS
Food poisoning	Scarlet fever
Haemolytic uraemic syndrome	Smallpox
Haemorrhagic fever (viral)	Tetanus
Streptococcal disease (Group A, invasive)	Legionnaires' disease
Hepatitis, viral	Leprosy
Tuberculosis	Malaria
Typhoid fever	Measles
Typhus	Meningitis
Whooping cough	Meningococcal septicaemia
Yellow fever	

It is good practice for doctors to also inform the consultant in communicable disease control of instances of other infections (e.g. psittacosis) where there could be a public health risk. From a local Public Health perspective it would also be helpful to contact the Nurse Consultant Health Protection where notifiable diseases are suspected to be more than an isolated case.

Consultant in communicable disease control (CCDC)

☎ 01142 428850

Nurse Consultant Health Protection - 9 am – 5 pm

☎ 01709255849

## PATIENT EDUCATION AND SUPPORT MATERIALS

Educating patients about the benefits and disadvantages of antimicrobial agents is advocated. Practices can provide leaflets and/ or display notices advising patients not to expect a prescription for an antibiotic, together with the reasons why. Educational materials are available from NHS Rotherham Medicines Management Team, through the practice's Prescribing Advisors and Medicines Management Technicians or by contacting Medicines Management admin on 01709302632. There is a 'Non prescription' pad which has been developed for prescribers to use to hand to patients instead of a prescription where antibiotics are not indicated. The 'Non prescription' will have a diagnosis ticked and explains why antibiotics are not necessary and advises patients on self help treatments to ease symptoms. This can be printed directly from the electronic version of the NHS Rotherham full Management of Infection in primary care document or pads obtained from the Medicines Management Team. There are also two different designs of poster available for display in GP practices, pharmacies or other public places and a credit card sized information card to educate patients that antibiotics are not always necessary. Both designs of poster are available in A4 or A3 sizes from the Medicines Management Team or printed directly from the electronic version of the NHS Rotherham full Management of Infection in primary care document.