Genital Tract Infections continued

Pelvic inflammatory Disease (PID) Referral surgical contact to GUM service. If gonorrhoea likely (partner has it, severe symptoms, history of sex abroad) avoid ofloxacin\textsuperscript{a} regime.

Ceftaxime\textsuperscript{v} 400mg stat and metronidazole\textsuperscript{a} 400mg BD and doxycycline\textsuperscript{a} 100mg BD both for 14 days or Metronidazole\textsuperscript{a} 400mg BD and ofloxacin\textsuperscript{a} 400mg BD both for 14 days

Acute prostatitis Send MSU for culture and start antibiotics

Clindamycin\textsuperscript{a} 600mg BD for 7 days or mupirocin\textsuperscript{a} cream TDS for 5 days. Penicillin allergy: Clindamycin\textsuperscript{a} 900mg BD for 7 days

Skin and Soft Tissue Infection

If MRSA positive, seek Medical Microbiologist advice

Impetigo Mild: Fusidic acid\textsuperscript{a} cream or ointment TDS for 5 days If known MRSA positive only use mupirocin\textsuperscript{a} cream or ointment TDS for 5 days

Severe: Flucloxacillin\textsuperscript{v} 500mg QDS for 7 days Penicillin allergy: Clindamycin\textsuperscript{a} 500-600mg BD for 7 days

Eczema Treat as impetigo if visible signs of infection. Otherwise the use of antibiotics\textsuperscript{a} (+/- steroids) does not improve healing and will encourage resistance

Cellulitis If febrile and ill admit for IV treatment. If slow response to PO treatment, continue for a further 7 days. Flucloxacillin\textsuperscript{v} 500mg QDS for 7 days Penicillin allergy: Clindamycin\textsuperscript{a} 500mg BD for 7 days

Facial or perineal cellulitis Co-amoxiclav\textsuperscript{v} 500mg/125mg BD for 7 days. Continue for a further 7 days if slow response. Penicillin allergy: Cefalexin\textsuperscript{v} 500mg TDS for 7 days If perineal cellulitis add metronidazole\textsuperscript{a} 400mg TDS

Leg Ulcers Ulcers are always colonised. Culture swabs and antibiotics indicated only if active infection, i.e. cellulitis, increased pain, pyrexia, purulent exudate, odour. Send pre-treatment swabs, treat as cellulitis and review antibiotics after culture results.

Diabetic foot infection Send swab and seek advice

Wound infection or abscess Consider drainage of pus if abscess. Flucloxacillin\textsuperscript{v} 500mg QDS for 7 days Penicillin allergy: Clindamycin\textsuperscript{a} 500mg BD

Scabies Permethrin\textsuperscript{a} 5% cream, two applications 1 week apart. Treat whole body and household contacts.

Bites Surgical toilet most important. Consider tetanus risk and risk of rabies (animals) or HIV and hepatitis B&C (humans). Give prophylaxis if cat bite, puncture wound, bite to hand, foot, face, joint, tendon or ligament, or if the patient is immunocompromised, diabetic, asplenic or cirrhotic. Prophylaxis advised for human bite. Review all bites at 24 and 48 hours.

Human Bites Co-amoxiclav\textsuperscript{v} 250/125mg - 500/125mg TDS for 7 days. Penicillin allergy: Metronidazole\textsuperscript{a} 400mg TDS and clindamycin\textsuperscript{a} 250-500mg BD for 7 days

Animal Bites Co-amoxiclav\textsuperscript{v} 250-125mg - 500-125mg TDS for 7 days. Penicillin allergy: Metronidazole\textsuperscript{a} 400mg TDS and doxycycline\textsuperscript{a} 100mg BD for 7 days

Conjunctivitis Many viral and self limiting. Consider treatment if red eye(s) and mucopurulent (not watery) discharge. If severe use chloramphenicol\textsuperscript{a} 0.5% eye drops twice hourly for two days, then four-hourly (while awake) and chloramphenicol\textsuperscript{a} 1% eye ointment, applied at night. Continue both for 48 hours after resolution; Second line fusidic acid\textsuperscript{a} 1% gel (Fucidithromic), applied BD, continued for 48 hours after resolution

Fungal nail infections Refer to local guidelines before investigating or treating. Take nail clippings and only start treatment if infection is confirmed by the laboratory.

Dermatophyte infections of the skin Take skin scrapings for culture

Terbinfine\textsuperscript{a} 1% topical OD-BD for week or Clotrimazole\textsuperscript{a} or miconazole\textsuperscript{a} 1% topical OD-BD for 4-6 weeks

Varicella zoster: If immunocompromised, pregnant woman or neonate, seek urgent specialist advice.

Chickenpox If started within 24 hours of onset of rash and patient is 14+ years, or severe pain, dense or oral rash, secondary household case, smoker, or on steroids, then consider Aciclovir\textsuperscript{a} 800mg five times a day for 7 days

Shingles (Herpes zoster) Treat if age > 50 years and within 72 hours of rash onset, ophthalmic shingles, Ramsay-Hunt, or eczema. Use aciclovir\textsuperscript{a} 800mg five times a day for 7 days

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Summary of guidelines for the management of infection in primary care

Principles

1. This guidance is based on the best available evidence but professional judgement should be used and patients involved in the decision.
2. Unless otherwise stated, doses are oral and for adults only. Please refer to the BNF/BNFC for further information.
3. 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 consider a larger dose or longer course.
4. Lower threshold for antibiotics in immunocompromised or those with multiple morbidities; consider culture and seek advice.
5. Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
6. Consider a no, or delayed, antibiotic strategy for acute self-limiting URIs.
7. Limit prescribing over the telephone to exceptional cases.
8. Use simple generic antibiotics where possible. Avoid broad-spectrum antibiotics (e.g. co-amoxiclav, quinolones and cephalosporins) when narrow-spectrum agents remain effective, as use of broad-spectrum agents increases the Clostridium difficile, MRSA and resistant UTIs.
9. Avoid widespread use of topical antibiotics, especially agents also available as systemic preparations (e.g. fusidic acid)
10. In pregnancy AVOID tetracyclines, aminoglycosides, high dose metronidazole (2g). Short-term use of nitrofurantoin is unlikely to cause problems, as is short-term use of trimethoprim unless the patient has poor folate intake or is taking another folate antagonist.
11. Clarithromycin is recommended as it has fewer side-effects than erythromycin, improved compliance (as BD vs QDS) and is available generically at a similar cost.
12. Doxycycline is the first-line choice of tetracycline.

Where ‘best-guess’ therapy has failed or special circumstances exist, advice can be obtained from a Medical Microbiologist at your local hospital:

- Worthing Hospital: 01903 205111 ext 5569
- St Richard’s Hospital: 01243 788122 ext 3547
- Crawley Hospital: 01293 609300 ext 3093
- East Surrey Hospital: 01737 786511 ext 2778
- BSUH: 01273 696955 exts 4615, 4596 or 7516

Quinolones (ciprofloxacin and levofloxacin), cephalosporins and clindamycin are powerful precipitants of CDAD. Use these antibiotics prudently. For the treatment of CDAD, see gastrointestinal infections

Clostridium difficile associated diarrhoea (CDAD) warning

Quinolones (ciprofloxacin and levofloxacin), cephalosporins and clindamycin are powerful precipitants of CDAD. Use these antibiotics prudently. For the treatment of CDAD, see gastrointestinal infections.
### Upper Respiratory Tract Infections

**Influenza**
- See NICE recommendations

**Pharyngitis/sore throat/tonsillitis (mainly viral)**
- Phenoxymethylpenicillin ▲ 500mg QDS or 1g BD for 5 days
- Penicillin allergy: Clarithromycin ● 250-500mg BD for 5 days

**Otitis externa (usually Pseudomonas)**
- Acetic acid 2% ear spray (EarCalm) TDS for 7 days or Dexamethasone 0.1% + neomycin sulphate 3250 units/mL + glacial acetic acid 2% ear spray (Otomize®), TDS for 7 to 14 days (if severe)

**If boil (Staph)**
- Flucloxacillin ▲ 250-500mg QDS for 7 days
- Penicillin allergy: Clarithromycin ● 250-500mg BD for 7 days

### Meninogitis

**Transfer all patients to hospital immediately.**
- Give benzylpenicillin ▲ or cefotaxime ▼ IV (or IM if cannot find vein)

**Benzyolpenicillin ▲**
- Age 10+ years & adult: 1200mg
- Child 1 - 9 years: 600mg
- Child < 1 year: 200mg

**Cefotaxime▼**
- Age 12+ years & adult: 1g
- Child < 12 years: 50mg/kg

Penicillin allergy: Give cefotaxime ▼ unless history of anaphylaxis or immediate hypersensitivity to penicillins or cephalosporins.

Prevention of secondary cases of meningitis – only prescribe following advice from Public Health Doctor - contact via local hospital switchboard.

### Gastro-intestinal Tract Infections

**Eradication of H. pylori**
- C13-urea breath test is method of diagnosis
- PPI (use cheapest) BD and clarithromycin ● 500mg BD and amoxicillin ▲ 1g OD for 7 days
- Penicillin allergy; PPI (use cheapest) BD and clarithromycin ● 250mg BD and metronidazole ● 400mg BD

**Infectious diarrhea**
- Antibiotic therapy is not indicated unless the patient is systemically unwell. If Campylobacter suspected consider clarithromycin 250-500mg for 5 to 7 days if treated early, otherwise discuss with a Microbiologist

**C. difficile diarrhea**
- Stop antibiotics and send stool for toxin detection. If the patient is symptomatic and in a care home isolate and take infection control precautions.

**Symptomatic C. difficile infection**
- If no response or relapse: Vancomycin ● 125mg PO QDS for 10 days

**Giardiasis**
- Metronidazole ● 2g OD for 3 days or 400mg TDS for 5 days

**Threadworms**
- Treat household contacts and advise on hygiene
- Mebendazole ● 100mg stat. Child 3-6 months use piperazine/senna ● (Pripsen®) and give a 2.5mL spoonful from the sachet. Consider repeat treatment at two weeks. Under 3 months or pregnant: Hygiene measures only.

**Abdominal ‘sepsis’ e.g. diverticulitis**
- Co-amoxiclav ▲ 250/125mg or 500/125mg TDS for 5 to 7 days
- Penicillin allergy; cefalexin ▼ 500mg BD and metronidazole ● 400mg TDS for 5 to 7 days

### Lower Respiratory Tract Infections

**Acute cough/bronchitis**
- Benefits marginal in otherwise healthy adults
- Amoxicillin ▲ 500mg TDS for 5 days
- Penicillin allergy: Doxyxycycline ● 200mg stat then 100mg OD for 7 days

**Acute exacerbation of COPD**
- Amoxicillin ▲ 500mg TDS for 5 days
- Penicillin allergy: Doxyxycycline ● 200mg OD or clarithromycin ● 500mg BD for five days
- If clinical failure to respond:
  - Co-amoxiclav ▲ 500/125mg TDS for 5 days
  - Penicillin allergy: Levofloxacin ▲ 500mg OD for 5 days

### Community-acquired Pneumonia - treatment in the community

Use CRB65 score to help guide and review. Score one for each of:
- New onset Confusion (AMT < 8), Respiratory rate > 30/min, BP < 90 mmHg systolic or < 60 mmHg diastolic, age > 65 years.

**CRB65=0**
- treat at home; CRB65=1-2 hospital admission/assessment; CRB65=3-4 urgent admission required give IM benzylpenicillin ▲ or amoxicillin ▲ 1g PO if admission delayed or life-threatening

**CRB65=1 and treated at home**
- Amoxicillin ▲ 500mg TDS for 7 days
- Penicillin allergy: Doxyxycycline ● 200mg stat then 100mg OD for 7 days

**CRB65=≥ 2**
- Amoxicillin ▲ 500mg TDS and clarithromycin ● 500mg BD for 7 to 10 days
- Penicillin allergy: Doxyxycycline ● 200mg stat then 100mg OD for 7 to 10 days

**Remember Pneumovax in 65+ years and ‘at-risk’ groups!**

### Urinary Tract Infections

**UTI in pregnancy**
- (send MSU and modify based on sensitivities)
  - 1st line: Nitrofurantoin ▲ 100mg M/R BD or 50mg QDS for 7 days.
  - 2nd line: Cefalexin ▼ 500mg BD for 7 days

**UTI in children**
- (send MSU & refer to NICE guidelines)
  - Refer urgently for assessment if < 3 months
  - Lower UTI: trimethoprim ▲ or nitrofurantoin ▲ for 7 days, see Children's BNF for doses. 2nd line cefalexin ▼ for 7 days.
  - Upper UTI - co-amoxiclav ▲ or cefixime ▼ if penicillin allergic, both for 7 days - see Children's BNF for doses.

**Acute pyelonephritis**
- If admission not needed, send MSU for C&S and start antibiotics. Admit if not improved after 24 hours.
  - Co-amoxiclav ▲ 500/125mg TDS for 14 days
  - Penicillin allergy: Ciprofloxacin ▼ 500mg BD for 7 days
  - Nitrofurantoin ▲ 50-100mg or trimethoprim ▲ 100mg either stat post-coital or OD at night.

### Genital Tract Infection

**STI Screening**: People with risk factors should be screened for chlamydia, gonorrhoea, HIV, and syphilis. Refer individuals and partners to GUM service. Risk factors: < 25 years, no condom use, recent (within 12 months) or frequent change of partner, symptomatic partner. Opportunistically screen all patients aged 15 to 25 years for chlamydia infection - treat partners as well and refer to GUM service.

**Vaginal candidosis**
- Clotrimazole ● 10% vaginal cream or 500mg pessary,
- PV at night (stat dose) or fluconazole ● 150mg PO stat. Do not use oral azoles in pregnancy.

**Bacterial vaginosis**
- Metronidazole ● 400mg PO BD for 7 days or 2g PO stat, or metronidazole ● 0.75% vaginal gel, 1 applicatorful (5g) at night for 5 days or clindamycin ▼ 2% vaginal cream, 1 applicatorful (5g) at night for 7 days

**Chlamydia trachomatis**
- Treat partners and consider referral to GUM clinic. If pregnant, refer to full guidelines

**Azothromycin ● 1g stat or doxyxycycline ● 100mg BD for 7 days.**