Management of common infections in general practice: Part 1

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Disease: What does it look like?	**Patients**	**Organisms**	**Antibiotics:** In order of preference	**Other Issues**
Pharyngitis From vague redness to large, pus-containing tonsils depending on organism. Streptococcal tonsillitis (S. pyogenes): Pus on tonsils + fever + tender anterior cervical neck glands + absence of cough + age <15 years ≥51% chance of S. pyogenes	All ages S. pyogenes more common in people under age 25 years	10% of cases S. pyogenes (Lancefield group A), 90% viral in adults, 50% in children. Rarely Mycoplasma or diphtheria	1st Penicillin VK orally for 10 days or IM benzathine 0.6 MU <27kg & 1.2 MU if >27kg 2nd Erythromycin 10 days or cephalosporin 10 days	Can give oral amoxycillin, which can be taken with food but has more side effects. High index of suspicion of S. pyogenes in high risk populations i.e. Maori, Pacific Island people & children. No need for cultures after treatment finished as a positive likely to represent prior carriage & not eradicated by penicillin
Common cold Rhinitis, +/- sore throat, +/- fever, +/- cough, +/- sputum	Any age	Viral Secondary bacterial infection debateable		
Acute purulent rhinitis See BMJ 2002; 325:1311-2 on antibiotics for acute purulent rhinitis	Usually children	Unknown	1st Amoxycillin 2nd Cotrimoxazole will probably work as well One week probably sufficient	Although effective, don't use antibiotics initially. Use a decongestant first
Cellulitis Redness +/- streaking +/- pain	Any age Get advice if on diabetic foot	S. pyogenes usually, but sometimes S. aureus	1st Penicillin if sure it is strep, otherwise flucloxacillin for 10 days. 2nd Erythromycin or cefaclor	May need hospitalisation or IV antibiotics. In GP, consider cephazolin 2g stat daily & 500mg of probenecid bd
Boils (furunculosis)	Any age, especially teenagers	S. aureus	1st Flucloxacillin for one week 2nd Erythromycin or cefaclor May need cotrimoxazole, erythromycin or doxycycline if methicillin resistant S. aureus	If recurrent, put mupirocin in nose (or fusidic acid) for 5 days. Approximately 20% of S. aureus resistant to mupirocin or fusidic acid. Last resort: rifampicin 300mg bd always together with another effective antibiotic. Both for 5 days

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Impetigo	Usually children	S. pyogenes 66% of cases & rest mixed with S. aureus or S. aureus alone	1st Flucloxacillin for one week 2nd Erythromycin or cefaclor or topical mupirocin if minor or unable to take oral medication	
Otitis media Bulging red drum with fluid in the middle ear together with acute symptoms of pain & fever	Children, very rare in adults	S. pneumoniae H. influenzae M. catarrhalis (less common)	Delayed prescription if temp <37.5, not vomiting & looks well 1st Amoxycillin 80–90mg/kg/day (need high dose for penicillin 'resistant' pneumococcus) 2nd Cotrimoxazole (5 days usually ok). If Rx fails, give amox/clav + amoxycillin 1:4 to avoid excessive clavulanate	Monitor for hearing loss especially if bilateral. Cefaclor does not get high levels in middle ear. Amox/clav has an advantage over amoxycillin for beta lactamase producers, i.e. H. influenzae & M. catarrhalis
Otitis externa & CSOM Pus coming from ear canal. It is not always possible to see the drum. Otitis externa (drum intact) or chronic suppurative otitis media (drum perforated)	Children, rarely adults Difficult to separate OE from CSOM unless drum seen	Swabs rarely helpful & may grow P. aeruginosa	Topical antibiotics ideally fluoroquinolones (not funded), but framycetin with gramicidin & dexamethasone commonly used. Steroid questionable but may be an eczematous component. There is concern in CSOM of middle ear toxicity with some topical antibiotics	Oral antibiotics rarely indicated for OE or CSOM. Watch for rare complications of CSOM: mastoiditis & cholesteatoma. Perforation <6 weeks: treat as treat as for otitis media plus topicals
Acute bronchitis Typically cough, sputum & lower resp signs, but in practice often just cough & sputum	Any age If <1 year consider bronchiolitis	Usually viral If >55 years or looks very unwell, think of pneumonia	If obvious bronchospasm treat as that. If concerned about pneumonia then treat as such	CXR in older patients >55 years or very unwell
Sinusitis Facial pain +/- nasal discharge	Any age	Viruses S. pneumoniae H. influenzae M. catarrhalis	No antibiotics unless severe. Try decongestants, first if not successful then then amoxycillin, cotrimoxazole, doxycycline or amox/clav. Duration of antibiotics: 7 to 14 days	Doxycycline must be taken with food as it is very irritating to the GI system
Community acquired pneumonia Febrile/afebrile, vague to specific chest pain +/- sputum, resp. rate up; can be mildly ill to very sick. Need clinical or radiological confirmation of pulmonary consolidation	Any age	S. pneumoniae + others incl. M. pneumoniae & C. pneumoniae	1st Amoxycillin or amox/clav: 500 tds 2nd Cefaclor 500mg tds or cotrimoxazole 2 bd or doxycycline 200mg stat then 100 bd for 10 days or erythromycin 500mg qid or roxithromycin 300mg daily for 10 days	Doxycycline, erythromycin, & roxithromycin have useful activity against L. pneumophila & atypical pathogens
Acute exacerbations of chronic bronchitis (COPD) 2 symptoms out of 3: • increasing dyspnoea • increase in sputum	Usually older >50 years & smoker or ex-smoker	S. pneumoniae H. influenzae M. catarrhalis less often: K. pneumoniae or	1st Amoxycillin or amox/clav 500 tds 2nd Cefaclor 500mg tds or cotrimoxazole 2 bd or doxycycline 200mg stat	Often patients have a supply of antibiotics at home. Most exacerbations are probably viral & antibiotics are of very limited benefit

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• volume decrease in lung • function		P. aeruginosa. Pseudomonas important in bronchiectasis & cystic fibrosis	then 100 bd for 10 days or erythromycin 500mg qid or roxithromycin 300mg daily for 10 days	
Whooping cough (Pertussis)	Usually young children	B. pertussis on special nasopharyngeal swab	Erythromycin 50mg/kg/day given qid, maximum 2gms, for 14 days, may shorten duration of symptoms	Give prophylactically (same dose/duration) to house-hold contacts, especially if children under the age of 1 year in the household. Ensure immunisation complete. Notifiable
Laryngitis & croup		Laryngitis primarily viral, occasionally S. pyogenes, Mycoplasma or Chlamydophila may be contributory, but role of antibacterial treatment is uncertain. Croup is viral & there is no place for antibiotics		