Brighton and Sussex University Hospitals NHS Trust

Paediatric Empirical Medical-Inpatient Antimicrobial Guidelines 2009

These guidelines are designed to advise the most appropriate, initial treatment in non-pregnant children with normal renal & hepatic function.

Dosing should be calculated using the BNF for children & be appropriate for age / weight.

Documentation

- Prescribers must state the indication in both the medical notes & on the drug-chart in the 'additional instructions' box.
- Prescribers must state the intended duration / review date in both the medical notes & on the drug-chart in the 'valid period' box.

IV to Oral Switch

- IV antibiotics should be reviewed daily and switched if appropriate to oral equivalents

Penicillin Sensitivity

All children / carers should be asked about penicillin allergy. The nature of the allergy / adverse effect should be sought, including time of onset post exposure, history of re-challenge & skin-testing. Discuss antimicrobial choices with microbiology.

Reaction to penicillin	Penicillins	Cephalosporins	Other beta-lactams e.g. meropenem
Anaphylaxis	X	X	X
Urticaria	X	X	X
Pruritic rash immediately following penicillin exposure	X	X	X
Laryngeal oedema / angioedema / bronchspasm	X	X	X
Minor rash (non-confluent, non-pruritic, restricted to small area of the body)	X Can be administered with caution for serious infection	✓	✓
Rash occurring > 72 hours post penicillin exposure	X Can be administered with caution for serious infection	✓	✓
Nausea, vomiting or diarrhoea	✓	✓	✓

X – Unsafe to administer ✓ - Safe to administer

Contacts

Consultant Microbiologist	ext 4229 or Bleep 8080 or via switchboard out of hours
Antimicrobial Pharmacist	ext 4078 / Blackberry 07769 931083
Medicines Information	ext 8153 / 8566
Katy Fidler (Consultant Paediatrician)	ext 2403
Paediatric Pharmacists	Bleep 8694 or 8026

* Contact tracing required. Contact local public health department (Tel: 01273 403591 / out-of-hours: 0870 2385156)

Δ Notifiable disease

\# Consider tuberculosis

Respiratory

Indication	1st line	Duration
Pertussis Δ *	Clarithromycin oral	3 weeks
Empyema #	Co-amoxiclav IV	Prolonged & variable. Discuss with respiratory team & micro
Community acquired pneumonia		
< 3 months *Can be difficult to differentiate from sepsis / meningitis*	Amoxicillin IV + Cefotaxime IV	5 days
> 3 months	Co-amoxiclav IV	5 days
	Add clarithromycin if atypical suspected in > 5 years	
Cystic fibrosis	See Cystic Fibrosis IV Antibiotic guidelines	

Urinary-tract

Indication	1st line	Duration
Urinary tract infection *UTI in children - NICE clinical guidelines, August 2007*		
Simple	Trimethoprim oral	3 days
Complex Pyelonephritis, septicaemia or < 3 months	Ceftriaxone IV If < 3 months, use Cefotaxime IV	10 days

Ophthalmology

Indication	1st line	Duration
Pre-septal & orbital cellulitis *Discuss all cases with ophthalmology*		
Moderate / severe pre-septal cellulitis	Co-amoxiclav IV	7 – 10 days
All orbital cellulitis	Ceftriaxone IV	7 – 10 days
Opthalmia Neonatorum *Consider Gonococcus / Chlamydia*	Ceftriaxone IV STAT + Clarithromycin oral if *Chlamydia* suspected	7 days

Central Nervous System

Indication	1st line	Duration
Meningitis Δ		
< 3 months	Cefotaxime IV + Amoxicillin IV	Depends on organism (see below)
> 3 months #	Ceftriaxone IV	
If > 2 months - add dexamethasone (as phosphate) IV 150 micrograms/kg qds (max. 10mg qds) for 4 days starting before or with 1st dose of antibiotics unless septic shock, immunocompromised, post-neurosurgery or < 3 months		
Add Aciclovir IV if herpes simplex virus suspected		
Encephalitis / Meningo-encephalitis Δ	Treat as per meningitis + Aciclovir IV Consider Clarithromycin for *Mycoplasma pneumoniae*	
Severe sepsis / septic shock (no clear focus)	Treat as per meningitis. Do **NOT** use dexamethasone Consider disseminated herpes simplex virus in neonates	

Organism	Duration of treatment
Group B *Streptococcus*	14 days
Neisseria meningitides *	7 days
Haemophilus influenzae *	10 days
Streptococcus pneumoniae	14 days
Escherichia coli	21 days
Herpes simplex virus	21 days
Listeria monocytogenes	14 days

Neutropenic Sepsis

Indication	1st line	Duration
Neutropenic sepsis Ensure administration within 1 hour of admission – may need multiple IV access	Piperacillin / tazobactam + Gentamicin	48 hours then as per paediatric haematology / oncology supportive care protocol
	Add teicoplanin IV if tunnel infection or infected endoprosthesis	

Skin & Soft Tissue

Indication	1st line	Duration
Cellulitis Moderate / Severe	Flucloxacillin IV + Benzylpenicillin IV	7 days
	Use Ceftriaxone IV if > 3 months to facilitate early discharge if IV antibiotics still indicated	
Cervical lymphadenitis	Co-amoxiclav IV / oral	7 days
Infected eczema	Flucloxacillin IV + Benzylpenicillin IV	7 days
	Add Aciclovir IV if eczema herpeticum	
Human & Animal Bites	Co-amoxiclav oral	5 days
Assess risk of blood-borne viruses if human bite (HIV, Hepatitis B & C) and rabies if animal bite abroad Obtain tetanus vaccination history & vaccinate as appropriate		

Ear, Nose & Throat

Indication	1st line	Duration
Otitis media	Amoxicillin oral	7 days
Tonsillitis	Penicillin VK oral	10 days
Epiglottis Δ	Ceftriaxone IV *Use cefotaxime if < 3 months*	7-10 days
Mastoiditis	Co-amoxiclav IV	14 days

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