Recommendations for the Empiric Treatment of Pediatric Community Acquired Pneumonia (> 3 months)

Excludes: < 3 months age, immunocompromised, chronic lung disease (ie. cystic fibrosis, NOT asthma)

OUTPATIENT/ORAL THERAPY

First Line: Amoxicillin 30 mg/kg/dose po TID (Max: 4000 mg/day). TID dosing improves antimicrobial concentrations in lung tissue. Can use 45mg/kg/dose BID if mild disease.

If suspect Atypicals (≥ 5 yrs old) add:
Azithromycin 10 mg/kg po day 1 (Max: 500 mg), 5 mg/kg daily days 2-5 (Max: 250 mg)
-If ≥ 8 y/o consider Doxycycline monotherapy (dose below)
-If cannot tolerate macrolides & has reached skeletal growth maturity, consider Levofloxacin (dosing below)

Presumed Influenza: Oseltamivir (Tamiflu™) 3mg/kg/dose BID or fixed dosing:
≤15 kg: Oral: 30 mg twice daily.
>15 to 23 kg: Oral: 45 mg twice daily.
>23 to 40 kg: Oral: 60 mg twice daily.
>40 kg: Oral: 75 mg twice daily.

Penicillin allergy:

A. History of non-serious allergic reaction (No anaphylaxis):
   - Cefpodoxime 5 mg/kg/dose po BID > 2 mo of age (Max: 400 mg/dose)

B. History of anaphylaxis:
   - Levofloxacin 8-10 mg/kg/dose po BID 6 mo-5 yrs; 8-10 mg/kg po q day greater than 5 yr old (Max: 750 mg/dose)
   - Doxcycline 1-2mg/kg/dose BID (Max: 100mg/dose) if > 8 years old

INPATIENT/IV THERAPY

If empyema is present, see separate Empyema guidelines.

Age-appropriate immunizations and otherwise healthy: Ampicillin 50 mg/kg/dose IV q 6 hrs (Max: 1,000mg/dose)

Immunizations **not** age-appropriate, or significant comorbidity: Ceftriaxone 50 mg/kg/dose daily (Max: 2g/dose)

If suspect Atypicals (≥ 5 yrs old) add: Azithromycin 10mg/kg x1 (max 500mg/dose), followed by 5mg/kg daily (max 250mg/dose) to complete 5 day course

Presumed Influenza: Oseltamivir (Tamiflu™) – see dosing above

If suspect *Staphylococcus aureus* (influenza with superimposed bacterial pneumonia or MRSA nares surveillance positive) consider addition of clindamycin (30-40mg/kg/day divided q6-8hrs) or Vancomycin (40-60 mg/kg/day divided q6-8 hrs)

Penicillin allergy

A. History of non-serious penicillin allergy: Trial Ampicillin IV under medical observation for first dose or consider Ceftriaxone.
B. History of severe beta-lactam allergy: consider Levofloxacin or doxycycline – see dosing above

STEP-DOWN THERAPY

Once patient stabilized, improving, and has functioning GI tract, a switch to oral therapy is strongly encouraged.

DURATION OF THERPAY

Appropriate length of therapy for mild-moderate CAP is 5-7 days.

- For an otherwise healthy child with rapid response - consider 5 days
- For an inpatient with underlying comorbidities - consider 7 days
- Severe/complicated CAP (large pleural effusion, loculated fluid, empyema, necrotizing pneumonia, or abscess) - *see Empyema guideline.* Usually treated for 2-4 weeks

Approved by UCDH Pharmacy & Therapeutics Committee 3/2021.

NO CLINICAL IMPROVEMENT or WORSENING

After 48-72 hrs of treatment, further investigation necessary. Consider repeat imaging (CXR or ultrasound), further lab work (CBC, trending inflammatory markers) and broadening antibiotic coverage.